REPORT

OF THE

SECRETARY OF THE NAVY.

NAVY DEPARTMENT,
December 1, 1916.

To the PRESIDENT:

I have the honor to submit herewith the annual report of this department for the fiscal year ending June 30, 1916, including operations and recommendations and estimates to date. It has been a notable year in naval annals, marking the largest expansion in times of peace and greatest efficiency since the Navy Department was organized under the act of April 30, 1798.

The naval appropriation act for the fiscal year 1917, approved August 29, 1916, stands out beyond all precedent in the entire history of the United States Navy. For the first time the policy of a continuing program for new construction was adopted by a Congress that will go into history as understanding and providing for the Navy better than any of its predecessors. In all essential features the three-year program authorized is that recommended originally to be executed in five years. The 813,000 tons of new construction authorized is greater than the total of the authorization of the 10 preceding acts. The 377,000 tons to be begun as soon as possible is nearly five times the average of the preceding 10 years. The total appropriation of $313,384,212 is more than twice as large as the amount carried by any previous appropriation bill. The department will be able, as a result of this act, to place the ammunition reserves of the Navy for the first time on a basis of that full measure of preparedness which the present war has shown to be so important, as $13,720,000 has been provided for this purpose, and in addition, $19,485,500 has been provided for ammunition and reserves for all the new vessels to be laid down this year.

Our naval legislation in the past has often been criticized as lopsided and unbalanced—material provisions being unaccompanied by the necessary personnel provisions. This criticism does not apply to the legislation of this year. Before the passage of the appropriation act there had been passed legislation providing for utilizing

to the utmost facilities at the Naval Academy for the education and training of officers for the Navy. The act authorizes an enlisted force of 74,700 men, and further authorizes the President to increase this number to 87,000 in time of emergency. In addition to this permanent force, provision is made for the first time for an adequate naval-reserve force, which may be utilized in time of national need. The commissioned personnel is placed on a logical and proper numerical basis by the provision that the number of officers in the line and various staff corps shall bear a constant ratio to the authorized enlisted strength of the Navy. The ratios between the numbers in the various ranks and grades are likewise fixed on a basis proper to meet the needs of the service. In the future, as it becomes necessary to increase the personnel of the Navy to provide for the manning of new vessels, it will only be necessary to obtain the authorization from Congress for an increase in the enlisted force, and the rest of the organization will automatically be adjusted to meet the new conditions.

Several means have been provided for meeting, as promptly as possible, the immediate needs for increase in the commissioned personnel; besides the increase in the number of appointments to the Naval Academy, appointments direct from civil life have been authorized for officers to perform engineering and aeronautic duties.

One of the most important items in the entire act is that which provides a system of promotion by selection of officers of the line of the Navy, thereby insuring certain prospects of promotion for those officers best qualified for the exacting duties and high responsibilities of command of our ships and fleets, and at the same time preserving to the country the services, in the lower grades, of officers of lesser ability, but still of great value, due to their education and training.

The act contains several items which will permit the department to increase its own facilities for the supply of naval material, thereby adding to the country's capacity for the output of munitions, and the present war has demonstrated that one of the greatest problems which any country must face is that of providing the maximum output of material essentials in the minimum of time, and that no country can have too great an industrial capacity for this purpose, including both Government and private plants. A Government armor plant and a Government projectile plant are provided for, and a large appropriation is made available for increasing the shipbuilding facilities of the navy yards. There is also authorized a great naval experimental laboratory, where, with the advice and assistance of eminent civilian scientists and engineers, experimental and development work of the utmost importance will be carried out.

In the field of aviation the act provides funds far in excess of any previous appropriations for this purpose, and will enable the

department to provide for immediate necessities in this branch and to do the development work necessary to insure this country that continuous progress which is so essential in any new field of science and engineering.

The act is so replete with provisions and authorizations for the betterment of all branches of the naval service that it is impracticable to make specific mention of each one within the limits of this report.

The appropriation act not only indicates the earnest purpose to provide an adequate first line of national defense by unprecedented provision for new construction, but also makes manifest the intention that this provision shall be carried into effect as promptly as possible. The act requires all vessels authorized to be laid down within three years; it directs that nearly half of the total, as measured by value, be laid down as soon as practicable; it further directs that this part of the program shall be contracted for, or under construction in navy yards, within six months of the approval of the act; and, finally, it authorizes the expenditure of a sum equal to 20 per cent of the normal limits of cost for the purpose of expediting the construction and completion of all of the vessels authorized.

SHIPS READY BY 1921.

The execution of this program will give the Navy the following vessels, completed and in commission in 1921:

Battleships, first line	27
Battle cruisers	6
Battleships, second line	25
Armored cruisers	9
Scout cruisers	13
Cruisers, first class	5
Cruisers, second class	3
Cruisers, third class	10
Destroyers	108
Fleet submarines	12
Coast submarines	130
Monitors	6
Gunboats	18
Supply ships	4
Fuel ships	15
Transports	5
Tenders to torpedo vessels	6
Special types	8
Ammunition ships	2

These numbers are based on the General Board's estimates of survival for the present vessels of the Navy.

Owing to the fact that the naval increases of the belligerents in the present war are being held as national secrets of the greatest importance, it is impossible at present to give an accurate estimate of the relative standing among naval powers of the United States as a result of the completion of this program.

ADEQUATE NAVY DETERMINED UPON.

It may be stated with confidence, however, that the act of 1916 shows clearly that this country is now determined to provide and maintain a first line of defense adequate to its needs. In the past—within the short period of less than a score of years—we have seen the Navy of the United States rise from the fourth or fifth position among the world's navies to a good second and then slip back in 1911 until it was a doubtful third. This generation will not again see such an indefinite, halting, uncertain naval policy.

The act of 1916 in its execution will place a heavy burden not only upon the Navy Department itself but upon the constructive facilities of the country. Present conditions as regards labor and material and the unprecedented demand for the construction of merchant shipping to carry neutral commerce render the task of construction peculiarly difficult, but everything indicates that the shipyards will rise to the occasion and accomplish what was regarded as impossible but a short time ago.

HEARTY COOPERATION IN NAVY DEPARTMENT.

As to its own task, the department welcomed the opportunity to demonstrate the capabilities and efficiency of its present organization and personnel. The reorganization undertaken in 1915 was complete, and though somewhat hampered just now, like the rest of the Navy, by the shortage of experienced officers, the Navy Department at present affords an object lesson of sound organization, able and efficient personnel in responsible positions, and, above all, of harmonious and sincere cooperation. In the voluminous literature, past, present, and probably future, on the subject of the Navy Department organization, it seems usually assumed as an axiom that the responsible advisers and assistants of the Secretary—officers of the Navy whose duties are arduous and responsibilities great—are self-seekers, or, at best, interested only in the aggrandizement of their various corps; that they spend their time in disputes with each other, which the Secretary must decide; and that it will never be possible for the department to operate without a number of coordinators or harmonizers to discipline and direct the bulky team. My experience in the department early led me to feel that the coordinators were more in need of coordination than the coordinated; that the Navy was

now too big and important to place, or tolerate, in any responsible positions in the Navy Department, officers of the characteristics ascribed the advisers and subordinates of the Secretary in so much of the imaginative literature dealing with the department, and that every corps and branch of the Navy was well supplied with capable officers, not only willing and anxious to work in harmony and cooperation with officers of other corps and branches of the Navy to the common end of naval efficiency, but incapable of working in any other way. It is common knowledge that in every responsible position in the department, as well as in command afloat, the fittest men have been selected.

I have, of course, found my advisers of differing opinions at times. I have found that differing opinions need not involve acrimony or friction. As to the few cases where I have found it necessary to decide between radically different views there has not been a single instance under the present organization of the department where the decision has not been accepted and carried out with the best of loyalty and good faith by all concerned. I see absolutely no reason why, with the present organization, there should ever be reason in the future to complain of faulty team work in the department.

THE CHIEF OF NAVAL OPERATIONS.

The creation by the act of 1915 of a Chief of Naval Operations, given by the act of 1916 the rank of admiral, so that in the Navy he now ranks next to Admiral Dewey, "the Admiral of the Navy," has secured to the department for the first time, in connection with the bureau chiefs named by the President, what naval experts at home and abroad have declared to be the best naval organization that human wisdom has devised. While civilian control, the essential in a Republic, has been preserved, responsibility has been placed upon the Chief of Naval Operations and the chiefs of the bureaus. Experience of a year and a half of earnest cooperation, without the semblance of friction, has demonstrated the wisdom of this new organization in the department. Ashore and afloat, the Navy is working in hearty cooperation and the spirit of the service is seen in the perfect teamwork that has given new high records in target practice, war maneuvers, improved communication, survey of possible auxiliaries in time of war, equipment for merchant ships when called into service—in a word, better conditions in the Navy in every department testify to the perfection of the organization which succeeded the former loose and haphazard system which was replaced in 1915 by the present organization. Under the direction of the Chief of Naval Operations, Admiral William Shepherd Benson, and his efficient corps, the operations of the fleet and its preparation for war have been directed by

master hands. I am printing as Appendix B to my report the summary of the year's work and development under the new organization effected under the Chief of Naval Operations.

ENORMOUS TASK IMPOSED.

The enormous additional task imposed upon the department by the act of 1916 has fallen first upon those who are responsible for material, and has been handled, so far, without a hitch and with record-breaking speed. Not only will the strain of material problems continue for some years, but as already indicated, the act of 1916 places upon the department the responsibility for enormous personnel expansions. The problems incident to this have already been taken in hand. They must be satisfactorily solved if the Greater Navy of the United States is to be in the end what the country demands and has a right to expect. Questions involving the personnel and its efficiency and skill are not so tangible and susceptible of analysis and comparison as when material is in question, and hence the efficiency of naval personnel is not so easy to determine as that of naval material. But we must not forget Mahan's dictum that experience shows that good men in poor ships will win against poor men in good ships. Our men and ships must be of the best.

THE BUILDING PROGRAM RECOMMENDED.

With regard to the number and types of ships for which I recommended appropriations at the approaching session of Congress, I felt myself bound by the act of Congress fixing a three-year program. I therefore recommend as the building program for the fiscal year 1918 the following:

Number and type of vessel:

3	battleships.
1	battle cruiser.
3	scout cruisers.
15	torpedo-boat destroyers.
4	fleet submarines.
14	coast submarines.
1	fleet submarine tender.
1	destroyer tender.
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The navy yards are not yet prepared to add materially to the facilities for construction. The private yards have obtained more contracts for merchant ships in the past year than in a long period, and

their facilities for building ships for the Navy are limited. Moreover, the revival in shipbuilding and the big naval program of the fiscal year 1916 have about taxed their capacity. In addition, the number of skilled men in the shipbuilding industry has not grown with the increased demand, and the demand for materials of all kinds has caused a rise in price and a delay in delivery. It will tax the Government and private yards, even after new facilities are provided, to build the ships recommended for the fiscal year 1918 and complete those heretofore authorized. The General Board recommends a larger program than is contained in my estimates. There are two reasons why my estimates, made before the report of the General Board had come to me, do not embrace a larger building program. The first is that Congress at its last session fixed a specific three-year program for the construction of 156 ships and appropriated money to begin work on 66, leaving 90 to be commenced during the coming two years. My recommendation is to begin on approximately one-half of the 90 in the fiscal year 1918, leaving the other half to be appropriated for in the naval bill for the fiscal year 1919. The total estimates for the fiscal year 1918 are very large, necessitated by the program already adopted, and I have not felt it my duty to advise the increase that the large number of ships proposed by the General Board would require. There is another and an impelling reason—the private and public yards can not, unless they abandon building merchant vessels, build a larger program than I have recommended. In its report (printed as Appendix A) the General Board says:

> The General Board is of the opinion that the capacities of our shipyards should be utilized to the maximum in new construction, and therefore recommends such numbers of vessels in various types as it believes can be laid down in the fiscal year 1918.

The crowded condition of shipyards, the difficulty of securing labor and material, and the reports made to me by the officers of shipbuilding yards all unite in convincing me that the largest program that can be constructed, under present shipbuilding conditions in this country, is that which I have recommended, and which I understand meets the policy which Congress incorporated in the last naval bill, to wit, 156 ships to be commenced in three years. Experience in securing contracts for the building of the ships already authorized, the delays encountered by lack of skilled labor, and the difficulty of promptly obtaining material convince me that the program I have recommended is as large as can be constructed, unless work on merchant ships is abandoned and slips thus employed are utilized for Navy vessels.

VESSELS BUILDING AND AUTHORIZED.

Since my last report there have been added to the active fleet in commission four battleships of a type at least as powerful as any possessed by any other naval power. These vessels, the *Oklahoma*, *Nevada*, *Pennsylvania*, and *Arizona*, represent a tremendous increase in the instantly available power of the Navy to meet any sudden and unexpected emergency, as they increase the number of battleships of the dreadnaught type from 8 to 12—a numerical increase of 50 per cent, and a far greater proportional increase in fighting power.

In addition to the four battleships, there have been added to the fleet during the past year the destroyers *Tucker*, *Conyngham*, *Porter*, *Jacob Jones*, *Wainwright*, *Sampson*, *Rowan*, *Davis*, and *Wilkes*, the submarines *L-1*, *L-2*, *L-3*, *L-4*, *L-9*, *L-10*, and *L-11*, and the submarine tender *Bushnell*.

There are under construction at the present time the following vessels, authorized prior to the naval bill of August 29, 1916: Battleships *New Mexico*, *Idaho*, *Mississippi*, *Tennessee*, and *California;* destroyers *Allen*, *Shaw*, *Caldwell*, *Craven*, *Gwin*, *Conner*, *Stockton*, and *Manley;* submarines *L-5*, *L-6*, *L-7*, *L-8*, *M-1*, the *Schley*, *N-1* to *N-7*, inclusive, *O-1* to *O-16*, inclusive, and fleet submarines *No. 2* and *No. 3;* fuel ships *Maumee* and *Cuyama;* transport *Henderson;* and supply ship *Bridge*.

Of these vessels the *New Mexico*, *Tennessee*, *California*, *Shaw*, *Caldwell*, *Craven*, *L-8*, *O-1*, *O-2*, *Maumee*, *Cuyama*, *Henderson*, and *Bridge* are under construction in Government navy yards. In addition to these, certain navy yards were directed, on August 29, 1916, the same day as the approval of the naval bill authorizing their construction, to proceed with the building of fuel ship *No. 16*, hospital ship *No. 1*, and gunboat *No. 21*.

The progress of work on the vessels under construction, both by contract and by navy yards, has, in the main, been satisfactory, in view of the unprecedented industrial activity extending throughout the whole country, and resulting in great shortage of both labor and material, these conditions being peculiarly acute in the steel and shipbuilding industries.

PLANS MADE IN RECORD TIME.

In regard to the vessels of the three-year program, for which appropriation was made in the last naval bill, as pointed out elsewhere in this report, the concentrated and coordinate efforts of all sections of the department permitted the issue of plans and specifications in record time. Bids have already been received and opened on all vessels except the battle cruisers and the ammunition ship. In addi-

tion to the fuel ship, hospital ship, and gunboat, work in connection with the construction of which has already been started in navy yards, contracts have been awarded for 20 destroyers, and contracts have been or will be placed at a very early date for all the other ships for which appropriations have been made, except the scout cruisers, for which only one bid was received within the appropriation.

DESIGNS OF NEW SHIPS.

The desire of the administration and of the Congress to expedite in every way possible the construction of these vessels presented to the department a problem involving the greatest difficulties. Before any actual work whatsoever can be undertaken on new vessels, it is always necessary to prepare complete specifications and designs, in which are embodied the military characteristics necessary for vessels of the various classes to meet the especial tactical and strategical needs of the United States. In the preparation of each design it is necessary to study thoroughly a great many new problems and evolve methods providing the vessels in question with all items, the necessity and desirability of which have been demonstrated by experience in our own fleet, information received from abroad, or by scientific or engineering progress in the world at large. The major portion of this design work is performed in the three technical bureaus—Construction and Repair, Steam Engineering, and Ordnance. The preparation of the design of each separate type forms a distinct problem and requires the concentrated efforts of the staffs of these bureaus for varying periods. The three-year building program, as adopted by Congress, included 15 separate and distinct classes of vessels, of which 10 were finally directed in the appropriation act to be laid down as soon as practicable. These included many more different designs than had ever been prepared before in any one year. As soon as the magnitude of the task became apparent, authority was requested to employ a large number of additional draftsmen and other technical employees, in order to expedite this work to the greatest extent possible. The necessary authority was granted by Congress in the urgent deficiency bill of February 28, 1916. I am pleased to report that, due to the increased forces and the hearty cooperation of the three bureaus and to the unremitting efforts of all of the officers and civilian employees concerned, it was possible to advertise for bids for the 4 battleships, 4 scout cruisers, 20 destroyers, and 29 submarines on the same day that the appropriation bill was approved by the President. On this same day instructions were issued to the navy yards—Boston, Philadelphia, and Charleston—to proceed at once with the construction of the fuel ship, the hospital ship, and the gunboat, respectively, the plans for

these vessels being ready. The designs of the battle cruisers were completed and issued to prospective bidders on October 2, 1916. The plans of the ammunition ship were completed November 1, 1916.

As several types of vessels of the program are novel in our service, and as experience so far in the European war has indicated the desirability of urging development of former types along certain lines, the designs this year have involved an unusual number of new and, in many cases, difficult problems.

Particular attention has been devoted to improvement of the protection of capital ships against underwater torpedo attack. The prosecution of experimental investigations along this line has continued during the year, and has indicated so far that the conclusions reached in connection with the designs of battleships 43 and 44 were sound, and that the protection under water of our new battleships is markedly superior to that of any previous battleships in any navy.

The new battleships will carry 16-inch guns instead of 14-inch, as carried by previous United States battleships. The war seems to have impressed upon practically all the combatants the desirability of increasing the caliber of their main battery guns, and although not all the officers of the United States Navy are convinced that this is a necessary development, it is believed the vast majority are in line with the recommendation of the General Board, approved by the department, for the adoption of the 16-inch gun.

The new battle cruisers will be the largest and most expensive vessels in our service to date. There is some opposition in the service to this type of vessel, owing to the feeling of some officers that it is substantially a repetition of the armored cruiser type of 12 or 15 years ago, now generally recognized as obsolete. The main reason for the disappearance of the armored cruiser type was that although its speed was superior to that of the battleship of its day the superiority was not very great, so that the speed of a battleship of to-day is substantially the same as that of the armored cruiser of a dozen years ago.

Our new battle cruisers have been designed with an enormous and unprecedented horsepower, calculated to give them, in spite of their great size, a speed of 35 knots an hour. The margin between the speed of our latest armored cruisers and that of contemporary battleships was about 4 knots only, at that time battleship speed being about 18 knots and armored cruiser speed about 22 knots. The margin between our 21-knot battleships of to-day and our new 35-knot battle cruisers is very much greater—being 14 knots. While battleship speeds will undoubtedly be increased in the future, it is believed that these vessels will retain their advantage of speed, as compared with the heavily armored battleship type, throughout their life.

ADDITIONAL POWERS MAY BE NEEDED.

The last naval bill does not give to the department any additional or extraordinary powers in connection with placing the contracts for these vessels or in obtaining materials for their construction. It is hoped that the necessity will not arise of having to ask for such powers, as a number of shipbuilders and manufacturers have shown an attitude of willingness to assist the department in meeting the unusual situation created by the desire of the country to commence and to expedite an entirely unprecedented naval program at a time when the industrial resources of the country are already taxed to their utmost capacity in meeting the demands of tremendous trade activity, both domestic and foreign, in every branch of business. It may be necessary, however, for Congress to enact legislation of this character to insure the early completion of the program of construction.

NEW CONSTRUCTION.

The following table shows the vessels authorized in the three-year building program—those for which the first appropriations have already been made, those for which estimates for the fiscal year 1918 have been submitted to cover the first year's work, and those which will remain to be covered in the naval bill for the fiscal year 1919:

Type.	Authorized in 3-year program.	Appropriated for in naval bill for 1917.	Recommended to be appropriated for in naval bill or 1918.	Remaining to be provided for in naval bill, 1919.
Battleships	10	4	3	3
Battle cruisers	6	4	1	1
Scout cruisers	10	4	3	3
Destroyers	50	20	15	15
Fleet submarines	9	.....	4	5
Coast submarines	58	30	14	14
Fuel ships	3	1	.....	2
Repair ships	1	.....	.....	1
Transports	1	.....	.....	1
Hospital ships	1	1	.....	.....
Destroyer tenders	2	.....	1	1
Submarine tenders	1	.....	1	.....
Ammunition ships	2	1	.....	1
Gunboats	2	1	.....	1
Total	156	66	42	48

In the same manner as prior to the adoption of the three-year program the department has since that time been carefully studying the occurrences of the European war, as affecting types of naval vessels. There have not developed, however, any facts which would cause the department to recommend any changes in the numbers or types of vessels as provided for in the program.

The most notable advance which the department contemplates in the development of any of these vessels is in the case of the battleships. In these, the definite adoption of a high-powered 16-inch gun will cause a marked increase in the size and power of the new vessels, and this will be accompanied by an increased efficiency in the defensive features against attack by either guns or torpedoes.

INDUSTRIAL ACTIVITIES AT SHORE STATIONS:

The results have more than justified the policy of this administration of increasing the industrial activities of our shore stations. As a business proposition, the Navy has been saved large sums. Yards which have previously been a financial drain upon the Naval Establishment have become not only self-supporting, but have actually in addition to paying the cost of their own maintenance decreased the total expenditures of the Navy Department for various manufactured materials. What is even more important, the military value of these yards has been enormously increased. In time of war, these yards are now far better fitted to repair damaged ships, to convert merchantmen, to supply the fleet with mines, with torpedoes, and with the hundred and one things necessary for their equipment at short notice.

One of the most striking lessons of the present European war has been the need of well-equipped shore stations, where repairs and building work may be carried out. A few years ago many naval experts recommended the closing of some of our yards and the concentration of our shore stations into a few units. The experience of the war has convinced these experts that naval warfare under modern conditions calls for expansion rather than contraction of existing shore stations. A navy yard manufacturing plant in time of war is an immediate source of war supplies, manufactured by men trained for years in that work, with tools already assembled and in operation, where ships can be outfitted and repaired with a minimum of delay. The military value of such stations is now absolutely beyond question, and the department's policy of not only maintaining but enlarging them has thus been justified not only from an economic but from a military viewpoint as well. The expansion of our yards has been gradual, care being taken that every increase is justified before it is made. In what are termed our industrial yards, which include Portsmouth, Boston, New York, Philadelphia, Washington, Norfolk, Charleston, Mare Island, Puget Sound, and the torpedo station at Newport, the total number of men employed has increased in the last four years from 16,898 to 24,382, and their daily pay roll from $46,027.35 to $73,091.12. As every manufacturer knows, an increase in work and in working force, if done in a businesslike way, means

a reduction of proportionate overhead charges and a more economical working of the plant. This has been the case in the navy yards. Take, for example, the cost of repairs made in navy yards to our own vessels. In 1913 this cost amounted to $6.19 per ton for the total tonnage of our Navy at that time. In 1916, figured on the same basis, this has been reduced to $5.40 per ton, a showing all the more remarkable when it is considered that over half of this expense was for materials, principally iron, steel, copper and brass, and that these materials have advanced from 50 to 100 per cent in cost during that time. The output in manufactured products that go on ships has also been largely increased, with a corresponding decrease in the cost of each article manufactured.

At the torpedo station, by doubling the number of men employed, we have increased the output of torpedoes and other like material 400 per cent, and we are now making these torpedoes at 25 per cent less than we can buy them. By installing our own plant for the recovery of waste metals at Portsmouth we have reclaimed 1,937,784 pounds of copper and brass which would otherwise have been sold for junk, and the yards during the same period have used over 4,000,000 pounds of scrap metal in place of new metal. This represents a saving in the purchase of 6,000,000 pounds of new metal at a time when copper and brass are at the highest point they have ever reached. So far as possible the department is carrying out a policy of concentrating the manufacture of particular articles at particular places, with satisfactory results in economy. In addition to the metal-recovery plant at Portsmouth electrical fittings of various kinds and boat outfits are being turned out at exceedingly low rates of cost. At Boston the tremendous anchor chains for our new dreadnaughts are being turned out. Serious problems in their manufacture, on account of the fact that they are heavier than chains have ever been made before, have been satisfactorily solved. Boston now manufactures chain, rope, and anchors for the Navy. At New York radio outfits are manufactured for the fleet. At Norfolk, in addition to the manufacture of paint, of which the Navy uses large quantities, we have undertaken the manufacture of mines with most gratifying results, and the clothing factory at Charleston has more than justified its establishment.

In no particular branch of the Navy has greater improvement been shown than in our shore stations and in the economical and efficient business administration thereof.

DRY DOCKS ESSENTIAL TO THE FLEET.

Modern battleships, battle and scout cruisers require constantly the highest skilled attention for their operation and repair and often sweeping changes, so that these vessels may be kept well abreast

of the times and potentially able to cope with similar vessels of other naval powers.

These principal ships of a modern navy once built and commissioned can not indefinitely maintain the high sea and retain their efficiency. They must frequently return to our home stations for wear-and-tear repair and modernizing changes. So that irrespective of the use of navy yards for actual shipbuilding, a fleet itself is dependent on them for its continuation as a fleet ready at all times and prepared for any possible emergency. The Navy exists for possible use in offensive or defensive warfare, and for that reason our navy yards must be so planned and laid out that they not alone can take care of all of the requirements that may be imposed upon them by vessels of the Navy in times of peace, but also having in mind the possible demands upon them in case of hostilities. With the lessons of the European war before us, it is apparent that the docking and repair facilities in our navy yards should be as nearly as possible adequate in location and extent to fully and with dispatch make good the destruction and damage incident to warfare.

DRY DOCKS BUILDING AND AUTHORIZED.

The first session of the Sixty-fourth Congress authorized the construction of two dry docks capable of taking the largest vessels that can pass through the Panama Canal. Plans and specifications for these two docks at Norfolk and Philadelphia are complete, and work on the Norfolk dock will soon be started. The Philadelphia dock will follow. The large dry dock constructed at Balboa, Panama Canal, has been completed and is now ready to receive vessels.

From most recent reports the large dry dock under construction at Pearl Harbor is progressing satisfactorily. The indications are that by the first part of the year 1920 we will have four governmental dry docks, three under the control of the Navy and one under the canal, capable of docking the largest vessels projected.

In addition to these four docks a dock is under construction by the Commonwealth of Massachusetts at Boston. While the progress of construction has not been fully up to expectations, the work is continuing and should certainly be completed before the year 1920.

Under authority granted by Congress, contract has been made with the Union Iron Works for the use of a dry dock of the maximum size which this company has undertaken to build at Hunters Point, San Francisco. The contract with the Navy Department guaranteeing a minimum usage of this dock for a period of six years undoubtedly played a large part in making possible the inception of this commercial venture. I am inclined to believe there is opportunity for an extension of this policy of encouraging the construction of dry docks

by private enterprise, as by this means dry-docking facilities of greatest importance to the Navy, in case of hostilities, may be secured. With these six large dry-dock projects completed, the Navy will have available three docks of maximum size on the Atlantic coast, one on the Pacific coast, one at Panama, and one in the Hawaiian Islands. Even so, docking facilities still fall short of the undoubted naval needs for ships built and authorized. The lack of dry docks sufficient in number and availability would constitute a source of weakness in times of stress.

At the Charleston yard there is at the present time a modern dock capable of taking care of vessels of the *Florida* class. It is sufficient in width and depth for larger vessels. This dock should be lengthened so that, if necessary, it could be used for docking larger battleships and cruisers. I have come to this conclusion because to lengthen this dock would be comparatively inexpensive and the improvement could be carried through within a year and one-half. In the same way the dry dock recently completed at Puget Sound is too short to receive the battle cruisers authorized. This dock should be lengthened to take vessels 1,000 feet long.

SAVING IN "ARIZONA'S" CONSTRUCTION.

The construction of the *Arizona* at the New York Navy Yard demonstrated that there has been an increase of efficiency in new construction at that yard. The actual cost of the *Arizona*, as compared with that of the *New York* and *Florida*, the preceding battleships built at the New York yard, was much less, notwithstanding the present strenuous condition due to the great war in Europe, which has increased all expenses for material and labor in shipbuilding in this country.

The actual saving, as reported by Capt. G. E. Burd, industrial manager of the New York yard, in the construction of the *Arizona* was $678,239.82, but due to the scarcity of labor it was necessary to pay $133,729.95 in bonuses for overtime work, which would not have been required in ordinary times. Without the payment of these bonuses the saving would have been $811,969.77. The comparison of the cost per ton of the *Florida*, *New York*, and *Arizona* is illuminating. The cost per ton for building the *Florida* was $286, the *New York* $233.53, and the *Arizona* $210.62. That this decrease in cost per ton was made, notwithstanding the considerable increase in wages and cost of material and increasing number of expensive appliances installed in new ships, demonstrates the wisdom of ordering the construction of this ship at the New York Navy Yard.

SHIPBUILDING AT NAVY YARDS.

At the beginning of my administration but one of our navy yards was equipped and capable of building battleships—the navy yard, New York—and another navy yard, at Mare Island, equipped and capable of building auxiliary vessels. The cost of all of these navy yards and their equipment represented an investment of about $150,000,000, and they are undoubtedly capable, as has been demonstrated, of being employed to a far greater extent than had been for the benefit of the Navy in the construction of ships. With this end in view, the first step taken was to provide building ways and equipment at the Philadelphia and Boston Navy Yards so that these two yards could construct auxiliaries and cruisers. Then the Portsmouth (N.H.), Norfolk (Va.), and Charleston (S.C.), Navy Yards were provided with ways and equipped for the construction of submarines and torpedo-boat destroyers, respectively. This was followed by greatly improving the battleship construction facilities at New York, and enlarging the construction capacity of the Mare Island Navy Yard so that a battleship is now being constructed at that yard; consequently we are now able to build and are building battleships at two of our navy yards, auxiliary vessels at two other yards, destroyers at two other yards, and submarines at one yard.

In addition to this accomplishment, the recent naval act authorizes the expenditure of $6,000,000 for fitting navy yards for ship construction, and steps are being taken to fit yards for the construction of capital and other ships. It is confidently expected these improvements will be far enough advanced so that some of the ships to be provided for in the naval act of the coming session of the Sixty-fourth Congress can be laid down at these yards. I am convinced that we have been well justified and reached a wise decision in taking the steps which have been taken to fully utilize our navy yards for shipbuilding construction. The offers that have been received from the private shipbuilding companies for the construction of the ships authorized indicate that the capacities of these private plants will be taxed to the fullest in bringing to completion the ships already authorized. All private yards are at the present time, and will be perhaps for several years to come, devoting a large part of their capacity and energy to the building of commercial vessels, and it is thus apparent that if we had not made provisions, as we have done, for equipping navy yards for naval vessel construction, we would have been seriously embarrassed and perhaps found it impossible to construct within a reasonable time the ships for which the last session of Congress made appropriations.

ORDNANCE:

In the important Ordnance branch of the naval service the resourcefulness of the Navy has been nowhere more manifest. Progress may be reported in the manufacture of powder at decreased cost and in the extension of facilities for that purpose; in the difficult work of both perfecting the design and increasing the output of our torpedoes; in the manufacture of big guns and in the effort to increase the capacity for such manufacture; in increasing the stock of shells and raw material indispensable for the making of powder. Although a serious handicap, particularly in the manufacture of powder at Indianhead, has been the loss of employees who have accepted places with private powder manufacturers able to pay abnormally high wages on account of the prices received for their product, it is nevertheless a fact that at the torpedo station at Newport, R. I., since March, 1913, the number of employees has increased practically 100 per cent, or, to be exact, from an average of 543 to an average of 1,122 men; and the wages paid have increased from $449,155 a year to $1,035,717 a year, while the sum of $260,000 has been expended for ships and storage buildings and $160,000 for new machinery, and estimates have been submitted for the purchase of more machinery to the extent of $100,000. The usual amount for maintenance, $80,000, was increased last year to $100,000, and this same amount has been voted for 1917. The total product of the torpedo factory, which was established in 1908, to the end of 1915 was 256 torpedoes, while the output of torpedoes for the calendar year may reach as high as 150 or 160, and it is expected that this number will be increased next year. At the same time torpedoes are being manufactured at the Washington Navy Yard. A large number of small machine tools were available there for this work, and advantage was taken of these resources to manufacture torpedoes. It is quite a new industry at the gun factory, and the output has not been large. However, it is now on a good working basis, and we count on receiving about 100 torpedoes per annum from this plant. Some of its product has been delivered, given range trials, and finally accepted.

A NEW TORPEDO DESIGNED.

The work of the Bureau of Ordnance this year has been characterized by originality and invention. A new torpedo has been designed by the bureau. The torpedo has been in a state of evolution and development through the past half century, in which period parts have been added from time to time until a type of torpedo has come into use the general arrangement of which is by no means ideal. The bureau believes that in the new type it has designed it has se-

cured the simplification of manufacture, the easier repair of injured parts, and the quicker adjustment of new devices. In addition to this, the new design will be the property of the United States Government, and only in its minor features will it contain parts the use of which will necessitate the payment of royalty by the Government.

PROFITABLENESS IN THE MANUFACTURE OF POWDER.

In my report last year I was at some pains to point out the profitableness of the Navy manufacturing its own smokeless powder, and it was shown how the Government thereby was able to reduce the price of powder from 80 cents paid to a private company until Congress made an investigation of the cost, when a reduction was made to 53 cents; and later still, by the aid of the Sixty-third Congress in authorizing the increase of the product at Indianhead to something like 4,000,000 pounds, to reduce the price to the Navy to about 34 cents a pound. This year the work of enlargement has been completed, and the factory is now on the contemplated basis and is producing powder at the rate of well over 6,000,000 pounds per annum, or practically double the output for the fiscal year 1912–13. In 1915 the sulphuric and nitric acid plants were enlarged to a sufficient extent to care for the entire needs of the powder factory, so far as those acids are concerned. To have accepted acid at the lowest price quoted under competitive bidding would have cost, for a six months' supply, about $630,000. The existing plant was extended for $180,000, and in six months has manufactured the amount required at a cost of $270,000. That is, we paid for the plant, manufactured the acid, and still saved about $180,000 over quoted prices. This has done away with the cumbersome and costly method of transporting acid in tanks from Washington down the Potomac River to Indianhead. The cost of powder for the fiscal year 1916 has increased substantially, owing to the great advances in prices of raw materials. This embraces notably the cost of acid procured by private contract, the cost of nitrating cotton and of alcohol. The first of these items would have been inconsiderable had the enlargement of the powder factory embraced originally the enlargement of the acid plant. Money was appropriated in the 1917 bill for the purchase of a war supply of nitrate of soda and providing for the necessary houses for its storage. The amount of money appropriated will procure about 30,000,000 pounds of this essential material, and I am submitting in the 1918 program estimates for augmenting this reserve by an equal amount. Nitrate of soda can be stored for an indefinite period without any deterioration whatever, and it is a wise policy to have a sufficient quantity of this material safely stored in this country

against the possible contingency of the only source of supply, namely, Chile, being closed to us in time of war.

INCREASED CAPACITY OF GUN FACTORY.

The gun factory has continued working to its full capacity on the manufacture of guns and gun carriages. Orders have already been given for twenty-four of the fifty 14-inch 50-caliber guns required for the battle cruisers in the 1917 building program. Contracts for the forgings have been placed and deliveries will be made in ample time for the installation of the guns on new vessels.

INCREASING POWER OF GUNS.

Last year a 16-inch 45-caliber gun was proved, with excellent results, and guns of this type are to constitute the main battery of the four battleships appropriated for in the 1917 bill. However, with a view to still further increasing the power of guns of this caliber, we have designed and are constructing one of still greater chamber capacity and greater length. If this gun fulfills our expectations, similar guns will be constructed for the 1918 battleships.

WISDOM OF MOUNTING GUNS THREE TO A TURRET.

The system of mounting guns three to a turret, as effected on the *Pennsylvania*, *Nevada*, and *Oklahoma*, has undergone trial in service, and results show the wisdom of adopting this scheme. Its principal advantages lie in the decreased weight of armor required for a given number of guns, together with an arrangement of the emplacements on board ship that is most convenient from a structural standpoint.

ANTIAIRCRAFT GUNS INSTALLED.

A new antiaircraft gun has been installed on several of the battleships, and many others are being rapidly provided with this new weapon. Its design has been most carefully and patiently worked out, and the Navy will be well prepared afloat against aircraft attack.

BATTERIES FOR AUXILIARY SHIPS.

A scheme is well in hand for augmenting our supply of guns for batteries for auxiliary merchant ships to be mounted in case of war. The sum of $1,650,000 was appropriated in the 1917 bill, and this sum was intended to take care of one-half the project. The prices of labor and material have advanced so much that the amount has been insufficient to cover all of the first half of the program, which is well under way notwithstanding this handicap.

ADDITIONAL LAND FOR GUN FACTORY.

The 1917 appropriation bill carried with it funds for the purchase of additional land adjacent to the present gun factory. Provision has also been made for a new gun shop to be erected on the additional ground, which, with the existing facilities, will double our capacity for gun building and relining. Sufficient money was appropriated to push the construction of the shop well along, and funds have been asked for this year to complete the shop and provide it with the necessary machinery.

MAKING UP DEFICIENCIES IN SHELLS.

Due to a liberal appropriation for the purpose, contracts have been let and the work is already under way of supplying the Navy with all the deficiencies that have accumulated in shell of all calibers except the 14-inch. A contract has been made for a large number of shell to make up the 14-inch deficiency, and additional contracts are in preparation to complete this work. The stock of powder is all that can be desired, and the manufacture of necessary accessories outside of shell and powder has been pushed so vigorously at the Washington yard and elsewhere that the situation in this respect is quite satisfactory.

LARGER PROVING GROUND NEEDED.

The Bureau of Ordnance has been working under a most serious handicap, due to the lack of an efficient proving ground to meet modern naval artillery requirements. The existing proving ground at Indianhead was established some 25 years ago, when the gun ranges that have been attained to-day were undreamed of. The geography of the place will not permit of its extension to meet existing conditions, and I deem it important that a new location be sought, where necessary experimental work can be carried on.

ARMOR-PLATE PLANT.

In three annual reports I have urged upon Congress the wisdom of making an appropriation for an armor-plate factory. Though this country has long furnished the largest quantity of the raw material for armor plate, we purchased the supply needed from foreign manufacturers until Secretary Whitney saw that it was the part of wisdom to have it made in our own country. For years the manufacture of armor plate has been confined to three companies, which named their own price, and the Navy Department has paid extortionate prices. Secretary Herbert advocated a Government plant.

Congress appropriated the money for an armor plant in 1900, but a qualifying provision was inserted in the bill, and it was not erected. In the meantime the manufacturers, without competition, fixed to suit themselves the prices charged the Government, until Congress intervened. Even then the price was abnormally high. On March 3, 1913, the price charged was $454 per ton. When the three concerns bid identically the same price in November, 1913, I rejected all bids and demanded competition and asked Congress to appropriate money to build a plant and prevent a continuance of the price fixing by the three companies manufacturing the product. As a result the price was reduced to $440 and a saving of $111,875 was effected on the *Arizona* over the price charged for the *Pennsylvania* armor; the price was reduced to $425 per ton, and $640,538 was saved on the *New Mexico*, *Idaho*, and *Mississippi;* the price was $425 per ton, and $419,896.80 was saved on the *Tennessee* and *California*, and the latest bid, made in November, 1916, was $420, which gives a saving on the *Maryland*, *Washington*, *West Virginia*, and *Colorado* of $984,585.60 over the price charged the Government before the 4th of March, 1913. These savings in armor plate, contrasting the prices paid since the 1913 refusal to award contracts without even the semblance of competition, aggregate in less than four years the rather neat sum of over $2,000,000. It was saved over prices formerly charged because the Navy Department, making public the lack of competition, refused to pay the higher prices demanded, and urged Congress to erect a Government plant. Since the armor-plate manufacturers abandoned competition and fixed the price by understanding, the Government has paid for armor, above a reasonable price, enough money to have constructed the best plant in the world.

The Sixty-fourth Congress appropriated $11,000,000 for an armor-plate plant, plans are being prepared, and early in the new year work will commence on its construction. When completed, not only will the Government be in a position to make a portion of its armor at lower prices than it has been paying, but improvements in the manufacture of armor plate by our experts will belong exclusively to our Government, an advantage not to be lightly regarded.

FACTORY FOR MANUFACTURE OF PROJECTILES.

Upon the recommendation of the department, the first session of the Sixty-fourth Congress appropriated money to build a projectile factory. The condition which made this appropriation imperative was briefly as follows: The Navy wants armor-piercing projectiles, but it does not want an inferior quality of armor-piercing projectiles, such as some manufacturers are willing to call "armor-piercing" and are willing to sell for such. The manufacturers of this country,

although they have ample capacity for manufacturing armor-piercing projectiles, and although they know that projectiles in accordance with the requirements of the Government can be produced, are unwilling to undertake their production save at a price 60 per cent or more higher than their contracts of 1914. What is the answer? There can be only one answer; that is, for the Navy Department to own and operate its own projectile plant, which will enable it to fill its requirements and possibly to improve over the qualities now demanded of private concerns. Not only did private companies fail to supply projectiles that measured up to the specifications, but the remarkable thing was that three companies usually bid within a few dollars of one another. It was evident that they were not in real competition. The Government, when such conditions prevail, must provide for the manufacture of at least a portion of these indispensable projectiles.

TARGET PRACTICE:

The feeling of apprehension over national preparedness, more or less well defined, which has been aroused in the minds of the American people as a result of the European war, has extended to the matter of target practice. In view of this it is gratifying to be able to state, not in any spirit of boasting, but merely as an expression of steel-cold fact, that the American Navy has not only equalled, but in battle target practice has actually excelled the best records believed to have been made in recent European naval battles. This is proven by the scores made in the winter practice at Guantanamo in February and March, in which all ships, at a mean battle range, averaged 11 per cent of hits. The dreadnaught class of battleships, at a long battle range, averaged 7 per cent of hits, and at a mean battle range this same class of ships averaged 21 per cent of hits.

At the Guantanamo practice referred to above the ships were firing at screen targets 90 feet long by 30 feet high. To obtain the percentages as stated above the shots were plotted on a battleship 600 feet long, 95 feet beam, and 30 feet freeboard.

The department is gratified but not satisfied with the results obtained in this year's practices. These results have been secured as a result of careful study and investigation by naval experts. Prior to 1903 all our target practice was at short range. We were using a range of about 1 mile, and it was then the opinion that naval battles would never be fought at distances greater than 2 or 3 miles. The possibility of training people to shoot at the "enormous range of 7,000 yards" was then considered absurd by some foreign authorities. The evolution of our target practice was along these lines: With improvement in the accuracy and rapidity of fire, and with the improvement in gun gear, we began experimental shooting at 4,000

yards with the ship at anchor and the target moored. We went from this to 6,000 and 7,000 yards with the target under way. This aroused the greatest enthusiasm amongst officers and men, as all the firing was competitive, and, in addition to the long-range practice, there was usually held short-range practice in which the guns fired singly. This enabled us to compare the efficiency of the pointers and crew of each gun with every other gun in the Navy of similar class.

As a further step toward increased efficiency in big gun work in 1914, boards of inspection were appointed. They found a lack of interest in gunnery due to the lack of proper preparation. Everything seemed to be centered on the development of the fire control, and for the time being the very important element of human interest, so far as the individual turret crews and gun crews were concerned, was not developed as it had been in previous years. Meantime it was found that exceptional records were being made in the fall practice of 1914 in the elementary practice of the *North Dakota* under command of Capt. C. P. Plunkett, and that, too, with old guns of inferior caliber. The latter's report attributed the splendid record which his ship made in the first place to a system for locating errors, and in the second place to a plan for determining with reasonable certainty the causes of practically all misses. This system was then put into effect by Admiral Mayo in the first division of the Atlantic Fleet, and an improvement followed similar to that which was noted on the *North Dakota*. And later still it was ordered by Admiral Fletcher, then commander in chief, to be applied to all ships whose elementary practice had been delayed. Lieut. Commander Bingham, who had served under Capt. Plunkett, was made gunnery officer of the Atlantic Fleet and Capt. Plunkett's genius has been utilized by transferring him to the department as director of Gunnery Exercises and Engineering Performances.

The response on the part of personnel and material, of men and guns, to this intensive system was quick and powerful. Accuracy of aim, rapidity of fire, and increase of hits at unprecedented range returned to the fleet. Admiral Mayo was able to report last July that—

> It is believed that the dissemination of gunnery knowledge in the fleet during the past year has been greater than at any period in recent years.

And he added:

> There now exists in the fleet excellent gunnery spirit and a thorough interest in battle efficiency.

Admiral Fletcher declared last July that—

> Criticism * * * implying that there has been a deterioration in efficiency during the last three or four years * * * is not justified by the records of

target practice on file in the department or upon reports from the fleet. The introduction of salvo firing, independent fire control of turrets, double-barrel firing, and other requirements call for greater training and greater skill in all the details of material and of fire control, and these new demands have been met without any falling in efficiency * * *. For a time previous to the summer of 1914 some of our battleships were unavoidably retained on the coast of Mexico, owing to our lack of cruisers for that service. It was stated, as a criticism, that owing to this fact our battleship force was not kept together for fleet maneuvers, and as a consequence there was a falling off in target practice. This is not borne out by the facts. Our daily training and drilling for target practice at dotter practice, check telescope, or subcaliber was kept up on all ships, whether in Mexico or with the fleet.

It may be stated therefore that a better systematized and more searching analysis by boards of officers of the performance of ships during the training period preliminary to gun practice, as well as during the gun practice, has resulted in the elimination of faulty methods, standardization of good methods, and a general increase in knowledge of principles and methods underlying successful gunnery. During the year the fleet has carried out all the various forms of gunnery exercises prescribed by the department. The advance in battle efficiency has been maintained and the new orders covering fleet activities for the coming year have been approved. The problems involved make greater demand upon individual and fleet training, and all tend toward further increased efficiency. The satisfactory progress of last year is being maintained and more time is being given in the fleet to gunnery training than in previous years, without sacrificing the time necessary for other important exercises. Firing at extreme ranges has been carried out successfully, and with the greater experience with improved instruments for determining and controlling the ranges, supplemented by improved fire-control installations, more satisfactory results should obtain the coming year. Various experimental firings have been carried out, all of which resulted in a wider knowledge of results to be expected in firing under modern conditions. The battleship and destroyer forces have just completed the short-range battle practice for the year 1916–17, and substantial progress has been made over that reported last year. The submarine force shows an equally satisfactory advance in torpedo work.

I am furnishing to the Committee on Naval Affairs a confidential report showing the remarkable record made and the steady improvement of the past year.

Aircraft for Sea Service.

The necessity for aircraft as an important arm of naval service is appreciated now more than before their value was demonstrated in the European war. The development of aircraft in the Navy has

not progressed as rapidly as its usefulness demands. There is no arm of the service which is now calling for more thought, for it is recognized that what has been done is but an earnest of the greater things which must be done to strengthen the flying corps and make it as effective as the Navy is afloat. Efforts are making to secure the fullest cooperation with the Army Aviation Corps and the civilian efforts to improve the service. The aviation base at Pensacola, which site was selected by a board of able naval officers, is rapidly being equipped. Cruisers are being fitted with catapults. Suitable craft are being obtained as rapidly as American manufacturers can supply them.

The greatest difficulty in connection with naval aeronautics is due to the fact that practically every American aeroplane manufacturer is primarily a builder of land machines, and has not considered the special problems of naval aeroplanes. A land aeroplane can not be modified into a successful naval aeroplane for many very apparent reasons, yet manufacturers continue to endeavor to build naval aeroplanes by such methods. Furthermore, most of the manufacturers have little first-hand knowledge of sea conditions, and their floats and structure do not stand up under such conditions. Until they learn exactly what is required there will necessarily be a great many failures and rejections, and hence the progress depends almost directly on the education of manufacturers in this work. There are reasons to believe, now that the last session of Congress has appropriated enough money to justify investment, that manufacturers will construct aircraft for naval purposes. Great trouble has been and is still experienced in obtaining suitable aeroplanes and engines.

There are now 17 aeroplanes in active use by the Navy. There are on order 60 machines of various types which have not yet been completed and accepted. The industry is still so new that standardization of manufacturing method has not yet been reached, and many delays and rejections are inevitable. Some companies have made progress, however, and the situation is improving. A large twin-engine aeroplane has been designed and built at the Washington Navy Yard and is undergoing tests. It is proposed both to buy from private manufacturers and to construct at Washington suitable aircraft. Efforts have been made to procure such craft from European nations where the exigencies of war have stimulated talent and manufacture. The war has prevented this in large measure. One Paul Schmidt machine, equipped with new type of Renault engine, has been shipped from France. Two Farman aeroplanes have been ordered from that country. Two Green engines have been recently obtained from England. Great difficulty, however, is experienced in obtaining aeronautic supplies from Europe at present. The construction of rigid airships will soon be com-

menced; plans are being drawn for nonrigid vidette type airships. Other types have been purchased or ordered and will be supplied as rapidly as possible. The appropriation of $3,500,000 by the first session of the Sixty-fourth Congress has enabled the department to begin on a larger scale. Increased appropriations are necessary to make the air-craft arm of the Navy what it must be to render the service which experience has shown these ships of the skies are capable of rendering in time of war. Surprises in war ended with the coming of the scouts of the air. The European war has taught us many things in connection with aeronautics. Foremost among these lessons is the necessity for a large trained personnel. The flying services in those countries, though in most cases small, were well trained and fairly well equipped at the outbreak of the war, but the sudden expansion which became necessary almost completely broke down the organization because there were not enough trained officers and men to man the machines in the field and afloat, and at the same time conduct the administration of the services and the training of new personnel on shore.

The first session of the Sixty-fourth Congress authorized the admission of civilians into the Naval Flying Corps. Some of the most expert aviators in Europe are young men who have the requisite quality of skill and daring needed as scouts of the air. They were neither navy nor army officers. This country is now to utilize men of this gift in its Naval Flying Corps, in addition to the classes of educated and trained officers who go into this branch of the service. This training is now being extended to officers and men of the Naval Militia and the Coast Guard. There are at present at the Pensacola Aviation Station 9 officers qualified as naval aviators and 16 officers under instruction. A new class consisting of 12 naval officers, 80 men; 4 marine officers and 16 men; 4 Naval Militia officers and 16 men; and 2 Coast Guard officers and 8 men is now about to be sent to the station. There are now also two marine officers receiving instruction in land-machine flying at the Army school at San Diego, Cal. Qualified officers for aeronautic work at sea from ships and for inspection duty on shore are continually required, and this demand is continually increasing. The supply of officers to be trained must be maintained and the rate of supply must be increased to meet the increasing demand.

A joint Army and Navy board will shortly convene to decide upon the division of responsibility between these services for the air forces of the Nation. Immediately upon the settlement of this vital question, the subject of coastal air stations for patrol and defense will be taken up. Plans have already been drawn up by the Navy, but a complete understanding between the two services is being sought before steps can be taken to put such plans into effect. The

Advisory Committee for Aeronautics, authorized under and appropriated for in the Naval bill, is working in hearty cooperation with the aviation corps of both the Army and Navy, and it is hoped and believed this spirit of cooperation and the results of the study of this scientific body and the Naval Consulting Board will aid in a more rapidly increasing and efficient aviation branch of the service.

NAVAL RADIO SERVICE:

The name of this service will be changed to naval communication service in the near future, it having taken over the handling of all telegraph, telephone, and cable communications and generally all dispatch work of the Naval Service outside the fleet, in addition to the work of the radio stations. The Government and commercial needs have been efficiently served. As an illustration of the growth of the Radio Service in the past few years it may be noted that during the period from December 13, 1912, to December 31, 1913, there were handled a total of 12,854 commercial messages, while during the past fiscal year 97,084 commercial messages were handled. The number of official messages had correspondingly increased, the number for the fiscal year being 628,997.

The censorship of commercial radio stations, to carry out the proclamation of the President dated August 5, 1914, and his Executive order of September 5, 1914, relating to radio, has substantially the same status as at the time of the last annual report. The regulations have been enforced so as to inflict the minimum amount of inconvenience on the public consistent with the neutrality requirements. The department has not found it practicable or necessary to station officers in each commercial station. The censorship regulations are very clear and explicit, and it is gratifying to report that owners of commercial stations have during this fiscal year generally cooperated loyally with the Government in maintaining the neutrality of the United States.

The censorship regulations are based entirely on the President's neutrality proclamation, and should be covered by legislation in order that proper penalties may be provided for such use of radio stations as might at any time imperil the peace of the United States. The President should be given definite power to issue regulations governing the operation of all radio apparatus of whatever character under the jurisdiction of the United States, in order that necessary steps might be taken in delicate situations which might involve us in hostilities in advance of such hostilities. Furthermore, it is becoming increasingly evident that no censorship of radio stations can be absolutely effective outside of complete Government operation and control.

The control of the fleet requires a complete and effective naval radio system on our coasts. This we now have, but with the natural rapid increase of radio installations problems of mutual interference between the Government and commercial stations, ship and shore, are increasing. Every effort is being made to keep naval ships and stations supplied with the very latest apparatus, but the problem of interference is far from being solved, and the work of both Government and commercial stations is restricted, especially in congested areas. The department sees no effective means of handling this subject of interference except by the operation of all radio stations on the coast under one control, and it is becoming increasingly evident that the Government must in the end follow the lead of almost all other Governments and obtain control of all coast radio stations and operate them, in conjunction with naval stations, for commercial work in times of peace.

The interference between high-power stations is also looming up as a great problem of the future, and special consideration should be given this subject while the number of such stations not operated by the Government is small.

The Tuckerton and Sayville stations have been successfully operated under naval control during the year with great profit to the owners.

There are 51 radio stations of the service in operation ashore and on light vessels, 2 of which are high-power stations, 10 of medium power, and the rest of lower power for communication with ships. In addition, a new medium-power station has been completed and will soon be put in service at Point Isabel, Tex. This station will be of great service to the merchant marine in that section, as well as to the Government in facilitating communication with vessels in Mexican waters. Within the next year it is expected that at least two new high-power stations will be completed, namely, at San Diego and at Pearl Harbor. Work is progressing satisfactorily on the Cavite high-power station, also on medium high-power stations at Puget Sound and at Cordova, Alaska. Estimates have been submitted for another high-power station on the island of Porto Rico, primarily for use in naval operations.

Marked improvement has been made in the radio equipment of ships and of the more important shore stations, enabling communication to be maintained over greater distances and securing an unfailing means of cross-continent communication at all times. Distant control stations have also been established at the principal stations and contribute greatly to the handling of the ever increasing volume of naval and commercial business.

Experiments on a practical scale have been continued with direction-finding apparatus. The results have been very gratifying, and it is believed that, when perfected in all its details, the instrument will be of great service as an aid to navigation.

COMMUNICATION BY WIRELESS TELEPHONE.

The Naval Radio Service was mobilized for tests on May 6, 7, and 8, 1916, when, in conjunction with the American Telephone & Telegraph Co., the Navy Department was connected by telephone and telegraph with all navy yards and radio stations in the United States. The result of such tests was so satisfactory that the department proposes to arrange for continuous direct long-distance service by telephone and telegraph circuits between the department and the principal navy yards on the Atlantic coast.

Shortly before 4 p. m. of Saturday, May 6, there congregated in the office of the Secretary of the Navy a number of officers of the various departments, in addition to representatives and officials of the American Telephone & Telegraph Co., to witness the opening of the mobilization. After opening remarks by the vice president of the American Telephone & Telegraph Co., to which the Secretary replied, and a short address by the chief engineer of the American Telephone & Telegraph Co., communication was at once established by wireless telephone between the Secretary and the captain of the battleship *New Hampshire*, then at anchor off Fortress Monroe. The Secretary then gave orders to the ship for the next day's movements, this being the first occasion that a ship of the Navy was ever operated direct from the department by wireless telephone. Many receivers were fitted so that the guests present could hear the conversation. Thus was brought to reality the prediction made to the Secretary some time previously that the time would come when he could sit at his office desk and converse with the captain of a ship at sea. This demonstration was followed by talking to various naval stations, widely separated, by long-distance land line. The circuit used between the Secretary and the *New Hampshire*, at anchor off Hampton Roads, consisted of land-line communication to Radio, Va., and wireless from there to the *New Hampshire*. The return circuit was by wireless to the Norfolk naval radio station and thence by land line to Washington.

On the following day, May 7, communication by wireless telephone was again carried out with the *New Hampshire* cruising between Hampton Roads and the southern drill grounds, and the communication was extended to include Mare Island. The commandant in his office at Mare Island conversed for some time with the captain of the *New Hampshire*. This was done by land line from Mare Island to Radio, Va., and thence by wireless telephone to the *New*

Hampshire; returning, wireless telephone from the *New Hampshire* to Norfolk naval radio station, and thence by land line to Mare Island via the department. This wonderful achievement is but an earnest of further wonders which the future may develop in this art.

THE NAVAL OBSERVATORY.

With increased and increasing speed of our warships, increased fighting ranges, and the continuing development of submarines and aircraft has come the necessity for new and more rapid methods of navigation and plotting, which the Naval Observatory has met by encouraging suggestions, aiding in the development of methods and instruments, making trial of all such as give promise of usefulness and furnishing to the service those that have proved of value.

The usefulness to navigation and to the country in general of the daily time service has been added to by the installation of two up-to-date transmitting clocks and arrangements for checking the actual emission of the radio time signals, which are now received throughout the country east of the Rocky Mountains and the contiguous oceans for several thousand miles. The time for the country west of the Rocky Mountains and for vessels navigating the north and east Pacific Ocean is sent out from the navy chronometer and time station at the Mare Island Navy Yard.

The routine astronomical work of the observatory for keeping track of the heavenly bodies has been kept up, a photographic zenith tube telescope for determining the variation of latitude added to the plant, and the photographic work extended. One volume of observations and an appendix, "Determination of the Difference of Longitude between Washington and Paris, 1913–14," have been published. The 1916 Nautical Almanac contains improvements and additions over previous issues, and tables have been gotten out to add the times of sunrise and sunset and moonrise and moonset in future editions. For the ensuing year the Naval Observatory will continue its routine work of furnishing time, Nautical Almanacs, and navigational instruments; and it is hoped it will be allowed a small appropriation for preparing and fitting out a party to observe the total eclipse of the sun, of June 8, 1918, the path of which will cross the United States.

The repair work to nautical instruments now being done in the instrument repair shop of the observatory has proved so much more economical and satisfactory than the old method of contract repairs that the shop has continually expanded with the expansion of the Navy, and the addition of new forms of navigation instruments for submarines and aircraft until the addition to the shop building of two upper stories is urgently needed to provide economical facilities for the work.

OIL CONSERVATION A NATIONAL NECESSITY:

When the three-year program already authorized by Congress is completed the Navy will require 6,721,000 barrels of fuel oil annually during peace and about three times that amount in the event of war. All new ships are oil burners, and the securing of an adequate supply of oil for the future is a matter of prime importance to the Navy. The superiority of oil-burning ships is so great that the Navy Department desired to build oil-burning battleships, but felt that a deterrent, affecting the use of oil fuel, was the fear of a failure of the supply.

In 1913 the cost of fuel oil was so great and the number of bidders on the Navy's oil requirements so few that in March of that year, before definitely entering upon the policy of constructing only oil burners, the Navy Department wrote to the Department of the Interior asking for information regarding the probable fuel-oil situation 20 years hence and the probability of being able to secure an adequate supply for the prospective oil-burning fleet. The Department of the Interior replied: "Relief to the Navy from increasing commercial prices can probably be secured only by development of its own reserves. * * * It is believed that the Department of the Navy may rely upon the reserves already existing for a supply of fuel oil for a period greater than the life of any battleship to be constructed within the next decade."

Prior to September 27, 1909, any citizen of the United States might enter upon public lands and prospect for oil under the placer-mining laws. He might claim 20 acres, or an association of eight individuals might claim 160 acres, and as long as he prosecuted work looking to a discovery of oil his claim was valid against any other subsequent claimant, but he secured no title as against the United States until he had made a discovery of oil or gas.

The inapplicability of the placer-mining laws, the fact that much oil land was being claimed illegally by homesteaders, scrippers, and others, and the fact that the needs of the Navy for fuel oil were realized, caused the President, through the Interior Department (acting on the recommendation of the Geological Survey and the Interior Department), to withdraw from entry on September 27, 1909, large areas of public land classified as oil land. The order of withdrawal said:

> All locations or claims existing and valid on this date may proceed to entry in the usual manner after field investigation and examination.

It is fair to assume that the representatives of the Government who drew up and issued this order knew the legal meaning of the [illegible]ployed therein. Under the mining laws a valid location [illegible]ior to discovery, but a valid location gives the locator

a vested right, so that the President could not have disturbed the owner of a valid location. Therefore the language used in the order of the withdrawal must have been for the purpose of assuring the owners of valid locations under the mineral public-land laws, and the owners of valid claims under the nonmineral public-land laws, that there would be no attempt to disturb them in their possession, and that their location and claims could proceed to patent.

When this withdrawal order was issued, there were many claimants to oil-bearing public lands in all stages of initiating and perfecting their claims, and many others who were planning to occupy the public domain and prospect for oil under the placer-mining laws, and nearly all of the withdrawn land was covered by numerous paper locations of no value. The Government did not at that time have notice of all the claims that were in existence and valid, because the placer-mining law did not require the claimant to give such notice to the Federal Government until he applied for a patent, which could not be done until a discovery was made. In fact, even after a discovery was made, no notice was required and the locator might legally extract all the oil present without filing an application for patent. Soon after this withdrawal was made two points were raised by claimants of public oil lands within the withdrawn area. First, that many oil men had spent much money and were about to effect a discovery, and that if the withdrawal order stood as issued they would suffer great financial loss through no fault of their own. Second, that able lawyers consulted by them advised that, in their opinions, the President had not the authority to issue such an order.

The first point was settled in favor of the oil claimants by Congress in passing the Pickett Act of June 25, 1910, containing the following provision which followed the language of a court decision cited by the oil men as defining the exact measure of relief desired by them:

> *Provided*, That the rights of any person who, at the date of any order of withdrawal heretofore or hereafter made, is a bona fide occupant or claimant of oil or gas-bearing lands, and who, at such date, is in diligent prosecution of work leading to discovery of oil or gas, shall not be affected or impaired by such order, so long as such occupant or claimant shall continue in diligent prosecution of said work.

The second point was settled by the Supreme Court, in its decision in the Mid West case, in February, 1915, when it was held that the withdrawal order was valid.

The Navy Department requested the cooperation of the Department of the Interior to secure for the Navy a definite reservation of oil-bearing public lands, but in each instance the Department of the Interior replied that pending other and adverse action by the Executive or legislation by Congress the existing withdrawals are as effec-

tive in preventing the initiation of private claims on public oil lands as any more specific reservation. In September, 1912, the President, under the authority of an act of Congress (36 Stat., 847), set aside from the already withdrawn area in California a definite area to be known as Naval Petroleum Reserve No. 1. In December, 1912, the second reserve No. 2 in California, and in April, 1915, No. 3 in Wyoming were similarly created by the President.

The orders creating these naval petroleum reserves stated that the area "shall be held for the exclusive use or benefit of the United States Navy," but the Navy has received no benefit from these reserves and the Navy Department has been unable to take actual physical possession of the naval petroleum reserves, except as to those parts upon which no oil has been discovered, no drilling in progress, and no adverse claims appear, because litigation is pending in the Land Office over all these public lands which are claimed by individuals. Because of this litigation the Navy Department has lacked the authority to protect its interests in these reserves. It has not been idle, for it has acted in concert with other departments to press the investigations and suits and take appropriate action to protect the Navy's interests. The activity of the department in this matter is further shown by the printed records of hearings on proposed legislation affecting the reserves and by its action in detailing a naval officer to special duty in connection with studying, investigating, and protecting these lands, and the using of special appropriations in concert with the Interior Department and the Department of Justice to hasten the disposition of the cases affecting title to these lands.

Since the withdrawal of September, 1909, scores of bills have been introduced in Congress bearing upon the withdrawal and the administration and disposition of the public lands containing oil and gas deposits, but few of them have recognized the Navy's rights and none of them have offered adequate protection to the deposits of oil which have been set aside for the exclusive use and benefit of the Navy.

The status of the naval petroleum reserves is now complicated by the following conditions:

1. The existence of numerous claimants to these lands whose claims are asserted notwithstanding the provision of the Pickett Act, which were initiated in defiance of the withdrawal order or are more or less fraudulent.

2. The suits in progress, about to be instituted, or contemplated.

3. The proposed legislative action which in the form of the "general leasing bill" (H. R. 406) passed the House of Representatives and is to be considered by the Senate when it meets.

This "general leasing bill" passed the House of Representatives but was so amended by the Senate Committee on the Public Lands as to omit all reference to coal lands and, as presented to the Senate, was virtually an act nullifying the decision of the Supreme Court in the Mid-West case, abolishing the naval petroleum reserves, dismissing all suits instituted, and leasing or patenting outright to the claimants the lands claimed. This bill was so amended in spite of the fact that, first, the Navy Department fully presented its claims; second, that the Department of Justice pointed out that few of the beneficiaries possessed even equitable claims, that many were fraudulent, and that the chief beneficiaries were very large corporations and not the poor, hard-working prospector pictured by the oil-land claimants; and, third, that individuals pointed out that many of the claimants had already recovered in the value of the oil extracted far more money than they had expended, and further that some of them had willfully and irreparably damaged the oil-bearing formations. It is to be hoped the litigation will be soon terminated and that Congress will turn a deaf ear to all pleas to give relief to those who have no legal claim to the Naval reserve lands.

Among the many advantages possessed by an oil-burning naval vessel over a coal-burning vessel may be mentioned the following:

(*a*) Large excess of speed.

(*b*) Absolute control over the emission of smoke so that advantage may be taken of the ability to utilize smoke screens.

(*c*) Greater radius of action.

(*d*) Reduction in fireroom force of about 55 per cent.

(*e*) Increased ability to refuel at sea, thereby increasing the effectiveness of the fleet by at least 25 per cent, as that percentage of coal burners would be absent from their station for refueling.

(*f*) Ability to maintain maximum speed for as long as the fuel lasts, because fires do not foul and fireroom force does not become exhausted.

(*g*) Flexibility in regard to increase and decrease of speed without loss of fuel, water, and time.

(*h*) Greater safety of the vessel from submarine attack because of more permissible subdivisions of ship.

As illustrating the above advantages it may be stated that the scouts, destroyers, and battle cruisers authorized by the last naval appropriation act could not be built if coal were used as fuel.

In view of the great advantages of oil fuel enumerated above and in view of the fact that this country produces annually two-thirds of the world's supply of petroleum, and upon assurances of the Department of the Interior as to the oil contents of the naval petroleum reserves, in 1913 the Navy definitely adopted the policy of building oil-burning vessels only.

It was the intention to hold these areas which could be wisely conserved in reserve and not utilize their oil content until the shortage of domestic production or the increased price of fuel oil rendered it advisable. These reserves were designed to serve as an insurance against the possibility of having a large fleet of exclusively oil-burning ships with no oil available.

Now, when the Navy has a large fleet of exclusively oil-burning vessels in commission, building, and authorized, it is confronted with the above-noted adverse conditions affecting the naval petroleum reserves, and the further fact that practically all students of the petroleum resources of the United States are predicting an early decline in the yield of petroleum, and some of the best-posted experts state that at the present rate of consumption of approximately 265,000,000 barrels per year the estimated supply in the ground would last only approximately 22 years, and that the price of oil will probably reach $5 per barrel.

Therefore it is of vital importance that the Navy protect every barrel of oil within these reserves in order that at least an adequate supply shall be available within the continental limits of the United States in the event of war. The Navy Department has had representatives in the field studying the conditions affecting naval petroleum reserves Nos. 1 and 2 and has assisted the Department of Justice in securing data for suits now in progress; but I believe that Congress should take a long step greatly needed for national defense by preserving the Navy's rights to these lands, so that the Navy can be sure that its efforts to protect resources which are of such vital importance to the safety of the Nation will not be jeopardized by claimants who demand relief by Congress because they know their claims can not stand the test of judicial inquiry and determination.

The conditions may be succinctly stated as follows:

An oil-burning naval vessel is incomparably superior to a coal-burning vessel of the same class.

If this Republic is to maintain a Navy, it is worse than useless to have that Navy made up of inferior vessels.

We have adopted the policy of building exclusively oil-burning vessels, relying for the future supply of fuel oil upon naval petroleum reserves created under the authority of an act of Congress.

This future supply of fuel oil for the fleet is threatened by legislation designed to benefit certain large corporations, other companies, and individuals possessing no legal title to the lands claimed.

Shall such legislation be enacted, thereby forcing the Navy to decide whether it shall continue to build oil-burning vessels, which will depend for their usefulness to the country in time of danger upon an uncertain commercial supply of fuel, or build coal-burning vessels

which will be admittedly inferior to those of a nation that can control a supply of oil? or

Shall the national good be placed above private interests without legal rights? The legal rights of claimants can be recognized and cared for without prejudice to the rights of the Navy and the need of the country for an adequate available supply of fuel oil for the fleet. If private parties have any equities that should be preserved, the Navy Department would not stand in the way of adjustment of such rights. But to legislate to give title to oil lands set apart as a naval reserve might jeopardize national defense. Against legislation which would defeat the Naval Reserve orders, affirmed by the Supreme Court, the Navy Department has protested and will continue to protest. Failure to oppose any steps to deprive the Navy of these oil reserves would be to neglect the highest interest of the Navy. If oil can not be obtained at reasonable figures now and in future years, the Navy may be compelled to end the construction of oil-burning ships, losing the manifold advantages which make them superior to those ships which burn coal. Foreign nations, looking to this country and to Mexico for their oil supply, are constructing ships which burn oil. It would be a national calamity for this country to fail to preserve the oil reserves already set aside and to find and set aside other oil-bearing reserves. Present local interests in producing oil ought not to be permitted to stand in the way of this conservation for preparedness, particularly in cases where those asking relief have no legal claim to the lands for which they are seeking titles. National preparedness in an oil reserve is essential to the highest efficiency of the greater Navy.

AUTOMATIC INCREASE IN LINE AND STAFF:

The shortage of officers in both the line and the staff of the Navy and in the Marine Corps, the effects of which had already been felt, was accentuated by the greatly enlarged building program adopted by Congress. Recognizing this need for additional officers, legislation was included in the naval bill that will permit the commissioned personnel to be automatically increased from time to time to meet the demands of the growing Navy. The total number of commissioned officers of the line was fixed at 4 per cent of the authorized enlisted personnel, and the number in each grade is a given percentage of the total number of line officers that may be in the service at any time. Under this arrangement, as there are increases in numbers there are corresponding increases in each grade; and the "humps" which have been such a source of annoyance and discontent in the past will practically be done away with.

The numbers of the Pay, Construction, and Civil Engineer Corps are based on a percentage of the total authorized number of line officers, so that these corps will also expand as the size of the Navy increases. These percentages are:

For the Pay Corps	12
For the Construction Corps	5
For the Corps of Civil Engineers	2

The strength of the Medical Corps, which serves not only the officers but the enlisted men of the Navy and of the Marine Corps, is fixed at 65/100 of 1 per cent of the total strength, commissioned and enlisted, of both branches of the service.

In the grades in the Staff Corps of the rank of commander and above, the numbers in each grade are a certain percentage of the total number in each corps; but, up to and including the rank of lieutenant commander, officers of the Staff Corps are promoted with their running mates in the line. This insures that all commissioned officers will reach the grade of lieutenant commander after having served about the same length of time. The need for the Corps of Professors of Mathematics, which was originally established for the purpose of instructing the midshipmen at the Naval Academy, having ceased, provision is made that no further appointments shall be made to this corps and that the corps shall cease to exist upon the death, resignation, or dismissal of the officers now carried in that corps on the active and retired lists of the Navy.

Commissioned warrant officers who have creditable records are given the pay and allowances of lieutenant (junior grade) after 6 years from date of commission and the pay and allowances of a lieutenant after 12 years from date of commission.

Promotions in the line to the grades of commander, captain, and rear admiral will, as a result of this legislation, be made by selection instead of by seniority as has been the practice in the past. The selection will be made from each lower grade upon the recommendation of a board of 9 rear admirals on the active list of the Navy. This board will convene during the month of December of each year and will recommend to the Secretary of the Navy for promotion a number of officers in each grade equal to the number of vacancies to be filled in the next higher grade during the following calendar year. It is also required that any officer recommended for promotion shall have received the recommendation of not less than six members of the board. The approval or disapproval of the report of the board rests with the President.

Officers selected for promotion are still required to pass the examinations prescribed by law for officers promoted by seniority and, in case of failure to pass the professional examination, an officer is thereafter ineligible for selection and promotion. On and after

naval officers and naval discipline, thus affording civilians, especially those who were brought up on the water, an opportunity to gain an experience calculated to fit them for this service in time of need and to give them a taste of what the Navy requirements of the country would be in a time like that. For this duty there were detailed from the ships of the reserve force nine vessels on the Atlantic coast and two on the Pacific coast, the embarkation being from the following ports: Portland, Me.; Boston, Mass.; Newport, R. I.; New York, N. Y.; Philadelphia, Pa.; Baltimore, Md.; Norfolk, Va.; Charleston, S. C.; Seattle, Wash.; Astoria, Oreg.; and San Francisco, San Pedro, and San Diego, Cal. From the Atlantic coast there were embarked 1,831 men and from the Pacific coast 97 men.

It was the original intention to confine this first cruise to the Atlantic coast, as it was more or less of an experiment, but after numerous requests had been received the department authorized a similar cruise for the Pacific coast, but too late to afford it the required publicity, which accounts, in part, for the wide difference in the numbers which enrolled on the two coasts.

For the gratifying success in securing enrollments great credit must be given to civilian committees organized in several of the large cities for the purpose of giving publicity to the cruise.

The ships on the Atlantic coast mobilized at Fort Pond Bay on August 15, and after participating in the department's strategic maneuvers August 20–27, proceeded to Hampton Roads for drills ashore and liberty. Here a review of the civilian battalions was held at Fortress Monroe. Target practice was held at Tangier Sound. During the cruise these volunteer recruits were given setting-up exercises, infantry drill, boat drill, emergency drills, gun drills, etc., and instruction in seamanship, navigation, steam engineering, electricity, radio work, and watch standing.

Cooperating with the vessels engaged in this cruise were a number of motor boats entered by residents of the different naval districts represented, with the idea in view that these small craft would be quite useful as auxiliaries in time of war. No boat was permitted to participate in the last week of the cruise unless it had been previously inspected by the board, and 54 boats reported for mobilization—9 at Cape May, 18 at Boston, 12 at Newport, and 15 at New York. These boats were exercised in maneuvers, signaling, searching for submarines, guarding battleships against submarine and destroyer attacks, and given instruction in the defense of their respective naval districts. The organization of these boats must conform to the organization of the naval district, and for the purpose of inspection and classification a permanent board of two officers has been appointed in certain naval districts under the direct supervision of the comman-

dant of these districts and with additional duties under the Board of Inspection and Survey.

The recruits taking part in this cruise represent the highest type of professional and business young men of the country, and almost without exception they left the cruise imbued with the fine spirit of the American Navy, with a new realization of its value as that arm of the service which would be first to strike a blow against aggression in the defense of the country, and, while the department realizes and no doubt they themselves do, that the experience gained in this short period will not fully qualify them for service with the Navy, it has given them, nevertheless, a primary naval course, and it is believed and hoped that it will whet their patriotism to such an edge that they will not fail to take advantage of future cruises and qualify for the volunteer naval reserve. From the enthusiasm evinced by the civilians who participated in this cruise, the reports emanating from them, and the press comments since the completion of the cruise, the department feels assured that in future cruises there will be no difficulty in securing as many volunteers as can be accommodated. Just prior to the completion of the cruise, representatives of the civilians called a meeting for the purpose of effecting a national organization, and it was decided to hold an organization meeting in New York in the near future.

NATIONAL NAVAL VOLUNTEERS.

The new naval act provides for a force to be at the disposition of the President for use, in addition to the Regular Navy, in any emergency and in actual war. The National Naval Volunteers will be a force of volunteers, qualified physically and professionally as the department may prescribe, immediately available for expansion of the Navy in time of emergency or threatened war. Congress provided liberal retainer pay for the National Naval Volunteers and the department has every reason to believe that within a reasonable time the entire Naval Militia will volunteer and be incorporated in the National Naval Volunteers. The continued generous support of the Naval Militia and the National Naval Volunteers by the Government is amply justified by the attendant results in the increasing efficiency of the Naval Militia.

NAVAL RESERVE FORCE.

Another important and progressive feature of the naval act was the creation of the Naval Reserve Force. A well-trained, efficient, and large reserve for the Navy has for many years been an urgent necessity. It remained for the Sixty-fourth Congress to enact legislation that will in the shortest possible time provide the Navy with

this crying need—a proper and adequate reserve. The legislation enacted provides for a Naval Reserve Force which will embrace all former officers and men of the Navy who are now in civil life; officers and men of the merchant marine, including those on the ships of the merchant marine that will be taken over by the Navy in time of war or emergency; those civilians who may be capable of performing useful service to the Navy in connection with the defense of the coast, such as service on or with coast-defense vessels, mining vessels, patrol vessels, or as radio operators and aviators. Provision is made for a liberal retainer pay for all classes of reserves. An important and valuable provision is to the effect that enlisted men of the Navy after 16 or 20 years of service may transfer from the active list to the reserve, and these are given pay to retain their services until they are no longer needed by the Government.

It has been estimated that there are now in the country 20,000 officers and men who have been trained in the Navy and have gone into civil life. It is expected that most of these trained and efficient officers and men will volunteer for enrollment in the Naval Reserve Force. Within a few years the Naval Reserve Force should number at least 30,000 officers and men.

PAY OF ALL NAVAL RESERVES.

In order to make more attractive service in the various Naval Reserves the pay has been fixed as follows:

In the Fleet Naval Reserve, officers are to receive two months' base pay of their rank. Men of 4, 8, and 12 years' service will receive, respectively, $50, $72, and $100 per year. This pay is increased 25 per cent for each enrollment. The transfer class of 16 and 20 year men will in general receive between $40 and $60 per month.

In the Naval Auxiliary Reserve, officers will receive one month's base pay of their rank. Men will receive two months' base pay of their rating. This pay is increased 25 per cent for each enrollment.

In all other classes except the Volunteer Naval Reserve, officers and men will receive two months' base pay of their rank or rating.

In the Volunteer Naval Reserve, members of this class must serve in one of the other classes of the Naval Reserve, the only distinction being that they will receive no retainer pay. Members of all classes will receive full pay of their rank or rating when on active service; this is in addition to their retainer pay.

INCREASE IN THE MARINE CORPS.

The naval appropriation bill for the fiscal year ending June 30, 1917, contained provisos increasing the Marine Corps by 255 officers and 5,034 enlisted men. The establishment of a large Marine Corps

post on each coast as training stations for its expeditionary forces has now become necessary. San Diego has been selected as the site for the west coast post. Inasmuch as the east coast navy yards are being developed industrially to their utmost capacity, the east coast post must be located at some place other than a navy yard.

THE ORGANIZATION OF THE MARINE CORPS.

Extensive legislation was enacted concerning the personnel of the Marine Corps, placing it on a percentage basis similar to that above described in the case of the Navy, embracing a large addition of second lieutenants and many promotions to officers already in the corps. The legislation contains a partial reorganization of the corps and provides for the eventual amalgamation of the line and staff. The legislation authorizes the appointment of five officers with the rank of brigadier general from among the colonels of the Marine Corps, and provides the rank and pay of brigadier general for the senior member of the quartermaster, paymaster, and adjutant and inspector's departments. The provisions contained in the act which establish warrant grades in the line and staff of the Marine Corps afford further opportunity for the advancement of deserving enlisted men. Since the passage of the act 17 enlisted men have passed creditable examinations and received commissions as second lieutenants in the Marine Corps. Graduates of certain excellent military schools have also been appointed second lieutenants. In addition, in order to fill the authorized quota of second lieutenants in the Marine Corps, an examination has been ordered. Appointments will be made from States in proportion to population or their Representatives in Congress, as midshipmen at Annapolis are proportioned to the States.

ENLISTED PERSONNEL:

There has been a steady increase in the personnel of the Navy, but never during the past 16 years previous to March 4, 1913, was ample provision made for adequately manning the ships of the Navy as new ships went into commission. It remained for this to be accomplished in the naval act of August 29 of this year by which authority was provided to increase the enlisted personnel from 51,500 to 74,700 (68,700 men and 6,000 apprentice seamen). As a further increase the Hospital Corps of the Navy was fixed at 3½ per cent of the authorized enlisted strength of the Navy and Marine Corps, an increase of 2,929 men, and was made in addition to the regular enlisted complement in the Marine Corps. The total increases in the complement, therefore, amount to over 26,000 men, while the total number may be increased to 87,000 in time of national emergency. This will

for the first time in this decade provide a personnel sufficient to man all the ships of the Navy in commission and to keep the necessary quotas on ships in reserve and in ordinary. The present authorized strength of the Navy (enlisted men and apprentice seamen) is 74,700 men. In the fiscal year 1907 it was 37,000. In the fiscal year 1911 it was 47,500 men. The last Congress made an authorization which more than doubled the number in 1907. If to the enlisted sailors now authorized (74,700) there be added 14,981 marines and 4,588 of other corps, we will have a grand total of 94,269, being 48,498 in excess of the total strength in the fiscal year 1907. To these men who enlist for service afloat, including marines, should be added approximately 25,028 men (an increase of about 6,516 over 1907) who serve the Navy in the principal navy yards or munition plants and are therefore a part, and an important part, of the personnel of the Navy. This makes a total of 119,297 men in the Navy, and to this should be added 6,750 officers of the Navy and Marine Corps, making a grand total of the personnel of the Navy of 126,047. This takes no account of the 9,334 officers and men in the Navy militia who give part of their time, and the growing number in the various reserves provided for in the 1916 law, who will make in time of need a valued portion of the fighting strength of the Navy.

On the 5th of March, 1913, the enlisted personnel of the Navy was 4,153 short of the authorized complement of 51,500. After careful study the problem was solved of why young Americans did not fill up the quota. An opportunity for education and opening new doors for promotion attracted young men who had not enlisted until these new advantages of service in the Navy were afforded. Then the youth of the country responded to these increased opportunities in the Navy, and during the past three years the complement has been several times in excess and a waiting list created, while the number of recruits actually enlisted in this time reached a total of 6,831. The satisfaction, too, in general, of parents with the opportunities thus presented to their sons is reflected in a letter which the department recently received from a pleased father just after he looked his boy over while he was home on furlough. Said this father: "I consider him improved 100 per cent from the day he left me two months ago in every way, physically, mentally, and especially in discipline." Not only have the bluejackets' increased opportunities met with a notable response from the young men of the country and with appreciation on the part of parents, but abroad the conditions of the American Navy's enlisted personnel have been conspicuously recognized. Mr. Hector O. Bywater, one of the great naval authorities, writing in a London service journal, says: "The American bluejacket is of a most admirable type and is fed, berthed, and cared for in a way

that astonishes those who are acquainted with the best European standards."

The department was gratified over the response of the young men of America to the inducements offered by a navy career. The department, however, is not blinded to the fact that the total authorized increases in the complement since the passage of the new bill amounting to over 26,000 men in the Navy and 5,034 men in the Marine Corps impose a difficult and exacting recruiting task. The difficulties are accentuated by the unprecedented demand for labor throughout the country, particularly in the industrial centers, together with the increasing activities of other recruiting services. Since the passage of the act of August 29, 2,524 new men have been enlisted, for a part of the time the inflow averaging about 1,000 men a month. Trusting in the widespread conviction which has permeated the entire country that not only does the Navy offer an unexcelled chance to learn the great basic trades, but also that it beckons to a possible officer's commission, if the applicant is willing to pay the high cost which ambition and application impose, the department is nevertheless putting forth every possible energy to make this great recruiting task a success. In order to obtain the large increase, the Navy recruiting service has been extended to reach every section of the United States, and has been reorganized so that the country has been divided into the eastern recruiting district, which extends to the 103d degree west longitude, including the States of North and South Dakota, Nebraska, Kansas, Oklahoma, and the eastern portion of Texas and the western recruiting district, lying west of the 103d degree west longitude, and including the Rocky Mountain and Pacific States.

A printing plant has been established at the Navy publicity bureau, in New York City, which has been or will be equipped with the necessary machinery for turning out the booklets, circulars, small posters, hangers, blanks, and other literature needed in the Navy recruiting service. When the advantages offered through these agencies are brought home to the youth of the country the department is confident that the necessary recruits will be secured. In the literature put forth American young men will be reminded that the Navy Department has kept faith in the promises of promotion by merit made to them.

PROMOTION BY SELECTION:

The outstanding provision with reference to personnel in the naval legislation of the Sixty-fourth Congress was the adoption of promotion by selection in place of the antiquated and un-American method of promotion by seniority. This forward step is but the beginning

of the tearing up by the roots in every branch of the service of advancement by age instead of advancement by ascertained merit. Under the old system the rewards for mediocrity and ability were the same. The new system makes promotion dependent upon ability, initiative, and resourcefulness. Promotion by merit through selection has always obtained in the assignment of officers to the positions as commanders of fleets and chiefs of bureaus, and in advancement among enlisted men, but promotion from grade to grade was based upon seniority. A brilliant man, gifted as Farragut or Dewey, under the seniority system abolished in September of this year, could never be advanced above the mediocre man who happened to have graduated a number ahead of him. It was an absurd method, lagging superfluous in our day, of denying reward to merit. For years some of the ablest naval officers advocated the real American principle of advancement by merit, but until the Sixty-fourth Congress it was doomed to defeat. After careful study, with three years' experience, and after very mature consideration of the logic and practical necessity of applying in the naval service the principle of promotion from grade to grade based upon merit rather than upon seniority as had heretofore obtained, I made my very earnest recommendations, in my last annual report, by letters to, and in my hearings before, the Naval Committees of Congress urging the passage of the recent act containing provision whereby promotion from the grades of lieutenant commander, commander, and captain will be made by selection, the legislation prescribing in detail how this should be done and insuring that such selection should be excluded from the effects of political influence and that no officer should be promoted from those grades who had not been selected for promotion by a two-thirds vote of a board of nine rear admirals. This adoption of the principle of selection in the promotion of officers in the Navy is, in my opinion, the most advanced and beneficial feature of constructive legislation which has ever been passed relating to the naval service. It had been my hope and desire that the principle thus found by Congress to be necessary for the three grades mentioned be applied for similar reasons to all ranks and grades in the service. Owing to the lack of time available for the consideration of this question during the final hearings, the selection feature was limited to the three grades mentioned. It is earnestly hoped that during the next session of Congress the principle of selection will be extended down to and including promotion from the grades of ensign, junior lieutenant and lieutenant in the line, and through corresponding grades in all of the staff corps of the Navy and in the Marine Corps.

In view of the fact that promotion by selection was not extended lower than the grade of lieutenant commander in the line, and hav-

ing become convinced from my experience since my incumbency in this office that the written examinations required of officers, especially those of the lower grades, did not furnish an accurate index as to their capabilities in the actual performance of their duties, and in view of the very large number of promotions that were to be made as a result of the legislation refered to, I have instituted a new system of examinations whereby officers of the grades mentioned are to be subjected not only to a written examination but also to an oral and to a practical examination which will cover in a searching manner all the duties which they will be required to perform in the next higher grade. This was considered particularly necessary for officers of the lower grades, because the duties of such officers are to a very great extent practical rather than theoretical. While I do not believe that this change in the form of examinations will fully take the place of applying selection to these grades, nevertheless it is considered the greatest step in advance in that direction that could have been made until such legislation is enacted.

Under the personnel feature of the recent act it is provided that—

> Officers of the lower grades of the Medical Corps, Pay Corps, Construction Corps, and Corps of Civil Engineers shall be advanced in rank up to and including the rank of lieutenant commander with the officers of the line with whom, or next after whom, they take precedence under existing law.

Under present law, officers must, prior to promotion from grade to grade, be subjected to physical, mental, moral and professional examinations. The grades in the different staff corps are not altogether identical with those in the line, and it will be noted that the rank of an officer in the staff corps is, under the above-quoted provision, to change when his corresponding number in the line is promoted from one grade to another up to and including lieutenant commander. In view of the provision that the pay and allowances of officers depend upon their rank and that examinations only occur on promotion from grade to grade, it follows that the above provision permits staff officers to be advanced in rank and in emoluments without examination. This is clearly illogical. Staff officers should not be advanced in rank—with its corresponding emoluments—until they have, like line officers, demonstrated their fitness therefor by examination. As the law now stands, not only may staff officers be advanced without examination, but under the law if a staff officer fails in his examination for promotion, for example, from the grade of passed assistant paymaster to the grade of paymaster, his rank would nevertheless be increased with that of his running mate despite such failure in examination, and though he could not be promoted to the grade of paymaster he would continue as a passed assistant paymaster

but his rank and pay would be increased notwithstanding. It is hoped that this very undesirable feature will be changed at the approaching session of Congress so that no officer will be advanced in the staff corps until after he has established his qualifications by examination.

Making immediately effective the principle of selection, the vacancies in the grade of brigadier general in the Marine Corps have been filled by selection from the grade of colonel, and the vacancies in the rank of rear admiral of the upper and lower half in the various staff corps will shortly be filled by selecting those officers best qualified for advancement to the higher grades. The selections for promotion in the Marine Corps were Cols. Barnett, Waller, Pendleton, Lejeune, and Cole. The board of nine rear admirals provided for in the new act and charged with the duty of recommending officers to be selected for promotion to the grades of rear admiral, captain, and commander in the line of the Navy has been ordered to convene on December 2.

EDUCATION:

The expansion of the educational work of the Navy noted last year has continued, and foundations have been laid for greater expansion in educational opportunities. Every man in the Navy is a student, from the admiral in the War College to the midshipman at the Naval Academy and the apprentice in the Training Station and afloat. The increased enlistment authorized calls for additional facilities at training stations. The beneficial result of the whole educational system in the Navy is that theoretical knowledge is almost immediately put into practice. Application is always eagerly waiting upon acquisition. It makes powerfully for efficiency. The man who does not wish to go to school ought not to knock at any door in the naval service. The Navy is the greatest educational institution in America, and in it theory is valued only as it is put into practice.

NAVAL WAR COLLEGE.

The Naval War College was established in 1884. The War College idea has now come to be enthusiastically accepted, though at the beginning there were not wanting officers who doubted the need for the education of officers in the art of war, or in any other art that could not be adequately mastered at the Naval Academy or on shipboard. And yet it would have seemed that the delivery in 1887 and 1888 at the War College for the first time by Capt. Mahan of his lectures upon "The Influence of Sea Power upon History" would have brought a profound sense of the possibilities of the college to all. It was then that the value of this great work, which probably affected as powerfully its generation as any other book written therein, was first realized. However, if the college had indifference

to contend with in its early years, it was not in its early years without its friendships, and among its most helpful supporters were Admiral Porter and Admiral John G. Walker. The college, nevertheless, in its early days had a struggle for existence, and as late as 1893 there was a movement on foot to abolish it. In the beginning no work was required of anyone. The college stood as a place of opportunity, not in any sense as one of obligation. In spite of this attitude—perhaps, also, in some measure because of it—an obligation appears to have been assumed by the students themselves to take advantage of the privileges so generously offered. The course consisted of a summer conference from June to October, during which the art of naval war and international law topics were studied and discussed. The college was a thing more or less apart from the fleet, and at times was even an object of suspicion there.

In 1911 a "long" course was established to supplement the "summer conference," and was taken by four officers. When the present Secretary first visited the college in June, 1913, only five officers were taking the course. It seemed a wrong to tax the people to pay for this great institution and to have the Navy derive so little benefit from it. I declared its doors must be closed or its advantages utilized. It was therefore decided to send more officers to take the course. Its growth and expansion has, to a certain extent, by reason of the shortage of officers, not been as great as I had planned, but the college has grown from five officers in attendance to seven or eight times that number in three years. It now has 36 student officers pursuing a course of 12 months at Newport and a correspondence course which is taken by 450 officers of the Navy. Distinguished officers enthusiastically rejoice that the college as now conducted is at all times essentially a part of the fleet. Within the past two years all division commanders, all commanding officers of the Atlantic fleet, and all members of the War College staff assembled at the college for the purpose of discussing the relations between the fleet and the college. Without a single exception they agreed that it should ultimately be the established practice to order to important command, both ashore and afloat, only those officers who were graduates of the college. In contradistinction to the sentiment which seems to have prevailed a few years ago, every officer of the service is eager to have the privilege of attending. The college has had a quartette of notable backers more or less closely identified with it in the past—Rear Admiral Stephen B. Luce, who got it under way; Capt. Alfred T. Mahan, who, with his powerful lectures, gave it prestige; Commander Henry C. Taylor, who, by his tact and diplomacy, saved it from wreck in its darkest and stormiest days; and Lieut. McCarty Little, who, by his contagious hopefulness and illuminating teaching, guided it to enlarged usefulness, introducing the war game.

The progress of the college under Rear Admiral Austin M. Knight, now president, has been most gratifying. In heartiest cooperation with him it has been possible to establish the long courses at 12 months, beginning with January and July, with not less than 15 officers above the middle of the list of lieutenants in each class, the staff, including the president, to consist of 9 officers; to these 30 officers will doubtless usually be added several officers of the Army and of the Marine Corps. A limited summer course is to be taken by as many officers as can be spared from other duty, while a correspondence course is established. This year the total number in attendance was 41, with a staff of 7 members, and every one of them a graduate of a long course. In the language of Admiral Knight, the college now "is an institution of definite aims, pursued by definite and above all by organized methods."

THE NAVAL ACADEMY—NEW BUILDINGS NEEDED.

The Sixty-third Congress looked ahead in providing for an increase of officers in the Navy, and the Sixty-fourth Congress also took a forward step in authorizing an additional appointment at Annapolis by every Member of the Senate and the House. The law enacted in 1903 authorizing two appointments by each Member of Congress had expired, and in May, 1913, Congress extended it. The Sixty-fourth Congress, as its first step in preparedness, passed a law authorizing an additional appointment for every Senator and Representative, so that now 1,762 midshipmen is the possible number that may be appointed. As has always been the case, a considerable percentage of the appointees fail to pass either the mental or physical examination, and the actual increase of midshipmen at Annapolis since the passage of these laws has been 462. The new fourth-class numbers 625, the largest in the history of the academy. The number present now is 1,230, as against 768 in 1912. It was foreseen that the usual percentage would fail, but enough additional appointees were successful to require changes in the buildings at Annapolis to accommodate those who entered this fall. It will be necessary for Congress at the approaching session to appropriate a sum sufficient to erect additional buildings and provide extension of present buildings, or both, to accommodate the increased number of midshipmen already authorized, and to further increase the capacity of the Naval Academy if an additional number of midshipmen is authorized shortly. Such provision will be required either now or after the new buildings are completed, because a still further number of officers must be trained for the larger Navy which Congress has authorized. The size and character of the additional buildings to be

provided is a matter that should receive the early consideration of Congress. We should build for the future and along the most approved lines. There is also need of an adequate building for the post-graduate school at Annapolis. The suggestion has been made that a site and buildings for the marine barracks be obtained at some other location than Annapolis, and the present quarters at Annapolis occupied by the marines to be converted into a post-graduate school. There is much to be said in favor of this change, and I recommend that Congress take the suggestion under consideration.

Too much can not be said in commendation of the superintendent, the commandant, and their associate officer teachers and civilian instructors at Annapolis, for the great work they are doing and for their wise action in promptly making arrangements, without waiting for increased appropriations, for housing and providing classrooms for the increased number of midshipmen. The spirit at the Naval Academy was never better than now. The era of good feeling has come between the midshipmen and the officers and instructors. It is all that could be desired. The midshipmen have responded cheerfully and unitedly to the confidence reposed in them and the added responsibilities imposed upon them. Such response is the best guarantee of the steadily improving character and fitness of the future naval officers. Hazing has been stamped out by the cooperation of the midshipmen, athletics have been placed on the highest plane, standards of scholarship and military training have been improved, and the deportment and demeanor of the more than twelve hundred young men who are to command our greater Navy has never been surpassed in the history of the academy since it was established by the great Secretary of the Navy, George Bancroft, in Polk's administration in 1845.

MEDICAL COLLEGE AND PAY OFFICERS' SCHOOL.

In Washington, under the direction of the Surgeon General, the United States Naval Medical School of excellent grade trains prospective young naval surgeons, and the course is thorough and the standard high.

Under the direction of the Paymaster General the Naval Pay Officers' School for training prospective pay officers in the Navy and Naval Militia affords valuable instruction in their professional duties to 15 newly appointed assistant paymasters of the regular Navy and also to 16 pay officers of the Naval Militia from various States, one of whom came all the way from Honolulu and another from California for the special purpose of enrolling for a course of instruction at the school. An officer of the pay corps, particularly well qualified by over 10 years of practical experience afloat and ashore, was detailed to instruct the student officers.

MARINE OFFICERS' SCHOOL.

The instruction in the Marine Officers' School, always excellent, has been improved this year, and its advantages will be extended to the extraordinarily large class of second lieutenants provided in the last naval bill.

EDUCATION OF BLUEJACKETS.

The American Navy is largely a boy institution. The bluejacket enlists at 17. The average age of officers and men when the fleet went around the world was 22. The authorized complement of the enlisted personnel was 51,500 when the new act of August 29, 1916, became the law increasing the complement to 74,000 in peace—68,700 men and 6,000 apprentice seamen—and 87,000 in emergency. At the training stations they are drilled and given the rudiments of naval training. They are given technical instruction and taught the three R's and this academic instruction is continued aboard ship. The instructors are the younger officers recently from the Naval Academy and warrant officers.

The American Navy offers as fine an opportunity as exists to the American youth who wishes to win in the race of life. The vast majority of boys in graded and high schools study their geography out of books. The bluejacket studies geography aboard ship and compares the "book learning" with the real thing as he circumnavigates the globe. The school boy at home gets his history out of the books, but the bluejacket may add to his book knowledge a glimpse of the inside of Westminster Abbey, or a sight of the Coliseum at Rome, as he is given leave while on his vessel's cruises around the world. He has the fourfold opportunity of serving his country, learning a trade, and improving his mind in study and travel.

We live in a day when the individual is trained as never before. Not only are his present attainments being built upon to increase his usefulness to society, but his latent forces are being coaxed into flower and fruitage. Every angle at which a man may be developed makes him better fitted for service, and in developing the men of our Navy individually along the line of the natural endowment and the outcropping bent of mind of each I believe a greater efficiency for teamwork is secured, which enhances the value of the men behind the guns in the day of battle. A man is a better coal passer for being able to parse sentences and bound the States of his country. That conviction is deep seated, and no other view is American. Those who deny it contradict Horace Mann's fundamental principle. A radio operator will not be the less valuable for having studied the science of electricity. The lad at the wheel, who keeps the captain on the bridge informed as to whether the

ship is on her course or not, must be even a better man for his job if he knows how to triangulate. And the boys behind the guns will be more efficient gun pointers from having a knowledge of applied mathematics. If the enlisted man does not remain long in the Navy, his usefulness to his country as a citizen is nevertheless enhanced by what he has acquired in the Navy schools.

An attempt has been made to prove that many boys go into the Navy because they really do not wish to go to school at home. I have seen no sufficient evidence, since the school on board ship was first successfully tried out on the *Des Moines* in 1913, that American youth enters the Navy for a four-year bluejacket truancy afloat. The school system in the Navy has, I believe, appealed strongly to American parents, and almost as strongly to American youth itself. Certainly it is a fact that a deficiency of 5,000 in the complement of enlisted men has been overcome since 1913, after schools had been established, and at times there has been a waiting list for bluejackets.

The Navy offers a wide variety of industrial courses to ambitious young men. If the recruit has had some training or experience in electricity, he may enter either the general or the radio classes of the electrical schools, one at the Brooklyn and the other at the Mare Island Navy Yard. Here the course of instruction comprises machine-shop work, reciprocating steam engines, steam-turbine engines, internal-combustion engines, magnetism and electricity, dynamos, motor generators, alternating currents, batteries, and the like. In the radio group there is thorough practice in the radio mechanism for receiving and sending. In the Artificer School at the Norfolk Navy Yard men are taught to be shipwrights, ship fitters, blacksmiths, painters, and plumbers. Both at Newport, R. I., and San Francisco are yeomanry schools, where the men are perfected for the clerical work of the Navy to become expert stenographers, typewriters, bookkeepers, etc. An attractive line in the Navy is the Hospital Corps, with schools at Newport, R. I., and San Francisco. Not a few men have gone out of these schools after their Navy service to make good doctors in civil life, after the thorough training received in anatomy and physiology, nursing, first aid, and emergency surgery, hygiene and sanitation, pharmacy, materia medica, toxicology, chemistry, and the like. Music is essential to vary the secluded life afloat, and boys with musical talent are instructed in the schools at Norfolk and San Francisco. The machinist school at Charleston is open to men who show themselves apt in mechanical work. The coppersmith school is located also at Charleston. The two commissary schools are at San Francisco and Newport. At Pensacola every three months a class of 16 enlisted men, selected by

the commander in chief of the Atlantic Fleet, is trained for an 18 months' course in aeronautics. The course is divided into two classes—mechanics and flying. The men are afterwards transferred to general service and are entitled to additional pay of 50 per cent while detailed to the duty of actual flying. The seaman gunners' school is located at Newport, where a special study of the torpedo is made.

Under 20 years of age and after a year's service, a bluejacket may stand the examinations for admission to the Naval Academy, where 25 lads from the service are admitted annually. Here they are making good, and one of them has already been elected president of his class. If he is studious and ambitious, the bluejacket may rise in due time to wear the much-envied four stars of an admiral.

But whether a bluejacket remains in the Navy with opportunity to climb to the highest pinnacle of success, or whether he learns a trade and retires eventually to civil life to ply it, he gets in the Navy one of the finest trainings available anywhere, an experience unique and broadening, and in which he is well fitted for the duties of patriotism and of citizenship in the greatest Republic on the globe.

ADDITIONAL OPPORTUNITIES FOR ADVANCEMENT OF ENLISTED MEN.

Under new rules, adopted since 1913, 15 enlisted men have been commissioned as assistant paymasters, 64 as pay clerks, and in the future all pay clerks will be promoted from the ranks instead of by the personal appointment of pay officers. Thirteen enlisted men have been promoted to the rank of ensigns. Enlisted men are also eligible for commissions in the Aviation Corps.

Reference has been made in my previous annual reports to advantages attendant upon the operation of the law of 1901 permitting warrant officers to qualify, by competitive examination, for commissions as ensigns in the line of the Navy. This law, however, restricts its benefits to boatswains, gunners, and machinists, and makes no provision for the similar advancement of other warrant officers. It is recommended that this law be amended to permit such officers, under generally similar conditions, to qualify for commissions in their respective corps. This amendment would be in the direction of widening the opportunities for advancement of enlisted men, a principle which has been consistently urged in my annual report each year. It will, furthermore, provide an additional source from which the Staff Corps of the Navy can be recruited, and the present demand for additional officers in all branches of the service is so urgent that no source of available and efficient material should be overlooked.

HEALTH AND SANITATION:

The chief object of concern in the Navy to the Surgeon General and the Medical Corps, is the matter of health and sanitation and the clean living of the personnel, essential to efficient service. I doubt if the families or friends of the young men who enter the Navy realize how carefully guarded as to health conditions these young men are. No institution of private training is so zealous for the well-being of its charges, or so watchful for the preservation of its own good name as is the Medical Department of our naval service. A constant pride is exhibited by our medical officers in maintaining health and sanitation on the ships or stations under their care, and constant efforts are being exerted to provide further safeguards.

Mortality statistics tell us that if these young men remain on the farm or in the city, eight out of every thousand will die during the year from the ordinary hazards open to all of us in the way of disease and injury during what should be the healthiest years of our lives. But last year only 4.48 per 1,000 of the naval personnel were lost by death. Could anything be presented more convincing of the efficiency and devotion of our caretakers of health?

Incident to the nature of a seafaring life is of course the constant menace of drowning, and of our total deaths 51, or one-sixth, are due to this cause. Of these, however, 21 are those who went down with the *F-4*.

It is noteworthy that the three predominant causes of death, drowning, tuberculosis, and pneumonia, all show upon analysis encouraging improvement over preceding years. Tuberculosis also, as it is handled in the Navy, is found less frequently in naval than civilian life. To quote statistics again, our civil population between the ages of 15 and 60 years owes 30 per cent of its total deaths to this disease; naval mortality during 1915 owes 11 per cent of its deaths to this cause, and this is being materially bettered each year.

The activities of the medical department of the Navy during the past year have been unusually marked. Naval and military developments of this unprecedented epoch of military history are constantly being observed and proper use made thereof in the plans and activities of our own service. Our medical officers detailed for observation purposes with the warring powers are informing themselves of all facts available pertinent to the medico-military aspects of naval life.

Our own military activities in the last two years have devolved upon our shoulders a large degree of medical care and treatment of the people of Haiti and Santo Domingo. In the former country affairs have resolved themselves into the formation of an orderly system of government, in which the United States is doing its utmost

to lend assistance to the local medical authorities. Our medical officers, acting in amicable unison with a commission of leading Haitian physicians, have gone over the existing laws relative to public health matters, and new laws have been drafted making necessary changes. Certain of the more important of these changes are now being put into execution under the present régime until such time as the proposed alterations of the Haitian statutes can be secured. Undoubtedly the future will yield as much credit for notable sanitary efforts here as has been the case in the past in Panama and Porto Rico.

The usefulness of a hospital ship as a necessity in modern warfare has been emphasized by the European conflict, and the naval act of this year, besides increasing the Medical Corps from 347 officers and 1,500 men to 600 officers and 3,000 men, besides facilitating advancement in the Hospital Corps from the lowest enlisted rating to that of actual commissioned officer, and besides increasing the total appropriation for the medical department from $682,000 last year to $1,187,728 for the current year, has led the navies of the world in authorizing the construction of a model hospital ship, which will be a veritable Bellevue afloat. The war across the Atlantic has demonstrated the value of the hospital ship. The British alone employed over 40 ships of this class during the Gallipoli campaign. These ships and the ships employed by other nations, however, were designed for other purposes and hastily converted to meet the emergency. The new hospital ship being constructed by the Philadelphia Navy Yard will be an oil-burner, with all that this means for comfort and cleanliness. A stabilizer will make for steadiness afloat. Not only will she provide hospital accommodations for the sick of the fleet, but experience of a number of years with the *Solace* has shown the necessity of making provision for an out-patient department, wherein men of the fleet may receive special treatments and examinations, returning to their ships on the same day.

The Navy is also to be congratulated upon the consistently maintained standards that are giving us a personnel which is the pick of the ambitious youth of our Nation. During the past year 106,392 sought enlistment in the Navy. Of these only 30.18 per cent were accepted. During the last four years, owing to a full or relatively full complement, the large number of applicants, and consequent ability to make more careful selection, the percentage of acceptances has decreased from an average for the previous six years of 52.67 to 30.18. The present rigidity of physical requirements not only insures a fine standard of men but helps to lighten the pension load of the country in future years. The urgent need of more men, as would happen in time of war, could be met by a modification of the standards without entailing the acceptance of any deficient types.

The provisions made for the medical department by the Sixty-fourth Congress, on the recommendation of the department, were timely and far in advance of any former provision. Promotions and higher rank were accorded to the commissioned officers. The reorganization of the Hospital Corps insures advancement in their profession and promotion in rating to all, under methods of training and recognition of ability not before possible. This progress had its inception in the establishment in 1914 of the two finest professional training schools for hospital corpsmen in the world, one on the Atlantic at Newport and one on the Pacific coast at San Francisco. Hand in hand with this training there now exists a satisfactory steady flow of promotion through ratings similar to those of the seaman branch, established by a recent act of Congress in the appropriation act for 1917.

Successful schools have been established in Samoa and Guam for training native women in nursing. Homes for nurses at Mare Island and Boston have been furnished, and provision has been made on the coast lines south of Norfolk and Mare Island, which are as yet unprovided with Navy hospitals, for the calling into being of mobile Red Cross hospitals of 250 beds each, with complete personnel and equipment. To prepare the Medical Reserve Corps a correspondence school has been initiated for the purpose of training these officers. The higher standards, the zeal and sacrifices of the men in this corps, and their devotion to health and sanitation, can not be too highly commended.

Authority has been given by Congress for an ample reserve stock of medical and surgical supplies, which is recognized as essential in a comprehensive plan of being ready for emergencies.

REFORMS IN PUNISHMENT:

Can we hope for the day when prisons will no longer be needed in the Navy and discipline be maintained without them? Not yet; but within three years, though the enlisted strength of the Navy has increased more than 6,000, the number of prisoners has decreased from 1,835 to 620, and the number steadily diminishes. And with it there has been a steady improvement in discipline and a marked improvement in efficiency.

I noted in my last annual report the adoption of the principle of suspended and indeterminate sentences in the cases of naval general court-martial prisoners and men under sentence of summary court-martial. At that time the results were still considered tentative in nature. It is therefore with pleasure that I now report that this reform has proved a distinct success, the reports received, both officially and unofficially, during the past fiscal year indicating that the results obtained have been more gratifying, in humane and in

economic features as well as in the beneficial effect upon discipline, than was even anticipated.

This new system merely applied to the naval service the principle of suspended and indeterminate sentences which had been found so highly sucessful in civil life. It differs from the old system in that, instead of incarcerating a man, guilty of a purely military offense, without pay for a long period, to be dishonorably discharged at the expiration thereof, a first offender whose record warrants it is placed on probation, usually for one year, at his regular station of duty, and the adjudged sentence of the court is held in abeyance. During this period the probationer is permitted to draw one half of his pay, the other half being withheld, to be paid him at the expiration of his enlistment, if his conduct and general efficiency have been excellent. By this means, there is a constant incentive to men who really desire redemption, to conduct themselves in an exemplary manner during the remainder of their enlistment, because by so doing they can wipe out the dishonorable or bad conduct discharge which has been held in abeyance, and earn back the salary which has been withheld. Thus the sentence of the court may, by their own efforts, be reduced to a merely nominal one.

In the beginning the institution of this radical step caused some unfavorable comment; however, the approbation which it has received from officers intrusted with command, since its operation has been more clearly understood, has exceeded the expectations of the department. Having been in operation throughout the fiscal year 1916, authoritative data now exist as to its effect from both a humanitarian and economic viewpoint, as well as its effect upon discipline.

From a humanitarian point of view it may be repeated that the number of naval prisoners of all classes has been reduced from 1,835, the number shortly before the system went into operation, to 620 at the present time, although the number of men actually in the service during this time has been largely increased. The men who would otherwise have been confined in prison have been retained on board ship on probation, as above described, rendering useful work. Statistics show that a larger percentage of men serve throughout their probationary period and are discharged in an honorable status than was the case with the corresponding class of offenders restored to the service after a year or more of nonproductive confinement in disciplinary barracks under the old system.

From an economic point of view it may be stated that the prison account made up by the Bureau of Supplies and Accounts, covering the entire prison system of the Navy for the year 1913, showed an expenditure of $1,190,514.39; in 1914, $822,923.03; in 1915, $643,461.34. The account for the fiscal year 1916 is not yet completed.

Inasmuch as the disciplinary barracks at Port Royal and the naval prison on the U. S. S. *Philadelphia* were permanently discontinued during the past year, the expenses incident to their maintenance will be a large item of saving in the future. The prison accounts of that portion of the fiscal year subsequent to the closing of the above-mentioned institutions show that at the present time the prison system of the Navy costs the Government approximately $350,000 per year. A monetary saving of $850,000 per year is thus shown for the system, besides certain other savings, such as transportation of prisoners, guards, additional upkeep of quarters, etc., which are charged under other appropiations. A portion of the above saving is in the reduction of the salary account of prison guards, who are now performing strictly military and expeditionary duty, for which the Marine Corps is primarily intended, rather than acting as prison guards.

The above saving could not be cited with satisfaction were it obtained at the expense of the discipline of the service. The effect of the new system upon discipline of the service may be arrived at both from the statements of commanding officers and the satisfaction of the enlisted personnel, as well as from actual statistics. The almost unanimous opinion of the commanding officers of the service, as obtained by special confidential letters, as mentioned in my previous report, strongly establishes the beneficial effect of this system upon discipline. This is confirmed by the statistics during the past year. These statistics show that during the past year there has been a decrease of 1,251, or approximately 20 per cent, in the number of men discharged in other than an honorable status. This decrease has occurred during a year in which the demand for labor and the corresponding inducements for men to leave the service and secure employment in civil life have been abnormal. During the year, despite the fact that there were 1,500 more men in the service, there has been a reduction in the number both of desertions and of men tried by court-martial, and an increase of 1,848 men, or approximately 18 per cent, discharged in an honorable status as compared with the preceding year. Desertions have decreased in the last year 1.4 per cent in the Marine Corps and 0.46 per cent in the Navy. One and seven-tenths per cent of men were tried by general court-martial last year as compared with an average of 2.02 per cent during the last three years.

In connection with the reforms above noted since my incumbency in this office I have made a consistent effort to reduce the length of time elapsing between the arrest of an offender and the final disposition of his case, and it was made possible by the wise policy of the able Judge Advocate General. The improvement effected during the preceding year in this respect has been most gratifying, the average

time elapsing from arrest of offenders until final disposition of case being reduced during the year from 31⅞ days to 14 days, being a reduction in average time of 55 per cent. In order to effect this improvement it was necessary to consider and watch every detail and every operation connected with the trial, from the first consideration of the report against the offender to final disposition of the case. It is believed that this can not under normal conditions be further materially reduced.

While gratified at the marked success of the new and modern system of penology inaugurated, a careful study of methods of discipline and punishment is being made in the hope of still further reducing the number of men confined or under suspended sentence. Just treatment and consideration have improved the satisfaction of the enlisted personnel and increased efficiency. It is believed that the only way to perfect naval efficiency and reduce desertions is to make every enlisted man feel that officers are his best friends, and this is possible only when officers are actuated by a spirit of justice, as is nearly always the case. That feeling has grown with the passing years.

The prevailing spirit now in the Navy is that officer and man, each in his own assignment of duty, are working to make the ship a perfect fighting unit, united in a common service for their common country. What has been accomplished in better methods, which secured better discipline, is but an earnest of what the new and more humane methods which have been adopted will do in the improvement of the naval service. I have requested Hon. Thomas Mott Osborne, humanitarian, expert in penology, to visit naval prisons, study the methods in operation in the Navy, and to make suggestions which may lead to further reforms, and this service he has patriotically consented to render. It is recognized that in radically departing from century old methods of punishing military offenders, only one long step has been taken. Further study, with suggestions from civilian experts and from those within the naval service, without whose cooperation reforms already effected would not have been possible, should result in the best system which can be devised. Nothing but the best will be satisfying. Ancient severe punishment for military offenses in times of peace have no place in present-day naval administration.

IMPROVED BUSINESS METHODS:

The volume of business incident to Supplies and Accounts contracts has increased since my last annual report by over 43 per cent. Notwithstanding this tremendous increase, by introducing new methods of handling bids inside of the department and by requiring the greatest dispatch from everyone to whom bids may be referred

prior to acceptance, the average time required to award contracts was 12 per cent less than during the best month of 1915. This has resulted in making the Navy's business increasingly attractive and has stimulated competition to a most gratifying extent. Just what such methods of conducting the Navy's business mean to the manufacturer and to the business world in general can probably be best illustrated by quoting from a letter very recently received by the chief of the Bureau of Supplies and Accounts from one of the largest concerns on the west coast:

> We wish to take advantage of this opportunity of expressing our appreciation of your hearty spirit of cooperation and the prompt action you gave this entire schedule. Under exceptional market conditions such as are existing at the present time, your efficient manner in handling large propositions of this kind is of all importance to contractors and does much to create a keen competition for the business, with a consequent saving for the Government.

With market conditions constantly fluctuating on account of the unprecedented conditions brought about by the war, one result of shortening the time taken to award contracts has been a direct saving to the Government in the purchase of supplies of all kinds for the naval service, bidders being able to quote closer prices when they know that their bids will be acted upon before the market has had time to change. With the last appropriation for the Navy amounting to over $300,000,000, a considerable part of which is spent for materials to build new ships and repair and otherwise keep up in condition those we now have as well as for the purchase of vast quantities of miscellaneous stores and general supplies needed by all branches of the service, the efforts that have thus been made to increase the purchasing power of every dollar spent and to bring about greater harmony in the department's dealings with firms regularly doing business with it (of which there are nearly 8,000) have been most opportune—coming at a time when the most rigid economy and business foresight were needed in order to offset in some measure the soaring prices that everywhere prevail and thus make it possible to keep within the appropriations which Congress has made for the Naval Establishment.

In addition to expediting the award of contracts as outlined, the time required to pay contractors' bills has been considerably reduced. Where previously the daily average number of public bills on hand awaiting payment was 978, there were on hand unpaid on the 30th of June last but 11.

In order that the increased cost of many supplies required by the Navy may better be realized, the comparative prices of a few of the commodities recently contracted for will be of interest. Lake copper which before the war was 15 cents a pound jumped to 23 cents. Zinc, used in galvanizing, composition metals, paints, etc., and of which

the Navy uses a great deal has doubled in price. Shellac, one of the principal components of ship's-bottom paint and of which great quantities are used annually, has likewise doubled in cost. Serge and flannel, used to manufacture uniforms for the enlisted men, now costs over 70 per cent more than it did before the war. This increase in the cost of supplies all along the line has been particularly noticeable in the advance in the cost of shoes, which are now $1 higher than last year.

In addition to the successful methods already referred to which were adopted to effect economy wherever possible, every other expedient that would in any way contribute to reduce the cost of supplies to the Navy has been introduced and with the most marked success. This has been possible only by the closest study of market conditions and by being alert to take advantage of every opportunity to save money when making big purchases of raw materials, thus effecting substantial economies.

A NEW DEPARTURE IN PURCHASING.

As it became more and more evident that greatly advanced ocean rates would enormously increase the cost of those raw materials usually obtained abroad, a plan was put into effect of purchasing such commodities in great quantities in the natural markets where they are produced and then using naval colliers to bring the purchases to this country. In this way a two years' supply of tin was bought in Singapore for $20,000 less than it would have cost otherwise; 5,000,000 pounds of sodium nitrate were contracted for in Antofagasta, Chile, and brought back by naval collier at a net saving on the entire purchase of $60,000. A similar method used in purchasing shellac in Calcutta, the natural market for that product, netted a total saving on 1,500,000 pounds of $67,000. Thus by realizing a saving on these three products of something over $147,000 has the wisdom been established of going into the natural markets for materials of this kind, at least until after the war, when ocean transportation, which has now for so long been almost wholly disrupted, again becomes normal with reasonable rates prevailing. In addition to the tin, nitrate, and shellac cargoes, the established policy of bringing back hemp from Manila in naval colliers resulted in 2,442 tons being obtained in this way during the year at a saving of $45,595.

ECONOMY IN OBTAINING FUEL.

Particular attention has been paid to the purchase of fuel, both coal and oil, during the year. Following the policy adopted last year of obtaining the widest possible competition on all coal pur-

chased for the Navy, a number of producers whose mines contain coal suitable in every way for naval use have been added to the bidding list, and more healthy competition for this business has been secured. It is pleasing to note that, directly traceable to the continuation of this "open door" policy in the purchase of coal, the Navy is enjoying a reduction in the price of from 20 to 25 cents a ton, making a total saving in the cost of coal consumed during the year of $200,000.

As the new oil-burning dreadnaughts and other vessels have taken their places in the active fleet, the consumption of fuel oil has greatly increased; 842,432 barrels have been burned this year, as compared with 521,382 barrels in 1915. With the rise in the cost of so many other materials forecasting a like increase in the price of fuel oil, particularly on account of the tremendous increase in the exports of this fuel, which is in such great demand by the navies of Europe, every effort was made to fill all available tankage under the favorable contracts yet in effect, upon the expiration of which a material advance in price was made by the suppliers. By arranging a schedule designed to keep the *Arethusa* and *Kanawha* engaged to the greatest possible extent on the run between suppliers' pipe lines and the Navy storage tanks, the maximum quantities of fuel oil that could be taken under the contracts in effect at Port Arthur, Tex., were loaded on these vessels, and the storage tanks at Guantanamo, Key West, Norfolk, New York, Newport, and Boston were replenished to capacity before the higher prices went into effect. Approximately 300,000 barrels were thus taken, the net saving being $107,000.

SAVINGS BY NAVAL COLLIERS.

The continued scarcity of merchant bottoms in which to transport coal to the Orient for the use of our ships on the China station and the consequent high offers made by ship owners to undertake this service has caused me to maintain the policy adopted last year of utilizing naval colliers in keeping the Asiatic Fleet supplied and in replenishing the coaling stations on the west coast, although the latter service has been interrupted to such an extent by slides in the Panama Canal which closed it for quite some time that for the first time in the history of the Navy coal for the use of the Pacific Fleet has been transported across the continent by rail, 50,000 tons in all being dumped at Tiburon and San Diego. The *Proteus* and *Nereus* have, during the year, carried a total of 39,805 tons of coal to Cavite, Olongapo, and Guam, which at the rate quoted for this service by responsible ship brokers of from $10 to $30 per ton shows a saving by using our own colliers of $700,000. This amount in-

cludes the saving effected in the cost of transporting the cargoes of tin, shellac, and hemp brought back on the return trip of the colliers from the Orient as well as the freight charges which were saved by carrying large quantities of miscellaneous stores on the trip out.

Particular attention has been paid to the ration, and the men have been furnished with food in plenty, unexcelled in quality and variety. To thus feed the men to their entire satisfaction and contentment and yet keep the cost within bounds with the price of foodstuffs everywhere soaring required the greatest care and unremitting attention. Notwithstanding the conditions unfavorable to economy which have constantly existed, it is a fact that the cost of the ration this year shows an appreciable reduction as compared with its cost for the two years immediately preceding the war. Department of Labor statistics show that the cost of 26 of the most commonly used foodstuffs has advanced 5 per cent during the two years of the European war as compared with the two years preceding it; meanwhile there has been a decrease of over half a cent in the daily cost of the ration per man during the year. Taking into consideration the rise in the provision market, this means that the comparative cost of subsisting the Navy during the past two years was something over $1,000 a day less than for the two-year period preceding the war. This has been practicable owing to a number of changes in the manner of administering the commissary department aboard ship, foremost among which is the requirement that the galley facilities on all ships shall be used to the greatest extent practicable in preparing food from the raw materials instead of purchasing patent prepared foods and pastries which are neither as acceptable to the enlisted men nor as economical as the same things "homemade."

THE BEST FED NAVY IN THE WORLD.

That this feature of the men's welfare has been well looked after and the standard of the ration by no means lowered, official reports from all sources abundantly attest. The Medical Department, which is charged with safeguarding the health of the personnel of the Navy, is particularly interested in the ration in so far as it affords a foundation for the general good health of the men, and on August 29, 1916, the Surgeon General made the following statement to the Paymaster General of the Navy, based on reports from the medical officers of individual vessels of the fleets:

I was prompted last year to write you a letter advising you concerning the excellent opinion expressed by the medical officers of our service on the work of your department and on the quality of your ration. I gave you a few samples of the many commendatory paragraphs of this tenor excerpted from the annual sanitary reports. The reports of this year have been even more

favorable, and I would repeat them here were it not that the repetition might seem monotonous.

I can assure you, however, that no Navy in the world is as well fed, as well clothed, its general welfare so thoroughly looked out for as that of the United States, and I am glad to offer you and the entire personnel of your corps my heartiest congratulations for the large share you have had in producing this well-being and its resultant contentment.

Owing to the steady rise in the metal market, particularly the high price of copper and brass, the reworking of scrap composition, and the pigging and remelting into ingot form of 1,937,784 pounds of scrap brass and copper at the Portsmouth and New York Navy Yards has resulted in a saving of $109,000. In addition to this, 4,000,000 pounds of carefully selected scrap copper and brass were used at the various yards in making castings. The castings made from this scrap proved to be in every way as satisfactory as if new metal had been used, whereas by using this old scrap instead of purchasing new metal a saving of $240,000 resulted.

LOWERING THE COST OF CLOTHING.

The clothing factory at Charleston has been able to manufacture the garments made there at a substantial reduction in cost as compared with the cost of the same garments before the Charleston factory was established. An output sufficient to meet increasing demands during the year has been satisfactorily maintained, without any appreciable increase in its facilities; additional machines and more operators will be added in the near future, however, so that production may keep pace with the growing demands due to the large increase which Congress has authorized in the enlisted strength of the Navy. Judging from the results already achieved, it is confidently expected that the increased manufacturing facilities will make possible a still further reduction in the cost of all clothing manufactured there, which reductions will accrue directly to the benefit of the enlisted men to whom all such garments are sold at as near the actual cost of manufacture as practicable.

Vessels Lost and Salvaged.

The year has been marked by an unusual number of casualties to ships, which, in two cases, have involved extensive salvage work, with completely successful results in one case, operations in the other case having been suspended until the return of favorable weather in the spring. Three cases have involved the temporary or permanent loss of a vessel, these being the sinking of the U. S. S. *Terry*, the beaching in a storm of the U. S. S. *Hector*, and the driving ashore by waves of extraordinary violence of the U. S. S. *Memphis*.

The U. S. S. *Terry*, a torpedo-boat destroyer of 740 tons displacement, struck a reef when entering the inner harbor of Puerto Plata,

San Domingo, on June 10, and subsequently sank in such a position that the greater part of the main deck was submerged. This casualty was fortunately not accompanied by any loss of life. The department at once engaged the services of the nearest wrecking steamer, which arrived on the scene on June 13. Salvage operations were at once commenced, under the general supervision of the commanding officer of the *Sacramento*, the officers and crew of the *Terry* cooperating with the wrecking company, whose services had been engaged. Despite the peculiar difficulties involved, due to the very light construction of the vessel and the nature of the bottom on which she lay, the *Terry* was floated on June 26, temporary repairs were completed July 7, and she was safely delivered at the navy yard, Charleston, S. C., on July 15. The complete repairs will be finished and the vessel again placed in service about December 1, less than six months from the date of the accident.

The U. S. S. *Hector*, a naval collier of 11,230 tons displacement, was damaged in a storm of the greatest violence on July 14, 1916, and went ashore on the coast of South Carolina. There was fortunately no loss of life, as all officers, crew, and passengers were taken off by vessels which went to the assistance of the *Hector* in answer to her distress calls sent out by radio. The vessel broke in two after going ashore. Although the wreck was in a very exposed position, there appeared to be a reasonable chance for successful salvage operations, by which the two ends of the vessel could be raised separately and be taken to the navy yard, Charleston, for rejoining and repairs. Salvage operations were continued until the end of October without success, owing to abnormally bad weather. After November the danger of winter storms precluded further work. An examination of the wreck will be made as early in the spring as the weather permits, and further efforts to salve the vessel will then be made if the conditions appear to warrant such action.

The U. S. S. *Memphis* (formerly the U. S. S. *Tennessee*), an armored cruiser of 14,500 tons displacement, was lying at anchor in the harbor of San Domingo City, San Domingo, on the afternoon of August 29. The sea was smooth, and no storm warnings had been received. Suddenly the sea rose, and waves resembling tidal waves in size rolled into the harbor, lifting the ship by successive steps, and finally, in less than an hour, depositing her on the rocky bottom in from 12 to 19 feet of water and only 40 feet from the precipitous shore line. The loss of life on the vessel itself consisted of three men washed overboard and seven men who died as the result of injuries from the bursting of a steam pipe, probably caused by the displacing of several boilers from their seatings when the bottom of the vessel was forced upward by successive blows on

the rocky bottom. In addition, 25 men were drowned from small boats while enroute from the shore to the ship, and 5 men from 2 other boats which had put out to sea for safety but were finally driven ashore during the following night. The wreck has been carefully examined by both naval and civilian experts, the consensus of whose reports is to the effect that although the salvage of the vessel, as a whole, is practicable the cost would be excessive and the ultimate delivery of the vessel at a repair port would be a difficult and dangerous undertaking. The salvage, if successful, and repairs would take between two and three years. In view of the great expenditure which would accompany an attempt at salvage, whether successful or not, and the certainty that, if successful, the ultimate cost of salvage and repairs to place the vessel in serviceable condition would be close to the present book value of the ship; and further, in view of the fact that the *Memphis* is of a class no longer constructed by any naval power, of comparatively small military value, and, if repaired, by two or three years from now would, in view of her age, etc., do little or no active service thereafter, the department has decided not to undertake salvage operations. In the meantime all articles of a portable nature, whose value is commensurate with the cost of removal, are being recovered, and shipped to the United States whenever Government transportation is available. Subsequent to the stranding of the *Memphis* the Government and citizens of San Domingo extended the utmost courtesy and hospitality to the officers and crew of the vessel.

The Work of the Consulting Board.

The year has witnessed the perfecting of teamwork between the experts of the Navy and the outside scientific world. The Naval Consulting Board, headed by Thomas A. Edison, and composed of members selected by the leading scientific societies of the country, has rendered noteworthy service. The lack at first of any provision in law whereby the members of the board could be compensated for expenses incurred incident to their service, which they rendered willingly and with conspicuous generosity, has been remedied by the last naval act, which appropriated $25,000 for this purpose. Congress has thus been quick to secure for the Navy the aid of outside scientists, and the approbation of the President when he declared, in view of the Navy's need of preparedness, "not for war but for defense," personally to the members of the Naval Consulting Board that "We must have the cooperation of the best brains and knowledge of the country." Of the problems presented by the Navy Department for solution, some have been solved and others are in process of investigation, especially where the question involved is one subject to continuous improvement. Reports as to

the value of many inventions have been received from the Naval Consulting Board, and its work has brought the officials of the Navy into closer touch with many industries.

A notable development of the board's work is its plan for the perfection of industrial preparedness throughout the country in its organization in each State of a committee, composed of one member each from the American Society of Civil Engineers, the American Institute of Mining Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers, and the American Chemical Society, to work in connection with the committee on production, organization, manufacture, and standardization of the Naval Consulting Board. With five members in each State this committee, which is called the committee on industrial preparedness, consists of a total of 240 members. The District of Columbia and the Territory of Alaska also is represented on this committee. The members of this committee have been designated as State directors of the organization for industrial preparedness, and they are associate members of the Naval Consulting Board of the United States. The directors in each State have enlisted the services of all the members of the five societies named, who are designated as field aides, and who are earnestly and energetically assisting in gathering information collected in the form of an industrial inventory. These blank inventories were sent confidentially through the State directors and aides to manufacturing establishments of every character throughout the entire United States, and the information thus secured in answer to questions on the blanks has been confidentially filed for the use of the Government in time of national need or crisis. This information is of such a character as will allow munitions of war to be ordered and manufactured in the most expeditious manner and delivered in the shortest possible time. The responses to these requests for industrial information have been exceedingly gratifying, and already they have received at the central office of the committee on industrial preparedness, New York City, 24,500 inventories, and it is expected that the total number will soon reach 25,000. This means that if it were ever necessary to mobilize to defend our country against foreign aggression, at least this number of concerns might, when prepared by this Government with proper gauges and drawings, be counted on at short notice to transfer the energies and machinery of industrial peace into the manufacturing of munitions of war. In other words, it means that America can never be caught off her guard with an insufficient number of shells and cartridges and other implements of defense, as was the case with some of the countries of Europe at the beginning of the present conflict.

In connection with the organization of the Naval Consulting Board, Congress was asked to provide an experimental and research laboratory so as to utilize in the fullest degree the talent and genius of the civilian scientists who responded so generously to the request for their aid. Such a laboratory was a crying need inasmuch as the experiment station at Annapolis has been overburdened with the work which it has in hand of testing coals and making photomicroscopic examinations of steel and iron, and in conducting other tests of materials used by the Navy. The naval act of this year provides for such a laboratory by appropriating $1,500,000 for its construction. This laboratory will undertake the study of such subjects as gun erosion, torpedo motive power, the gyroscope, submarine guns, protection against submarines, torpedo and mine attack, improvement in submarine attachments, improvement and development in submarine defense, storage batteries and propulsion, aeroplanes and aircraft, improvement in radio installations, and other necessary work of this kind. At the meeting of the Naval Consulting Board in the Secretary's office on September 19 the board was requested to investigate and report upon a suitable location for the establishment of this laboratory, and upon plans for its erection and work. The committee which was appointed for this purpose has already made extensive investigations regarding prospective sites, and at the next meeting of the whole board will report its findings, and a site will be selected as soon as possible. The act establishing the laboratory authorizes the employment of such scientific civilian assistants as may be needed. This is a marked advance in naval development, and work done in this laboratory is expected to result in the greatest value to the Navy, especially in determining the value of new inventions, improving materials, bringing new materials into use, improving products, lessening weight, and materially decreasing the cost of operation on board ship.

Council of National Defense.

In an act making appropriations for the support of the Army for the fiscal year 1917, Congress established a Council of National Defense for the coordination of industry and resources for the national security and welfare, and designates the Secretary of the Navy as a member thereof. It is contemplated that this council will eventually take over the work of industrial preparedness now being done by the Naval Consulting Board, and arrange it in such form as to be available to all departments of the Government in time of emergency. The excellent work already done by the Naval Consulting Board has been recognized by the President in the appointment of Mr. Howard A. Coffin, chairman of the committee on industrial

[illegible] Council of Defense [illegible] the organization of military, industrial, and [illegible] of the organization of highways, railroads, [illegible] employment of military and [illegible] the increase of domestic production of [illegible] the support of the population [illegible] of national emergency.

The Governments of Guam and Samoa.

[illegible] Guam and Samoa are placed under the Navy [illegible] the governor of each of these [illegible] in time of war.

[illegible] governor, the work of sup- [illegible] temporary defense of the island [illegible]

[illegible] connected up temporarily dur- [illegible] made permanent and will [illegible]

[illegible] station near Mount Tenjo [illegible] the site and constructing a road [illegible]

[illegible] including the Naval Establishment, [illegible] 463 during the year.

[illegible] cotton as a revenue-producing crop for [illegible] the unusually heavy rains in the [illegible] to the crop. However, a con- [illegible] produced, and the governor reports [illegible] that with proper encouragement and [illegible] the farmers and planters of Guam can produce cotton on a paying basis.

The expenditures during the year for education, exclusive of new buildings, were $71,868.95. Efforts to [illegible] the island school-teachers to a higher standard were [illegible] It is proposed to inaugurate a regular normal school [illegible] and such others as can be accommodated which [illegible] common high school [illegible]

branches. At present there are no secondary schools in Guam, nor sufficient personnel to inaugurate such schools. Instruction of boys in agriculture and of girls in sewing has continued. All schools generally are overcrowded and the need for additional schools in Agana is urgent.

Considerable damage was done to the crops on the northern part of the island by a typhoon on September 2.

SAMOA.

In my annual report for 1915 mention was made of a destructive hurricane which visited the Island of Manu'a in American Samoa in January of that year, devastating the coconut plantations and destroying growing crops. I am glad to be able now to report that, while, on account of the hurricane, no copra will be produced in the islands of the Manu'a group this year, and probably not for several years to come, the people of Manu'a are again self-supporting and have an ample supply of native foods. So carefully did Commander John M. Poyer, governor of Samoa, administer affairs, that of the $10,000 appropriated by Congress for their relief, a balance of $1,665.04 was turned back into the Treasury at the end of the fiscal year, and of the $2,000 donated by the American Red Cross, $878.02 was returned to that society in March, 1916.

As a result of efforts of the Navy Department, the Oceanic Steamship Co.'s steamships now call at Tutuila on their way from Australia to the United States, and there is now a steamship each three weeks in each direction. This improvement in transportation service has resulted in a material saving to the department in the transportation of personnel and in the shipment of freight to San Francisco, and is creating an increased volume of trade between the Pacific coast and the islands of the South Sea. That the present prosperous conditions in the United States are reflected in our South Sea possessions is shown by the fact that the natives of American Samoa are receiving for their 1916 copra $108.66 per ton, the highest price in the history of the island government. There have been no epidemics during the year and health conditions are excellent. According to a recently taken census, the population of American Samoa is now 7,550.

At the Inauguration of the Emperor of Japan.

Admiral Winterhalter, the commander in chief of the Asiatic station, proceeded with the flagship from Shanghai to Kobe, Japan, just prior to the coronation of the Emperor of Japan. The admiral, with his party, landed at Kobe and proceeded to Kioto, where the coronation ceremonies were to take place. At Kioto calls were ex-

changed between the admiral and the Japanese and foreign officials. The admiral was received by the Emperor and was a guest of the nation throughout his stay in Japan. Upon his return to Kobe a reception was given on board the flagship for Japanese and foreign officials and indicated the commander in chief's appreciation of the courtesies which had been shown.

Chinese Flood Sufferers Aided.

In times of peace the Navy is an agency through which this country responds to the need for aid by countries in distress. The response is always instant and generous. During the present year when the first news of the flood in July, 1915, at and above Canton, China, was received, the U. S. S. *Wilmington* and a small gunboat stationed in those waters rushed to the city of Canton. The flood had come so quickly that many thousands of people were caught unawares and lost not only all their posessions but every visible means of obtaining food. As there were no other foreign vessels in those waters at that time, the task of temporarily feeding these thousands devolved upon our vessels. The commander in chief of the Asiatic Fleet (Admiral Winterhalter), who was at Shanghai at the time, arranged for a naval auxiliary and such other vessels as could be spared to take supplies, consisting principally of rice, to the stricken district. These supplies undoubtedly saved an enormous percentage of the people from death by starvation. The fact that it was appreciated by the Chinese is evidenced in the beautiful silver small-arms trophy which they presented to the Asiatic Fleet, and which, in accordance with the orders of the commander in chief, will be competed for annually by the ships on that station.

Service of Marines in Haiti and Santo Domingo.

In the restoration of order and the preservation of peace in the revolution-torn Republics of Haiti and Santo Domingo the Marine Corps has rendered most valuable service. This service drafted most of the personnel of the entire corps, except that portion serving aboard ships and guarding navy yards, and almost during the entire year the corps was engaged in this expeditionary work. About this time last year Col. Littleton W. T. Waller, with the First Brigade, was in occupation of Haiti. Peace was restored and the tides of island traffic again flowed through their natural channels. The effective work accomplished led to the organization, at the instance of the United States State Department, of a Haitien Constabulary, for which provision was made in the treaty between the United States and Haiti. Organized under Capt. Smedley D. Butler as commandant, this constabulary consists of 112 officers and 2,500 native

Haitian gendarmes, and as Haitian citizens become qualified to serve as officers they will gradually replace the Americans. The State Department has been generous in its commendation of the work done by the Marine Corps, which was so effective that it was possible in May to withdraw a large part of the force and transfer it to Santo Domingo, where a revolution had broken out. Since that time Santo Domingo has been occupied by the Marine Corps, the Fourth Regiment having been drawn from San Diego, Cal., to assist in the work of pacification. Owing to the conditions existing in the interior of Santo Domingo, it became necessary in June to send a column to Santiago and other towns in that vicinity. This column, although opposed by forces of considerable strength, carried out its mission in a most expeditious and effective manner.

The column was about 850 men strong and the advance was made both by the road from Monte Cristi and by the railroad from Puerta Plata to Santiago. All of its operations were under the command of Col. Joseph H. Pendleton. A somewhat serious resistance was met with from the revolutionists at Las Trencheras, a well-recognized Dominican stronghold, and believed by the people to be impregnable. It included two well-intrenched hills rising about 75 feet above the road and dominating the surrounding country. The action lasted only three-fourths of an hour from the opening of the artillery fire, under which the infantry and machine guns deployed and moved forward through the underbrush. The heavy fire which was encountered became wild and ceased to do any damage as soon as the machine guns opened fire. Climbing the steep embankment of the trenches, the infantry captured the first line of trenches at the point of the bayonet, the revolutionists retiring to their second line, out of which they were easily driven. In this engagement Pvt. John J. Awkerman, of the Twenty-seventh Company, was killed and four other privates were wounded. Continuing the advance through the country over a bad road, it was found necessary to repair the bridges, all of which had been destroyed by the retiring revolutionists, and the advance was marked by frequent skirmishes and culminated in a sharp engagement at Dona Antonia Alta, in which Pvt. Kleme Millis, of the Thirty-first Company, was killed. On account of bad roads and for other reasons, on June 30 communication was cut with Monte Cristi and the expeditionary force moved out as a flying column until communication could be established with Puerta Plata by rail. On July 3 there was another encounter at the town of Guayacanas. During this sharp engagement Corp. Glowin, in charge of one of the guns, was shot, but continued to fire until hit a second time, and it was necessary to drag him back into the woods. Two of the machine guns in action jammed. At this moment First Sergt. Winans arrived with an additional machine gun, which

also jammed, but he coolly stood up and remedied the defect. With the arrival of other guns and the infantry, the revolutionists' fire was held in check and the infantry charged and occupied the trenches. For their conspicuous gallantry in this engagement, First Sergt. Winans and Corp. Glowin were awarded medals of honor by the department.

Arriving at Navarrette on the 4th of July, the column formed a junction with the railroad column which had advanced from Puerta Plata, first under the command of Capt. Eugene P. Fortson, who was later relieved by Maj. Hiram I. Bearss. The work of these two officers had been very highly praised by the colonel commanding. Working with a comparatively weak force, they had advanced along the railroad, driving the revolutionists back, and securing for the main body the line of communication which was essential to it since it had severed its own line. In official reports these officers are commended for their "spirit of initiative, courage, and zeal, combined with good discipline, which made all difficulties surmountable." In 10 days the column had marched a distance of 75 miles, cleared northern Santo Domingo of revolutionists, and peacefully entered the city of Santiago, the seat of the revolutionary movement. All military operations since August, 1915, were successfully carried out with comparatively small loss of life. Only one officer and six men were killed in the many engagements incident to the pacification of these countries. In addition to the casualties already mentioned, Capt. Herbert J. Hirshinger lost his life while fearlessly commanding a landing force at Puerta Plata on June 1, and Corpl. George Frazee was killed at Guayacanas on the same day. In Haiti Sergt. John Platt lost his life at Petite Riviere, September 25, 1915, and Sergt. Edward C. Thompson near Jeremie two days later, while Pvt. Peter Kulick was killed at Acul Samedi July 10, 1916.

Rescue Work in California.

During the year high commendation, well deserved, was given to a detachment of officers and men who cooperated with a naval detachment from the Pacific Reserve Fleet in the rescue work incident to the flooding of the Otay and Tia Juana districts near San Diego last February.

National Defense Secrets.

The bill designed to prevent the disclosure of national defense secrets which was revised by a joint board of representatives of the Department of Justice, War Department, and the Navy Department was recommended for passage at the last session of Congress. The

enactment of the draft recommended is considered urgently necessary as a step in the preparation of war.

MUCH YET REMAINS TO BE DONE:

In presenting this annual report, which shows what is admitted not only by the most exacting critics in our own country but by all of the naval experts abroad—the greatest year of progress in ships, matériel, and organization that the United States Navy has ever known—I feel it my duty to warn as solemnly as I may against the danger that lies in a possible feeling on the part of our people that the Navy has now been attended to, has been placed where it belongs among the great navies of the world, and that there is nothing further to be done.

COMPLACENCY THE FATHER OF DRY ROT.

Complacent retrospection of past achievement is the father of dry rot. We have made a magnificent beginning, but it must not be forgotten by the public that the same intelligent appreciation of our needs, the same willingness to provide for these needs, must be shown by the people as represented in Congress this year and the year to come, and the year after that, and, in fact, every succeeding year, if we are to finish what we have commenced. Until the great navy-building countries make a practical agreement to a reduction of armament our country must steadily increase its naval strength.

BIG PROGRAM STILL TO BE EXECUTED.

Our people are now interested in the Navy as they never were before. They are more familiar with our shortcomings and with our good points than they have ever been before. I beg them to keep this personal interest in the service, to query as to what we are doing, to criticize frankly whenever they feel there is room for criticism, and, above all things, never to relax into that state of complacent and smug satisfaction in our naval establishment that existed five years ago. Let us not forget that, while Congress has authorized the most splendid program of shipbuilding in the history of our Navy, it is still to be executed and that the very prosperity of our country has brought the Navy Department face to face with tremendous problems regarding the construction of these ships; that contractors for materials are stating times of delivery in years instead of months; that labor, busily employed all over the country, is hard to get at any price; that we are handicapped by years of long stagnation in American shipbuilding, with a lack of facilities for construction as compared with other powers.

OUR NAVY MUST NOT BE SURPASSED IN EFFICIENCY.

It has never been suggested seriously that our Nation should attempt to equal in the number of ships the greatest navy in the world. There is no reason whatever, however, why we can not only equal but surpass in the military efficiency of our organization that navy or any other navy on earth.

THE PROBLEM OF RECRUITING.

We have provided for a great increase in the personnel, which must be still further increased as new construction of ships demands additional force to man them. Here again lie new and serious problems. With every manufacturer bidding hitherto unheard-of prices for labor, with every farmer and every storekeeper equally anxious to secure their services, more than ordinary methods must be used to persuade the young men of our country to decline the countless opportunities opening before them in commercial life in favor of service with the Government. Were it not for the gratifying results in enlistments already shown, as a result of the policy of the last few years of offering educational advantages, particularly along technical lines, to our recruits, I would feel indeed that the problem of securing the men authorized for our fleets was an almost hopeless one. As it is, I feel sure it will be solved, but it is still a problem, and what I desire in this report is to warn the public against considering that the mere passage of laws authorizing additional men is equivalent to having these men actually on board our ships.

DIFFICULTIES IN RAPID CONSTRUCTION.

I have already spoken of our difficulties in the rapid construction of new ships. The much-debated question of the past as to the policy of encouraging the industrial activities of our navy yards, and whether or not we should construct any considerable portion of the ships authorized, is no longer a question. The paramount necessity of utilizing all of our own facilities, in order to relieve the burdens thrown upon builders and manufacturers already booked years ahead with orders, admits of no dispute. It may be necessary to ask, from time to time, for appropriations to provide our yards with the facilities they require. I hope such requests, if made, will be granted with the same intelligent appreciation of their necessity as followed our requests for the authorization of new ships last year. Our people can rest assured that no money will be asked for these purposes unless it is certain that, as a mere business proposition, it will result in a decrease rather than an increase of the charge upon the taxpayer.

A TRIBUNAL TO END COMPETITIVE ARMAMENTS.

The cost of building and maintaining a navy has steadily increased. The total appropriation made for our Navy in 1900 was $61,140,916.67; it had grown to $128,908,196.96 in 1912; the appropriations made in 1916 aggregate $312,678,071.54. If to this be added the total cost of the three-year program authorized, the figures go up to half a billion dollars for new construction alone, not including the additional cost for men and officers, munitions, and operation. The expenditures by other big navy-building countries mount up into the billions. How high they have reached during the pressure of the great war in Europe we can not estimate. Are the great nations to continue this competition in naval increase? How long before the burden will be greater than the people can bear? The plain duty of this country is to build a Navy large enough to defend its extended coasts and protect American rights. In comparison with those countries which have been engaged in recent wars this country is rich enough to build a Navy as large as its authorities may determine may be needed. But the Congress, which in August of this year appropriated more to increase the Navy than any nation had hitherto appropriated in one year, expressly declared that it looked "with apprehension and disfavor upon a general increase in armament throughout the world." It wisely recognized "that no single nation can disarm, and that without a common agreement upon the subject every considerable power must maintain a relative standing in military strength." After laying down this sound premise, Congress "authorized and requested the President to invite, at an appropriate time, not later than the close of the war in Europe, all the great governments of the world to send representatives to a conference which shall be charged with the duty of formulating a plan for a court of arbitration or other tribunal, to which disputed questions between nations shall be referred for adjudication and peaceful settlement." The act goes on to provide if "peaceful determinations of all international disputes shall render unnecessary the maintenance of competitive armaments, * * * such naval expenditures as may be inconsistent with the engagements made in the establishment of such tribunal or tribunals may be suspended when so ordered by the President of the United States."

It is believed this is the only defense appropriation bill ever enacted which gave authority to the Executive to suspend the expenditures authorized if the navy-building nations can reach an agreement by which international disputes may be settled without recourse to force. It marks a new departure, for suggestions of arbitration have not before come in bills appropriating money for an increase in fighting strength. In my reports of 1913, 1914, and 1915 I advocated

international conference between big-navy countries looking to an ending of the competition in building fighting craft. I earnestly hope the time is not far distant when this act of Congress will result in such agreement, and that the nations of the earth will have the statesmanship to devise effective means of preserving the world's peace without constantly building ever-increasing dreadnaughts at ever-increasing costs. Until that hour arrives the United States can not safely adopt any policy other than that of continuing steadily to increase its naval strength. It is gratifying that our biggest and best naval bill carries the hope of ending the race between nations for the construction of ships of war.

WE MUST GO FORWARD.

Of the achievements of the past year, this report shows under their proper heads, in detail, what has been done. It is a record which we may well look upon with pride, even with satisfaction. My most earnest hope is that this pride and this satisfaction will not make us slothful or indifferent. We have begun to march forward. We must not halt by the wayside.

JOSEPHUS DANIELS.

APPENDIXES.

APPENDIX A.

REPORT OF THE GENERAL BOARD.

DEPARTMENT OF THE NAVY, GENERAL BOARD,
Washington, D. C., October 16, 1916.

To: Secretary of the Navy.

Subject: Report in accordance with article 167-R, U. S. Navy Regulations.

The General Board submits herewith its report in compliance with article 167-R. The events and developments of the war in Europe have been followed closely by the General Board, in so far as accurate information has permitted. Nothing apparently has occurred to modify in the essentials the broad principles laid down and the conclusions reached by the board in former years. No new types of vessels have been employed in strictly naval warfare, though special types of vessels for special purposes have undoubtedly been constructed. The battle cruiser, the fast scout, the destroyer, and the submarine—each has its place in the well-balanced fleet, but the battleship remains, as heretofore, the principal reliance—the backbone—of the sea power of the nation.

ARMAMENT.

2. Early in the course of the war an enormous increase was observed in the size and power of the artillery used on land, and the demand for far greater power in the ordnance used on shipboard has naturally followed. Although this demand has not been limited to the batteries of the heaviest types of vessels, yet it is in these types that the change can be most readily effected, and it is particularly in the battleships, as the embodiment of the utmost in offensive force, that the change is most urgently needed.

3. The long ranges used in several of the naval actions of the war, together with results obtained at target practice, have convinced the General Board that the batteries of battleships must have the maximum range and the maximum power practicable. Reliable reports have been received that foreign building programs include battleships mounting ten or twelve 15-inch guns or guns of possibly larger caliber. Lest our vessels be inferior in power to similar types abroad, we must construct battleships carrying more powerful weapons than heretofore.

4. The General Board has therefore included in the characteristics of battleships recommended for the 1918 building program the most powerful battery which it believes can be constructed, having due regard to the present state of the art of building heavy ordnance in this country. The additional weight of such a battery can only be carried either by the sacrifice of other military characteristics or by an increase in the size of the vessel. The General Board does not believe that it would be justified in recommending any decrease in armor, for the vessel must be able to withstand the heavy blows of battle; nor in recommending that the cruising radius be reduced. The other characteristic that might be sacrificed is speed, but the General Board is of the opinion that to meet the speed of foreign vessels the speed of our next battleships should be increased moderately. After most earnest consideration of the various problems involved, the General Board has arrived at the conclusion that increase in size of battleships, with the additional cost entailed, must be accepted.

BUILDING PROGRAM.

5. As to the number of vessels which the General Board herein recommends for inclusion in the 1918 building program, it may be stated that information from various sources has led the General Board to the belief that not only has the course of construction in foreign shipyards been greatly expedited but that the numbers of vessels being laid down have been largely increased also. Under such circumstances, and having in mind the policy submitted last year (General Board letter No. 420-2, of July 30, 1915), the General Board is of the opinion that the capacities of our shipyards should be utilized to the maximum in new construction, and therefore recommends such numbers of vessels of various types as it believes can be laid down in the fiscal year 1918.

6. The General Board recommends that the following vessels, whose construction has been authorized by act of Congress, be included in the department's estimates for new construction in the building program, 1918:

Battleships	4	Fuel ship	1
Battle cruisers	2	Transport	1
Scouts	4	Destroyer tender	1
Destroyers	20	Fleet submarine tender	1
Fleet submarines	9	Gunboat	1
Coast submarines	18		

The following vessels are also recommended for inclusion in the building program:

Mine sweepers for the fleet	12
Supply ship	1
Seagoing tugs	2

7. No authorization exists for the construction of mine sweepers for the fleet, supply ships, or seagoing tugs; but experience abroad indicates that large numbers of small vessels are needed for mine sweeping in the coast areas used by commercial as well as naval vessels, and that certain others, somewhat larger, are required for employment with and in advance of the main fleet to sweep and clear the channels which the latter is to use. In order that the necessary training in mine sweeping may be undertaken, and that this important service may be in readiness at a moment's notice, the General Board is of the opinion that mine sweepers for the fleet should be built and permanently assigned to duty with the fleet. As to the supply ship, the fleet is supplied at present by the *Culgoa* and *Celtic* in the Atlantic and by the *Glacier* in the Pacific, but these three vessels have been in almost continuous service since they were purchased in 1898, have greatly deteriorated, and in the near future must be replaced. A new supply ship, the *Bridge*, is nearing completion, but will be unable to replace both the *Celtic* and *Culgoa* for all service in the Atlantic, and these two vessels can in all reason hardly be depended upon much longer. Therefore the General Board renews the recommendation of its letter of July 30, 1915 (G. B. No. 420-2), that a new supply vessel be authorized and includes it in its 1918 program. Seagoing tugs are a necessary part of the Naval Establishment; they perform most useful duty with the fleet. The number at present available for seagoing purposes is all too few. Two more are urgently needed for general duty and are included in the board's recommendations.

PERSONNEL.

8. The act making appropriations for the naval service, approved August 29, 1916, provided:

First. That the total number of commissioned officers of the active list of the line of the Navy, exclusive of commissioned warrant officers, shall be 4 per cent of the total authorized enlisted strength of the active list, exclusive of certain specified persons; and

Second. That the total number of commissioned line officers on the active list should be distributed in the grades in certain fixed proportions.

The latter provision is one that has for many years been advocated in one form or another, as leaving the total number of officers entirely within the hands of Congress, but by law of Congress providing flexibility in the grades which had not hitherto existed so that the number in grades should be proportioned to the duties that the different grades properly perform.

9. The fixing of the total number of commissioned line officers as a per centum of the total authorized enlisted strength of the Navy was also advantageous as it obviates the requirement for special legislation to increase the officers in the proportion necessary for an increased number of enlisted men. The authorized enlisted strength is in no law known to the General Board fixed in any way relative to the material strength of the Navy, and when additions to the fleet are made it has often been impossible to obtain the corresponding additions to the personnel which should be provided for at the same time as the ships themselves. That condition still exists. The enlisted strength of the Navy is not established on any fixed basis relative to the material strength of the Navy, and the efforts of the Navy Department are directed and the time of Congress is given up to annual considerations of the question of the strength of the enlisted personnel. The General Board believes this condition to be illogical and it recommends that legislation be sought from Congress that will fix automatically the total strength of enlisted personnel relative to the needs of the Navy on some recognized basis to be determined in the wisdom of Congress at the presentation of the matter by the Navy Department.

10. The whole scheme of personnel will then be established upon a logical basis and one that will not require annual reconsideration by Congress. The enlisted personnel will be fixed by the material strength of the Navy and duties to be required of it. The commissioned personnel of the line will be 4 per cent of the enlisted personnel and the distribution of officers in the grades will be in accordance with the percentages that have been established by law; thus the growth of the Navy in personnel and the provision for training that personnel will go hand in hand with the provision of the ships in a logical manner, one established by the Congress itself and one that will not require annual consideration of the whole question with the consequent great loss of time as the least evil and an inadequate provision of personnel as a greater evil, and one that has so frequently occurred in the past. The General Board renews its recommendation of last year that the enlisted force of the Marine Corps be maintained at 20 per cent of the total authorized enlisted personnel of the Navy, exclusive of Hospital Corps.

AERONAUTICS.

11. Aeronautics in the Navy has not apparently advanced to any great extent and its progress has not been satisfactory. Undoubtedly much preliminary work has been done experimentally which does not show, and much of the routine of training of personnel and of overhaul of aircraft has been systematized; but the application of this very important branch of the service to

the practical uses of the fleet has not yet been fully developed. Satisfactory aircraft do not appear as yet to be available for use with the fleet.

12. An aeroplane, in itself, is a very small craft, but the type necessary for the service has not been fully developed. This is probably due to several causes, and the General Board is of the opinion that the necessary directive effort can best be obtained by, and it therefore recommends, the establishment of an office whose head should be directly responsible for coordination in the work of construction and general development. Such an office should be under the direct control of the Chief of Operations, as is the office of mines and mining.

13. The General Board invites attention to its letter No. 449, of June 24, 1916, regarding the use of lighter-than-air machines in connection with the work of the fleet, and renews the recommendations therein made. Reports from abroad seem to show their value for scouting and spotting purposes, and also show the great difficulty which both England and France have experienced in developing a satisfactory type. The General Board therefore recommends that sufficient appropriation be requested to provide for the construction and development of aircraft of this type.

14. The General Board recommends that at the earliest practicable date the fleet be furnished with aviators and aircraft in adequate numbers, and it further recommends that $6,000,000 be appropriated in the 1918 program for naval aeronautics.

15. The General Board also invites the attention of the department to the advisability of developing detail coast charts for the use of aviators, such as are now in use abroad, to aid them in recognizing the locality in which they are operating.

ADVANCED BASE MATERIAL.

16. The General Board recommends that the amount of $460,000 be included in the estimates of the Bureau of Ordnance to provide for guns and equipment for advanced base land defenses. Consideration of the subject of advanced base land defenses shows the necessity for using larger guns for the main batteries than the 5-inch guns now assigned to that use. The General Board recommends that steps be taken to provide high angle fire, long range howitzers of about 10-inch caliber for this purpose. Such guns can be transported, landed, and mounted readily with the means available with the advanced base force.

17. In order that the land defenses of an advanced base may be quickly erected and efficiently manned the General Board recommends that the fixed defense force of marines be assembled at Philadelphia at the earliest practicable date, and held there for drills and exercises with the advanced base armament and material, except when absent on actual advanced base work, unless compelling circumstances demand its presence elsewhere. To use this force as infantry for long periods decreases its efficiency for advanced base work to the same extent that would result from using the crew of a battleship for extended infantry duty on shore.

NET DEFENSES.

18. The war in Europe has demonstrated the necessity for nets of great extent for the protection of anchorages and harbors against submarine and torpedo attack. The General Board recommends liberal appropriations for the supply and development of net protection for the defense of the coast and principal ports, and advises that the sum of $2,000,000 be included in the estimates of 1918 for this purpose.

GUANTANAMO.

19. Guantanamo is of great importnce to the Navy. In peace times it is the usual base of the Atlantic Fleet during the winter months, and it is an all-year base for the many small cruisers operating almost continuously in the West Indies and along the Caribbean and Mexican littoral. In time of war Guantanamo would probably be a very important point.

20. The usefulness of Guantanamo to the Navy has throughout the years of its occupation been greatly reduced, owing to the lack of a proper supply of water fit for boiler purposes and for drinking. This matter has frequently been before the Navy Department, but no action has ever been taken to actually secure an adequate supply of good water. The General Board earnestly recommends that such action be taken at the earliest possible moment.

GEORGE DEWEY.

APPENDIX B.

NAVY DEPARTMENT,
Washington, October 12, 1916.

STATEMENT BY THE CHIEF OF NAVAL OPERATIONS.

1. The Office of Naval Operations, organized in May, 1915, under the Chief of Naval Operations, has continued during the past year the consistent development of its work. In harmony with the department's already confirmed disposition to afford the chief of this office all necessary support for the exercise of his appropriate functions, Congress, by the act approved August 29, 1916, has strengthened the dignity of the Chief of Naval Operations by conferring upon him the rank of admiral, and has given permanency to the office by providing that he shall have not less than 15 assistants of or above the rank of lieutenant commander in the Navy or major in the Marine Corps. As soon as these officers become available for assignment they will be ordered to duty as provided for by law.

2. The experience in the administration of the Office of Operations during the past year has demonstrated that in it lies an effective means of coordinating the complex work of the Navy in harmony with maturely considered plans. The Chief of Naval Operations is, by law, charged, under the direction of the Secretary of the Navy, with the preparation and readiness of plans for the use of the fleet in war. A war plan constitutes a scheme of action and upon its soundness and completeness will depend the measure of success of our fleet when called upon to meet the test of war.

3. When properly understood, an approved plan becomes the guide for the effort of all executive branches of the department, to the accomplishmnt of which as a whole each branch within its own sphere of action must give its loyal adherence. The plans which have been formulated by the General Board and approved by the department have been received by the several bureaus and offices of the department in this loyal spirit, and there has resulted a closer and more efficient cooperation than ever before. Service of the fleet by all shore activities of the Navy, in order that the fleet may serve the Nation, has been accepted by all as a suitable mission.

4. In the work of preparation for war emergencies, and incident thereto in the collection of data relating to sources of supply, two or more bureaus have often covered the same field of inquiry, thus causing unnecessary multiplication of departmental work, and sometimes, unfortunately, causing a very natural irritation to private industrial managers subjected to repeated requests for information already furnished by them to the same department of the Government. To correct this very unbusinesslike practice, a permanent logistics committee of bureau representatives is now charged with the duty of coordinating the work of the several bureaus in collecting logistic data. This committee has also the broader duty of determining and maintaining, under the approval of the bureaus, a suitable war reserve of material and of devising methods for reserve expansion when war is imminent. There is a vital necessity for a war reserve for engineering and construction material sufficient to equip our fleet upon mobilization without delay.

5. The inspection of merchant vessels, with a view to their adaptation as naval auxiliaries in war, has continued. This work had formerly been carried on by a naval inspection board independent of the Army, which involved the risk of complication and confusion in the event of war through the fact that a similar inspection was being conducted independently by an Army board with a view to employing such vessels in the Army service. To obviate this there has been organized, through an agreement with the War Department, a board of inspection of merchant vessels consisting of both Army and Navy officers. No merchant vessels will be inspected hereafter for war service except by this joint board. Merchant vessels already inspected by either the War or the Navy Department, as well as vessels yet to be inspected, will be assigned definitely by the joint board either to the War Department or to the Navy Department. Each department will, when war is imminent, be able by this scheme to act with celerity and in perfect agreement. Like agreements affecting the allotment of the country's ammunition resources to the two departments are in process of adjustment. Other matters connected with the making of plans in which the Army and Navy must cooperate need close association of the two departments for satisfactory settlement. Steps are being taken to make a closer association with the War Department in such matters more easily possible.

6. A carefully thought out plan for the development of naval shore bases and naval stations has been prepared by the General Board and, in its main features, has been approved by the department. To insure a consistent plan of development of our navy yards and stations in accordance with such a plan a departmental board, on which all bureaus and offices concerned have representation, has been organized. The duty of this board is to advise a logical and scientific scheme of development and to determine the best method of applying the requirements of such scheme to each navy yard. By such systematic procedure each yard will be satisfactorily developed toward its maximum capacity for most efficient service, in conformity with the general approved plan. So, it is hoped, will immature or hasty recommendations for improvements be avoided and a permanent argument and justification for appropriations recommended will always be at hand based upon sound reasons.

7. In May, 1916, an officer of the rank of captain was given charge of naval districts in the Office of Operations. In accordance with the previously approved plan, the revision of the regulations governing naval districts was begun. A complete study of one district was worked out and was furnished to the commandants of districts as a type organization, with directions to organize each district along similar lines. This work is now being completed in the most satisfactory manner, and in addition the Offices of Naval Communications Service and of Naval Intelligence have prepared rules for obtaining and transmitting information within the naval districts.

8. The adoption of oil as the fuel of our naval vessels, the greatly increased use of fuel oil in commercial pursuits, the rapid depletion of our oil fields, and the difficulty of securing reserve fields to meet the future needs of the Navy, have created a very serious situation. The advantages of oil for naval use are so great that only a compelling necessity should ever force the Navy to consider its abandonment and a return to the use of coal. Such necessity can be avoided only if provision is made in advance to secure the necessary oil reserve. Having in mind these manifest conditions, the department appointed a board of naval officers to give this whole subject earnest consideration, and this board is now making a thorough study of the fuel-oil situation. It is hoped that the board's work of investigation may result in a definite recommendation to the department for a practical solution of this grave problem.

AERONAUTICS.

9. The development of naval aeronautics has continued to receive the department's serious attention, and though progress has not been rapid, the difficulties have been met without discouragement, and it is hoped that a type of naval aeroplane adapted for use over the sea, and its use from shipboard, are now problems near solution.

10. It must not be forgotten that all the wonderful advance in the science of aeronautics has been almost wholly along the lines of service over land, and that the service over sea is a new field, involving many unsolved problems widely different from those which have been solved in the land service. The naval aeroplane has its home on a ship, from which it must learn to take its flight and to which it must return to be reclaimed undamaged. The naval aeroplane has no smooth meadow from which to rise and upon which it may alight. It starts from the heaving deck of the scout and may have to rest, on its return, upon the surface of a stormy sea. Difficulties in the design of motors, of propellers, and of landing floats have been encountered and are steadily being overcome, the solution of these problems being greatly aided by the testing laboratory established at the Washington Navy Yard.

11. An aeroplane constructed after the department's own design is now nearly completed and is expected to solve many of our difficulties and establish the standard type for future construction.

12. One of our armored cruisers, the *North Carolina*, has been fitted with a practical aeroplane launching device and, supplied with a number of naval aeroplanes, has joined the fleet to cooperate in fleet work and to develop the tactics of aircraft on the sea. The *West Virginia* and *Washington*, sister ships of the *North Carolina*, have similar equipment installed, and other armored cruisers and scouts will, when opportunity offers to do the work, be fitted in like manner.

REPAIRS TO SHIPS.

13. In the effort to maintain our fleet in a state of constant readiness for efficient service, the department's policy abolishing regular overhaul periods at navy yards and requiring that all work within the capabilities of the ship's force and the fleet repair ships be done by these agencies away from navy yards has been adhered to, and will be continued. The benefits of such a policy, when thoroughly understood and reduced to practice, will be fully appreciated, and will result in an ever-increasing reliance within the fleet upon the fleet's own resources for maintaining its cruising efficiency.

14. That our important ships, under the operation of this policy, still continue to spend prolonged periods at the yards is due to abnormal circumstances existing at this time, when extraordinary work of alterations and repairs are made necessary by radical changes in the fire-control systems of all, the serious shaft troubles of some, and the renewal of boilers in others. These large items of repairs and alterations, of course, could only be taken care of at navy yards.

VESSELS IN COMMISSION IN RESERVE.

15. Vessels which have been placed in commission in reserve, though usually those of older construction, have still a definite military value, which exists so long as they are kept in readiness for active service. If allowed to deteriorate in their material condition or if stripped too bare of their personnel, these ships at once lose most of their military worth, and when so conditioned are virtually stricken from the Navy list. Under the department's present policy all ships in reserve are to be maintained in material readiness for active service at short

notice, with a sufficiently large part of their trained crew on board to keep alive knowleige of the ship and to sustain the spirit of efficiency within the ship as a leaven to the "green" men that upon commissioning for active service must be placed on board.

16. All reserve ships are organized into the reserve force under the reserve force commander. They are given periodic military inspections and are required to perform an annual program of exercises involving some form of target practice. The reserve force during the past year has been called upon to perform various services, and has in all cases answered the call with gratifying performance. On both the east coast and the west coast the reserve ships were given the duty of exercising the Naval Militia on its annual summer cruise of two weeks, and later they embarked nearly 3,000 civilian volunteers for a cruise of four weeks, giving these enthusiastic Americans an opportunity to see something of Navy life and of naval duties on shipboard.

GUNNERY EXERCISES AND ENGINEERING PERFORMANCES.

17. A better systematized and more searching analysis of the performances of ships during the training period preliminary to the gunnery exercises and during gun practice itself, by boards of officers appointed in the fleet, has resulted in the elimination of many faulty methods, in the standardization of good methods, and in a general increase in the knowledge of principles underlying successful gunnery practice.

18. The fleet has carried out the various forms of gunnery exercises prescribed, and the advance in battle efficiency has been maintained. The satisfactory progress noted in my report of last year is being maintained and, though not sacrificing the time necessary for other exercises, more time is being given to fleet gunnery training than in any previous year. Firing at extreme ranges has been carried out successfully, and greater experience with improved fire-control instruments and installations warrant the hope of still better results in the coming year.

19. Improvement in gunnery has not been confined to the battleship force alone, and it is worthy of note that the submarines show an equally satisfactory advance in torpedo work, keeping pace with the improvement noted in both the battleship and destroyer forces.

NAVAL COMMUNICATIONS SERVICE.

20. The Naval Radio Service, under its new name of Naval Communications Service, has continued its past efficient performance in handling the Government radio service, and in addition has taken over the work of handling all telegraph, telephone, and cable communications connected with the naval service outside the fleet. In addition to this work of serving the Government, as well as commercial needs, it has continued the censorship of radio stations in accordance with the President's neutrality proclamation of August 5, 1914.

21. An interesting demonstration of the progress attained in this interesting field was had on May 6, 7, and 8, 1916, when, in conjunction with the American Telephone & Telegraph Co., the communications service was mobilized for test. The Navy Department was connected by telephone and telegraph with all navy yards and radio stations in the United States. Radiotelephone apparatus was installed on board the battleship *New Hampshire*, and that ship, lying off the capes of the Chesapeake, was able to communicate by radiotelephony with the department in Washington and with the Mare Island Navy Yard, in California. The department itself had no difficulty whatever in communicating with the *New Hampshire* or any of the naval stations in the United States, using a desk telephone as on any ordinary occasion.

22. A new radio station has been completed and put in service at Point Isabel, Tex. This station will be of great service to the merchant marine in that section, as well as to the Government in facilitating communication with vessels in Mexican waters.

23. As an illustration of the growth of the radio service in the past few years, it may be noted that during the period from December 13, 1912, to December 31, 1913, there were handled a total of 12,854 commercial messages, while during the period from July 1, 1915, to June 30, 1916, the number had increased to 97,084. Of course the number of official messages had correspondingly increased, the number for the latter period above mentioned being 628,997.

OPERATIONS OF THE FLEET.

24. Our fleets on the several stations have been actively employed during the past year. In Asiatic waters the conditions in China have long been disturbed, and the unrest of the Chinese people has frequently been made manifest by local revolts and uprisings of more or less serious magnitude. Our ships on the Chinese coast, and especially in the rivers of that country, have rendered important service in keeping in touch with conditions, in sustaining our diplomatic representatives, and, in general, looking out for American interests.

25. The chief duty of the Pacific Fleet has been, as heretofore, service in Mexican waters. Unsettled conditions still continue in that country, and the recurrent threat of danger to the lives of our numerous citizens resident there has kept most of the active ships on the Pacific station, and at times many of the reserve ships distributed along the Mexican coast, ready for any service that the occasion might demand. Beginning in the latter part of June, 1916, and continuing through July, when the safety of Americans in Mexico seemed to be seriously threatened, our ships assisted thousands of our citizens out of that country and provided them transportation to the United States. On the east coast of Mexico the ships of our cruiser force in the Atlantic have performed like service.

26. The Atlantic Fleet has followed an approved annual program of exercises, In the main this program requires a stay in Cuban waters from January to April, during which target practice and tactical exercises are carried out. Then the fleet returns north for docking, repairs, and continued training, including elementary target practice and participation in the department's annual maneuver.

27. During the year, since October 1, 1915, the battleships *Pennsylvania*, *Nevada*, and *Oklahoma* have been completed and added to our active fleet, and the *Arizona*, which is to be commissioned on the 17th of this month, will soon join them. In addition, there have been completed and assigned to active service 10 destroyers and 7 submarines, together with the destroyer tender *Melville* and the submarine tender *Bushnell*.

28. The department's annual strategic maneuver took place in August last off the northern Atlantic coast. In this maneuver 83 vessels were engaged, of which 28 were battleships and 13 were submarines. The operations of the maneuver lasted for four days and developed most interesting and instructive situations for everyone concerned. It is with much gratification that the department noted the thoroughness and completeness with which the plans of the two commanders were treated and the very admirable manner in which the maneuver was carried out.

OPERATIONS IN HAITI AND SANTO DOMINGO.

29. The occupation of Haiti by the expeditionary force of United States Marines, which was initiated in July, 1915, still continues. The Haitien Gendermarie, under officers of the United States Marine Corps, has been organized in accordance with the treaty recently concluded between this Government and that of the Haitien Republic, and as soon as certain administrative details provided for in a supplementary agreement between the two Governments have been satisfactorily arranged, it is contemplated that the necessity for continued occupation of that country will cease. The present Government of Haiti gives every evidence of stability and that country is now enjoying a prosperity greater than it has for many years past.

30. The situation in Santo Domingo reached a crisis in May, 1916. The President of that country, Jiminez, abdicated his office, and the Santo Domingan Cabinet withdraw from Santo Domingo City, which was then held by an armed force of revolutionists under the revolutionary leader, Arias. In cooperation with our minister in Santo Domingo, naval forces were landed and occupied the city for the preservation of order and the protection of lives and property. The revolutionists having later established themselves in the town of Santiago, in the interior, an expeditionary force of Marines was dispatched to occupy that town, to disarm all insurgents, and to reestablish order. This work was most efficiently completed, and at this writing there are in existence no known revolutionists in arms against the constituted authority. All disorder in Santo Domingo has been suppressed, and it is hoped that permanent peace, under stable government, will soon be established. There are now 900 Marines in Haiti and 1,800 in Santo Domingo.

THE "HECTOR" AND THE "MEMPHIS."

31. On July 15 the U. S. S. *Hector* was wrecked and stranded off Cape Romaine, S. C. The *Hector* at the time of her wreck was proceeding on her usual service as collier from Charleston to the Caribbean and was caught in a severe gale, during which, after being disabled and having become unmanageable, she finally stranded, as stated. Salvage operations are now in progress, though greatly hampered by weather conditions which prevail at this season. No lives were lost in the wreck of this ship.

32. On August 29 the U. S. S. *Memphis*, flagship of the commander of the cruiser force, lying at anchor off the city of Santo Domingo, was driven ashore by heavy seas. This menace came upon the ship suddenly and without any previous warning. All material on board the *Memphis* of value is being salvaged, and an investigation is being held as to the feasibility of salvaging the ship. It is a matter of regret that 40 lives were lost in this wreck, 33 from the swamping of the ship's boats caught in the effort to return to the ship and 7 killed and 5 injured by the bursting of a steam pipe in the engine room.

W. S. BENSON.

APPENDIX C.

INCREASE OF NAVY SINCE 1903.

Statement of the totals of the appropriations carried by the naval acts from 1903 to 1916, showing separately the amounts for "Increase of the Navy," and showing the number and types of vessels authorized by those acts.

Year.	Appropriation.	Amount for increase Navy.	Building program.
1904	$97,505,140.94	$32,176,860.00	1 first-class battleship. 2 armored cruisers. 3 scout cruisers. 2 colliers. 2 tugs. 4 submarines.
1905	100,336,679.94	42,255,833.00	2 first-class battleships.
1906	102,091,670.27	33,475,829.00	1 first-class battleship. 3 torpedo-boat destroyers. 8 submarines.
1907	98,958,507.50	23,713,915.00	1 first-class battleship. 2 torpedo-boat destroyers.
1908	122,663,885.47	30,307,962.00	2 first-class battleships. 5 colliers. 10 torpedo-boat destroyers. 8 submarines.
1909	136,935,199.05	38,819,595.00	2 first-class battleships. 1 collier. 8 destroyers (3 subsurface). 4 submarines.
1910	131,350,854.38	33,770,346.00	2 first-class battleships. 2 colliers. 6 torpedo-boat destroyers. 4 submarines.
1911	126,478,338.24	26,005,547.67	2 first-class battleships. 2 colliers. 1 river gunboat. 1 gunboat. 2 tugs. 4 submarines. 1 submarine tender. 8 torpedo-boat destroyers.
1912	123,225,007.76	20,569,373.48	1 battleship, first line. 2 fuel ships. 6 destroyers. 1 destroyer tender. 8 submarines. 1 submarine tender.
1913	140,800,643.52	35,325,695.00	1 battleship. 1 transport. 1 supply ship. 6 destroyers. 4 submarines.
1914	144,868,716.61	41,091,734.00	3 battleships. 6 destroyers. 8 (or more) submarines.
1915	149,661,864.88	45,853,801.00	2 battleships. 6 destroyers. 2 seagoing submarines. 16 coast-defense submarines. 1 oil-fuel ship.

Statement of the totals of the appropriations [illegible] 1913 to 1916, showing separately the [illegible] showing the number and types of [illegible].

Year.	[illegible]	[illegible]	[illegible]
1916	[illegible]	[illegible]	[illegible]
			25,000.00
			38,850.00
			5,288,962.84
			6,042,312.84
			753,350.00

APPENDIX D.

Statement showing increase in number, increase in total pay, and increase in average pay of unskilled and partially skilled employees and skilled mechanics in the principal navy yards of the United States.

Yard.	Total number and average pay of unskilled and partially skilled employees and skilled mechanics in the principal navy yards of the United States as of date June 1, 1913.			Total number and average pay of unskilled and partially skilled employees and skilled mechanics in the principal navy yards of the United States as of date July 1, 1916.		
	Number.	Total daily pay roll.	Average pay.	Number.	Total daily pay roll.	Average pay.
Portsmouth	795	$2,075.63	$2.609	1,281	$3,760.88	$2.935
Boston	1,652	4,657.76	2.819	2,136	6,484.00	3.040
New York	3,880	10,576.92	2.726	5,889	18,174.46	3.086
Philadelphia	1,638	4,131.85	2.522	2,257	6,207.92	2.750
Washington	2,490	7,270.69	2.919	3,854	13,054.00	3.387
Norfolk	2,130	5,149.44	2.417	3,062	8,233.28	2.689
Charleston	800	1,967.61	2.459	1,169	2,597.62	2.222
Mare Island	1,909	5,634.16	2.951	2,294	7,243.28	3.160
Puget Sound	1,070	3,129.47	2.924	1,319	4,026.00	3.052
Newport	534	1,433.82	2.685	1,122	3,309.68	2.700
Total	16,898	46,027.35	.....	24,383	73,091.12	.....
Average	.....	.....	2.723	.....	.....	2.997

The act approved August 29, 1916, making appropriations for the naval service for the fiscal year ending June 30, 1917, increased the amount of leave with pay that can be granted the classes of employees above mentioned from 15 to 30 days in any one year.

COMPARATIVE STATEMENT OF ESTIMATES AND APPROPRIATIONS, 1917-18, NAVY DEPARTMENT.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Pay, miscellaneous	$915,000.00	$1,000,000.00	$85,000.00		
Contingent, Navy	46,000.00	46,000.00			
Expenses, civilian naval consulting board	25,000.00	25,000.00			
Investigation of fuel oil, etc	60,000.00	60,000.00			
Aviation	3,500,000.00	5,133,000.00	1,633,000.00		
National Advisory Committee for Aeronautics	82,515.70	107,000.00	24,484.30		
Arming and equipping Naval Militia	1,270,737.73	1,527,617.70	256,879.97		
Ships for Naval Militia	290,000.00			$290,000.00	
State marine schools	250,000.00			250,000.00	
Care of lepers, etc., Island of Guam	14,000.00	20,000.00	6,000.00		
Bureau of Navigation:					
Transportation	1,010,524.00	1,060,524.00	50,000.00		
Recruiting	224,228.84	319,228.84	75,000.00		
Contingent	10,000.00	10,000.00			
Gunnery and engineering exercises	135,000.00	205,000.00	70,000.00		
Outfits on first enlistment	2,065,920.00	2,390,920.00	325,000.00		
Maintenance of naval auxiliaries	1,069,460.00	1,144,390.00	74,930.00		
Instruments and supplies	350,000.00	450,000.00	100,000.00		
Ocean and lake surveys	105,000.00	105,000.00			
Naval Training Station, California	70,000.00	92,000.00	22,000.00		
Naval Training Station, Rhode Island	85,000.00	100,000.00	15,000.00		
Naval Training Station, Great Lakes	80,000.00	96,400.00	16,400.00		
Naval Training Station, St. Helena	25,000.00	30,000.00	5,000.00		
Naval War College, Rhode Island	38,850.00	38,850.00			
Total	5,288,982.84	6,042,312.84	753,330.00		

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Bureau of Navigation—Continued.					
Naval Home, Philadelphia, Pa.—					
Pay of employees	322,696.00	327,840.00	5,144.00		
Maintenance	54,421.00	57,800.00	3,384.00		
Total	377,117.00	385,640.00	8,528.00		
Bureau of Ordnance:					
Ordnance and ordnance stores	6,402,485.00	7,902,485.00	1,500,000.00		
Purchase and manufacture of smokeless powder	1,800,000.00	1,800,000.00			
Naval Gun Factory, Washington, D. C.—					
New and improved machinery for existing shops	150,000.00	307,000.00	157,000.00		
Repairs and betterments to present facilities		315,200.00	315,200.00		315,200.00
Machinery and equipment for new gun shop		1,798,800.00	1,798,800.00		1,798,800.00
Naval Magazine, Puget Sound, Wash.—					
Light automobile for carrying passengers	600.00			600.00	
Projectile plant	708,611.00	708,611.00			
Armor plant	11,000,000.00			11,000,000.00	
New batteries for ships of the Navy—					
For liners for eroded guns	100,000.00	100,000.00			
For one 12-inch 45-caliber gun		60,000.00	60,000.00		60,000.00
For antiaircraft guns and mounts		341,000.00	341,000.00		341,000.00
For 1-pounder boat guns and mounts		109,000.00	109,000.00		109,000.00
Batteries for merchant auxiliaries	1,600,000.00	1,600,000.00			
Ammunition for merchant auxiliaries		1,600,000.00	1,600,000.00		1,600,000.00
Defense of naval stations		1,000,000.00	1,000,000.00		1,000,000.00
Ammunition for ships of the Navy	13,720,000.00	1,800,000.00		12,920,000.00	
Armament and ammunition for 2 Coast Guard cutters		160,800.00	160,800.00		160,800.00
Torpedoes and appliances	800,000.00	800,000.00			
Air compressors for destroyers	195,000.00			195,000.00	
Torpedo nets for battleships	480,000.00			480,000.00	
Reserve ordnance supplies	4,808,524.00	4,657,400.00	153,900.00		
Torpedo Station, Newport, R. I.—					
Maintenance, etc.	100,000.00	100,000.00			
New and improved machinery and tools for torpedo factory	100,000.00	100,000.00			
Experiments, Bureau of Ordnance	100,000.00	100,000.00			
Contingent building fund	10,000.00	10,000.00			
Repairs, Bureau of Ordnance	80,000.00	80,000.00			
Contingent, Bureau of Ordnance	9,800.00	9,800.00			
Total	41,856,720.00	24,808,882.00	6,847,902.00	20,800,000.00	8,800,800.00

Bureau of Yards and Docks:					
Maintenance, Bureau of Yards and Docks	1,774,000.00	2,000,000.00	226,000.00		
Contingent, Bureau of Yards and Docks	50,000.00	75,000.00	25,000.00		
Total	1,824,000.00	2,075,000.00	251,000.00		
Public Works, Bureau of Yards and Docks:					
Navy yard, Portsmouth, N. H.—					
Toilet and locker facilities	3,000.00			3,000.00	
Crane track extension		11,000.00	11,000.00		11,000.00
Distributing systems extensions		18,000.00	18,000.00		18,000.00
Power plant improvements		105,000.00	105,000.00		105,000.00
Total	3,000.00	134,000.00	134,000.00	3,000.00	134,000.00
Navy yard, Boston, Mass.—					
Additional air-compressor plant	37,500.00			37,500.00	
Dredging, to continue	10,000.00			10,000.00	
Ventilating system	5,000.00			5,000.00	
Toilet and locker facilities	12,000.00			12,000.00	
Sterilizing and disinfecting plant		9,000.00	9,000.00		9,000.00
Improved drainage and filling arrangements, dry dock No. 2		17,500.00	17,500.00		17,500.00
Locomotive and crane shed		20,000.00	20,000.00		20,000.00
Total	64,500.00	46,500.00	46,500.00	64,500.00	46,500.00
Navy yard, New York, N. Y.—					
Dredging, to continue	50,000.00	125,000.00	75,000.00		
General distributing systems	15,000.00			15,000.00	
Paving, to continue	10,000.00			10,000.00	
Ventilating system	11,000.00			11,000.00	
Toilet and locker facilities	7,000.00			7,000.00	
Improvements to heating system	8,000.00			8,000.00	
Improvements to brass foundry	7,900.00			7,900.00	
Central power plant improvements		160,000.00	160,000.00		160,000.00
Remodeling building No. 132 for pattern storage		34,000.00	34,000.00		34,000.00
Storage facilities		500,000.00	500,000.00		500,000.00
Machine shop extension		400,000.00	400,000.00		400,000.00
Total	108,900.00	1,219,000.00	1,164,000.00	58,900.00	1,094,000.00
Navy yard, Philadelphia, Pa.—					
Addition to quartermaster's depot, Marine Corps, Philadelphia, Pa	175,000.00			175,000.00	
Ventilating system	9,000.00			9,000.00	
Toilet and locker facilities	4,000.00			4,000.00	
Dredging, to continue	25,000.00	25,000.00			
Dry dock (limit of cost not exceeding $3,500,000)	500,000.00	1,000,000.00	500,000.00		
Central power plant improvements		120,000.00	120,000.00		120,000.00
50-ton locomotive crane		100,000.00	100,000.00		100,000.00
Total	713,000.00	1,245,000.00	720,000.00	188,000.00	220,000.00

[1] Not included in total, paid from interest on Navy pension fund.

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Bureau of Navigation—Continued.					
Naval Home, Philadelphia, Pa.—					
Pay of employees	$22,696.00	$27,840.00	$5,144.00		
Maintenance	54,421.00	87,805.00	33,384.00		
Total	[1] 77,117.00	[1] 115,645.00	[1] 38,528.00		
Bureau of Ordnance:					
Ordnance and ordnance stores	6,402,485.00	7,602,485.00	1,200,000.00		
Purchase and manufacture of smokeless powder	1,800,000.00	1,800,000.00			
Naval Gun Factory, Washington, D. C.—					
New and improved machinery for existing shops	150,000.00	307,036.00	157,036.00		
Repairs and betterments to present facilities		315,200.00	315,200.00		$315,200.00
Machinery and equipment for new gun shop		1,798,500.00	1,798,500.00		1,798,500.00
Naval Magazine, Puget Sound, Wash.—					
Light automobile for carrying passengers	600.00			$600.00	
Projectile plant	705,611.00	705,611.00			
Armor plant	11,000,000.00			11,000,000.00	
New batteries for ships of the Navy—					
For liners for eroded guns	100,000.00	100,000.00			
For one 12-inch 45-caliber gun		60,000.00	60,000.00		60,000.00
For antiaircraft guns and mounts		341,000.00	341,000.00		341,000.00
For 1-pounder boat guns and mounts		162,000.00	162,000.00		162,000.00
Batteries for merchant auxiliaries	1,650,000.00	1,650,000.00			
Ammunition for merchant auxiliaries		1,500,000.00	1,500,000.00		1,500,000.00
Defense of naval stations		1,000,000.00	1,000,000.00		1,000,000.00
Ammunition for ships of the Navy	13,720,000.00	1,500,000.00		12,220,000.00	
Armament and ammunition for 2 Coast Guard cutters		159,590.00	159,590.00		159,590.00
Torpedoes and appliances	800,000.00	800,000.00			
Air compressors for destroyers	195,000.00			195,000.00	
Torpedo nets for battleships	480,000.00			480,000.00	
Reserve ordnance supplies	4,503,524.00	4,657,460.00	153,936.00		
Torpedo Station, Newport, R. I.—					
Maintenance, etc.	100,000.00	100,000.00			
New and improved machinery and tools for torpedo factory	100,000.00	100,000.00			
Experiments, Bureau of Ordnance	100,000.00	100,000.00			
Contingent building fund	10,000.00	10,000.00			
Repairs, Bureau of Ordnance	30,000.00	30,000.00			
Contingent, Bureau of Ordnance	9,500.00	9,500.00			
Total	41,856,720.00	24,808,382.00	6,847,262.00	23,895,600.00	5,336,290.00

Bureau of Yards and Docks:					
Maintenance, Bureau of Yards and Docks	1,774,000.00	2,000,000.00	226,000.00		
Contingent, Bureau of Yards and Docks	50,000.00	75,000.00	25,000.00		
Total	1,824,000.00	2,075,000.00	251,000.00		
Public Works, Bureau of Yards and Docks:					
Navy yard, Portsmouth, N. H.—					
Toilet and locker facilities	3,000.00			3,000.00	
Crane track extension		11,000.00	11,000.00		11,000.00
Distributing systems extensions		18,000.00	18,000.00		18,000.00
Power plant improvements		105,000.00	105,000.00		105,000.00
Total	3,000.00	134,000.00	134,000.00	3,000.00	134,000.00
Navy yard, Boston, Mass.—					
Additional air-compressor plant	37,500.00			37,500.00	
Dredging, to continue	10,000.00			10,000.00	
Ventilating system	5,000.00			5,000.00	
Toilet and locker facilities	12,000.00			12,000.00	
Sterilizing and disinfecting plant		9,000.00	9,000.00		9,000.00
Improved drainage and filling arrangements, dry dock No. 2		17,500.00	17,500.00		17,500.00
Locomotive and crane shed		20,000.00	20,000.00		20,000.00
Total	64,500.00	46,500.00	46,500.00	64,500.00	46,500.00
Navy yard, New York, N. Y.—					
Dredging, to continue	50,000.00	125,000.00	75,000.00		
General distributing systems	15,000.00			15,000.00	
Paving, to continue	10,000.00			10,000.00	
Ventilating system	11,000.00			11,000.00	
Toilet and locker facilities	7,000.00			7,000.00	
Improvements to heating system	8,000.00			8,000.00	
Improvements to brass foundry	7,900.00			7,900.00	
Central power plant improvements		160,000.00	160,000.00		160,000.00
Remodeling building No. 132 for pattern storage		34,000.00	34,000.00		34,000.00
Storage facilities		500,000.00	500,000.00		500,000.00
Machine shop extension		400,000.00	400,000.00		400,000.00
Total	108,900.00	1,219,000.00	1,164,000.00	58,900.00	1,094,000.00
Navy yard, Philadelphia, Pa.—					
Addition to quartermaster's depot, Marine Corps, Philadelphia, Pa	175,000.00			175,000.00	
Ventilating system	9,000.00			9,000.00	
Toilet and locker facilities	4,000.00			4,000.00	
Dredging, to continue	25,000.00	25,000.00			
Dry dock (limit of cost not exceeding $3,500,000)	500,000.00	1,000,000.00	500,000.00		
Central power plant improvements		120,000.00	120,000.00		120,000.00
50-ton locomotive crane		100,000.00	100,000.00		100,000.00
Total	713,000.00	1,245,000.00	720,000.00	188,000.00	220,000.00

[1] Not included in total, paid from interest on Navy pension fund.

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Public works, Bureau of Yards and Docks—Continued.					
Navy yard, Washington, D. C.—					
Additional gun shop (to cost, exclusive of equipment, not exceeding $600,000)	$200,000.00	$400,000.00	$200,000.00		
Fireproof model storage	65,000.00			$65,000.00	
Fuel oil storage	18,000.00			18,000.00	
Toilet and locker facilities	2,000.00			2,000.00	
Purchase of land	331,000.00			331,000.00	
Extending sight shop		40,000.00	40,000.00		$40,000.00
Improving lighting facilities		16,000.00	16,000.00		16,000.00
Total	616,000.00	456,000.00	256,000.00	416,000.00	56,000.00
Navy yard, Norfolk, Va.—					
Ventilating system	15,000.00			15,000.00	
Toilet and locker facilities	12,000.00			12,000.00	
To complete 150-ton crane	265,000.00			265,000.00	
Dry dock (limit of cost not exceeding $3,500,000)	500,000.00	1,000,000.00	500,000.00		
One structural shop (cost not to exceed $1,000,0000)	400,000.00	600,000.00	200,000.00		
Salvage and tools	50,000.00			50,000.00	
Water-front improvements		500,000.00	500,000.00		500,000.00
Improvements to central power plant and distributing system		300,000.00	300,000.00		300,000.00
Total	1,242,000.00	2,400,000.00	1,500,000.00	342,000.00	800,000.00
Buildings and grounds, Naval Academy—					
Two freight elevators, Bancroft Hall		15,000.00	15,000.00		15,000.00
Sea wall	70,000.00	70,000.00			
Garbage crematory		10,000.00	10,000.00		10,000.00
Total	70,000.00	95,000.00	25,000.00		25,000.00
Marine recruiting station, Port Royal, S. C.—					
12 sets of noncommissioned officers' quarters		18,000.00	18,000.00		18,000.00
For a new building for the naval hospital and for necessary changes in existing buildings and equipment	15,000.00			15,000.00	
2 bungalows for officers' quarters		6,000.00	6,000.00		6,000.00
Station improvements		20,500.00	20,500.00		20,500.00
Total	15,000.00	44,500.00	44,500.00	15,000.00	44,500.00

Navy yard, Charleston, S. C.—					
Dredging, to continue	12,000.00	18,000.00	6,000.00		
Toilet and locker facilities	8,000.00			8,000.00	
Dredging Cooper River, approach to navy yard	175,000.00			175,000.00	
New superstructure for pier No. 314		50,000.00	50,000.00		50,000.00
Improvements to central power plant and distributing systems		130,000.00	130,000.00		130,000.00
Addition to dispensary		12,000.00	12,000.00		12,000.00
Storage facilities		50,000.00	50,000.00		50,000.00
Total	195,000.00	260,000.00	248,000.00	183,000.00	242,000.00
Navy aeronautic station, Pensacola, Fla.—					
To repair, etc., public works damaged by storm of July, 1916	420,000.00			420,000.00	
Improvements to central power plant		50,000.00	50,000.00		50,000.00
Water system		40,000.00	40,000.00		40,000.00
Roads and pavements		20,000.00	20,000.00		20,000.00
Quarters for enlisted men		20,000.00	20,000.00		20,000.00
Total	420,000.00	130,000.00	130,000.00	420,000.00	130,000.00
Naval station, New Orleans, La.—					
Hurricane damages	150,000.00			150,000.00	
Extension of wharf		30,000.00	30,000.00		30,000.00
Floating crane		30,000.00	30,000.00		30,000.00
Total	150,000.00	60,000.00	60,000.00	150,000.00	60,000.00
Navy yard, Mare Island, Cal.—					
Maintenance of dikes and dredging	50,000.00	50,000.00			
Erecting shop	25,000.00			25,000.00	
Toilet and locker facilities	9,000.00			9,000.00	
Floating crane, revolving type (to cost not exceeding $600,000)	300,000.00	300,000.00			
Improvements to central power plant and distributing systems		105,000.00	105,000.00		105,000.00
Total	384,000.00	455,000.00	105,000.00	34,000.00	105,000.00
Navy yard, Puget Sound, Wash.—					
Dredging, to continue	15,000.00			15,000.00	
Toilet and locker facilities	3,000.00			3,000.00	
Improvements to central power plant and distributing systems		150,000.00	150,000.00		150,000.00
Floor shipfitters' shop		45,000.00	45,000.00		45,000.00
Floating derrick		70,000.00	70,000.00		70,000.00
Purchase of land and fitting up trial course (Vashon Island)		5,000.00	5,000.00		5,000.00
Latrine connections in dry dock		12,000.00	12,000.00		12,000.00
Storage facilities		500,000.00	500,000.00		500,000.00
Total	18,000.00	782,000.00	782,000.00	18,000.00	782,000.00
San Diego County, Cal.—					
Land for naval base, San Diego County, Cal	250,000.00			250,000.00	

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Public works, Bureau of Yards and Docks—Continued.					
Naval station, Pearl Harbor, Hawaii—					
Dry dock, to continue	$700,000.00	$936,500.00	$236,500.00		
Storehouses		100,000.00	100,000.00		$100,000.00
Total	700,000.00	1,036,500.00	336,500.00		100,000.00
Naval station, Tutuila, Samoa—					
Officers' quarters	4,000.00			$4,000.00	
Additional water supply		30,000.00	30,000.00		30,000.00
Enlisted men's quarters		5,000.00	5,000.00		5,000.00
Total	4,000.00	35,000.00	35,000.00	4,000.00	35,000.00
Naval station, Guam—					
Water-front improvements	1,000.00			1,000.00	
Roads		10,000.00	10,000.00		10,000.00
Storage facilities		5,000.00	5,000.00		5,000.00
Purchase of land		15,000.00	15,000.00		15,000.00
Water supply and power plant improvements		30,000.00	30,000.00		30,000.00
Total	1,000.00	60,000.00	60,000.00	1,000.00	60,000.00
Guns and munitions storage	280,400.00			280,400.00	
Naval station, Guantanamo, Cuba—					
Dredging and fill (to cost $25,000)		9,000.00	9,000.00		9,000.00
Water supply		25,000.00	25,000.00		25,000.00
Total		34,000.00	34,000.00		34,000.00
Naval magazine, Hingham, Mass.—					
Quarters for guards	5,000.00			5,000.00	
Smokeless powder test building	1,300.00			1,300.00	
Storehouse and approaches		35,000.00	35,000.00		35,000.00
Two magazines		70,000.00	70,000.00		70,000.00
Total	6,300.00	105,000.00	105,000.00	6,300.00	105,000.00

Naval proving ground, Indianhead, Md.—					
Three powder dry houses	15,000.00			15,000.00	
Fire protection	38,000.00			38,000.00	
Bridge over Mattawoman Creek	25,000.00			25,000.00	
Fence around powder factory	28,000.00			28,000.00	
Improvements to powder factory		150,000.00	150,000.00		150,000.00
Total	106,000.00	150,000.00	150,000.00	106,000.00	150,000.00
Naval magazine, Lake Denmark, N. J—					
Quarters for guards	10,000.00			10,000.00	
Two shell houses and one magazine		100,000.00	100,000.00		100,000.00
Total	10,000.00	100,000.00	100,000.00	10,000.00	100,000.00
Naval magazine, Fort Mifflin, Pa.—					
Office building	5,000.00			5,000.00	
One magazine building		35,000.00	35,000.00		35,000.00
Shell house		35,000.00	35,000.00		35,000.00
Railroad track extension		11,400.00	11,400.00		11,400.00
Concrete fence		46,800.00	46,800.00		46,800.00
One set of quarters for chief gunner or gunner		7,000.00	7,000.00		7,000.00
Fire protection system		7,500.00	7,500.00		7,500.00
Total	5,000.00	142,700.00	142,700.00	5,000.00	142,700.00
Naval magazine, Iona Island, N. Y.—					
Quarters for guards	5,000.00			5,000.00	
1 mine and projectile house		38,000.00	38,000.00		38,000.00
Water-front improvements		12,000.00	12,000.00		12,000.00
Total	5,000.00	50,000.00	50,000.00	5,000.00	50,000.00
Naval torpedo station, Keyport, Wash.—					
Railroad system	5,000.00			5,000.00	
1 officer's quarters	6,000.00			6,000.00	
Freight wharf		8,000.00	8,000.00		8,000.00
1 set of quarters for commissioned officers		8,000.00	8,000.00		8,000.00
Total	11,000.00	16,000.00	16,000.00	11,000.00	16,000.00
Naval magazine, Kuahua, Hawaii—					
Surveillance test house	3,000.00			3,000.00	
Filling house for explosive D	2,000.00			2,000.00	
Total	5,000.00			5,000.00	
Naval magazine, Mare Island, Cal.—					
Laboratory and testing building	3,000.00			3,000.00	
1 explosive D loading house and equipment		8,000.00	8,000.00		8,000.00
Building for storage of mines		8,000.00	8,000.00		8,000.00
Total	3,000.00	16,000.00	16,000.00	3,000.00	16,000.00

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Public works, Bureau of Yards and Docks—Continued.					
Naval torpedo station, Newport, R. I.—					
Seaman gunners' quarters	$105,000 00			$105,000.00	
Sea wall and filling	36.000.00			36,000.00	
Primer-filling house		$30,000.00	$30,000.00		$30,000.00
Extension of fire-protection system		8,000.00	8,000.00		8,000.00
Building for mine storage, Rose Island		9,000.00	9,000.00		9,000.00
Total	141,000.00	47,000.00	47,000.00	141,000.00	47,000.00
Naval magazine, St. Julien's Creek, Va.—					
Filling house	2,000.00			2,000.00	
Railroad system	12,500.00			12,500.00	
Locomotive house	3,500.00			3,500.00	
Purchase of land	60,000.00			60,000.00	
Extension of small arm ammunition building No. 16		8,000.00	8,000.00		8,000.00
1 mine-storage building, including track extension		9,000.00	9,000.00		9,000.00
1 magazine and 2 shell houses		100,000.00	100,000.00		100,000.00
Total	78,000.00	117,000.00	117,000.00	78,000.00	117,000.00
Naval magazine, Charleston, S. C.—					
Ammunition storage		35,000.00	35,000.00		35,000.00
Naval magazine, Puget Sound, Wash.—					
2 filling houses	3,000.00			3,000.00	
Guardhouse	4,000.00			4,000.00	
Shop for loading shells		7,000.00	7,000.00		7,000.00
Extension of water system		30,000.00	30,000.00		30,000.00
1 fuse and detonator house		3,600.00	3,600.00		3,600.00
1 mine-storage building		9,000.00	9,000.00		9,000.00
Total	7,000.00	49,600.00	49,600.00	7,000.00	49,600.00
Depots for coal and other fuel	500,000.00	1,000,000.00	500,000.00		
Naval coaling station, Melville, R. I.—					
Improvements to water supply (including purchase of land)	15,000.00	74,000.00	59,000.00		

Naval hospital, Canacoa, P. I.— 6 contagious disease units	3,600.00			3,600.00	
Naval hospital, Portsmouth, N. H.— 3 contagious wards		20,000.00	20,000.00		20,000.00
Naval hospital, Chelsea, Mass.— Sea wall	14,700.00			14,700.00	
Naval hospital, Great Lakes, Ill.— 3 contagious wards		20,000.00	20,000.00		20,000.00
Naval hospital, Mare Island, Cal.— Mess hall, extension	15,000.00			15,000.00	
Naval hospital, Newport, R. I.— 3 contagious wards	18,000.00			18,000.00	
Marine barracks, Philadelphia, Pa.—					
Advance base storage		80,000.00	80,000.00		80,000.00
Drill hall and gymnasium		80,000.00	80,000.00		80,000.00
Total		160,000.00	160,000.00		160,000.00
Naval hospital, New York, N. Y.— Remodeling house No. 4	10,000.00			10,000.00	
Marine Corps rifle range, Winthrop, Md.— Range improvements		10,000.00	10,000.00		10,000.00
Marine barracks, Norfolk, Va.— Station improvements		12,700.00	12,700.00		12,700.00
Marine barracks, Guam— 3 officers' quarters	10,000.00			10,000.00	
Naval training station, Great Lakes, Ill.— Improvements to distributing systems		50,000.00	50,000.00		50,000.00
Naval training station, Newport, R. I.—					
Supply officers' storehouse		30,000.00	30,000.00		30,000.00
Improvements to power plant		33,000.00	33,000.00		33,000.00
Total		63,000.00	63,000.00		63,000.00
Naval training station, San Francisco, Cal.— Water-supply improvements, to be immediately available	32,475.00			32,475.00	
Marine barracks, San Diego, Cal.— Toward the establishment of a Marine Corps base		600,000.00	600,000.00		600,000.00
Experimental and research laboratory, to complete (limit of cost not to exceed $1,500,000)	1,000,000.00	500,000.00		500,000.00	

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Public works, Bureau of Yards and Docks—Continued.					
To reimburse the owner of property damaged by shell fired at naval proving ground, Indianhead, Md		$550.00	$550.00		$550.00
Repairs and preservation at navy yards and stations	$1,100,000.00	1,250,000.00	150,000.00		
Recapitulation—					
Navy yard, Portsmouth, N. H	3,000.00	134,000.00	131,000.00		
Navy yard, Boston, Mass	64,500.00	46,500.00		$18,000.00	
Navy yard, New York, N. Y	108,900.00	1,219,000.00	1,110,100.00		
Navy yard, Philadelphia, Pa	713,000.00	1,245,000.00	532,000.00		
Navy yard, Washington, D. C	616,000.00	456,000.00		160,000.00	
Navy yard, Norfolk, Va	1,242,000.00	2,400,000.00	1,158,000.00		
Buildings and grounds, Naval Academy	70,000.00	95,000.00	25,000.00		
Marine recruiting station, Port Royal, S. C	15,000.00	44,500.00	29,600.00		
Navy yard, Charleston, S. C	195,000.00	260,000.00	65,000.00		
Navy aeronautic station, Pensacola, Fla	420,000.00	130,000.00		290,000.00	
Naval station, New Orleans, La	150,000.00	60,000.00		90,000.00	
Navy yard, Mare Island, Cal	384,000.00	455,000.00	71,000.00		
Land for naval base in San Diego County, Cal	250,000.00			250,000.00	
Navy yard, Puget Sound, Wash	18,000.00	782,000.00	764,000.00		
Naval station, Pearl Harbor, Hawaii	700,000.00	1,036,500.00	336,500.00		
Naval station, Tutuila, Samoa	4,000.00	35,000.00	31,000.00		
Naval station, Guam	1,000.00	60,000.00	59,000.00		
Naval station, Guantanamo, Cuba		34,000.00	34,000.00		
Guns and munitions storage	280,400.00			280,400.00	
Naval magazine, Hingham, Mass	6,300.00	105,000.00	98,700.00		
Naval proving ground, Indianhead, Md	106,000.00	150,000.00	44,000.00		
Naval magazine, Fort Mifflin, Pa	5,000.00	142,700.00	137,700.00		
Naval magazine, Iona Island, N. Y	5,000.00	50,000.00	45,000.00		
Naval magazine, Lake Denmark, N. J	10,000.00	100,000.00	90,000.00		
Naval torpedo station, Keyport, Wash	11,000.00	16,000.00	5,000.00		
Naval magazine, Kuahua, Hawaii	5,000.00			5,000.00	
Naval magazine, Charleston, S. C		35,000.00	35,000.00		
Naval magazine, Mare Island, Cal	3,000.00	16,000.00	13,000.00		
Naval torpedo station, Newport, R. I	141,000.00	47,000.00		94,000.00	
Naval magazine, St. Juliens Creek, Va	78,000.00	117,000.00	39,000.00		

Naval magazine, Puget Sound, Wash	7,000.00	49,600.00	42,600.00		
Depots for coal and other fuel	500,000.00	1,000,000.00	500,000.00		
Naval coaling station, Melville, R. I	15,000.00	74,000.00	59,000.00		
Naval hospital, Canacoa, P. I	3,600.00			3,600.00	
Naval hospital, Chelsea, Mass	14,700.00			14,700.00	
Naval hospital, Mare Island, Cal	15,000.00			15,000.00	
Naval hospital, Newport, R. I	18,000.00			18,000.00	
Naval hospital, Portsmouth, N. H		20,000.00	20,000.00		
Naval hospital, Great Lakes, Ill		20,000.00	20,000.00		
Naval hospital, New York, N. Y	10,000.00			10,000.00	
Marine barracks, Guam	10,000.00			10,000.00	
Marine barracks, Philadelphia, Pa		160,000.00	160,000.00		
Marine barracks, Norfolk, Va		12,700.00	12,700.00		
Marine barracks, San Diego, Cal		600,000.00	600,000.00		
Marine Corps rifle range, Winthrop, Md		10,000.00	10,000.00		
Naval training station, Newport, R. I		63,000.00	63,000.00		
Naval training station, Great Lakes, Ill		50,000.00	50,000.00		
Naval training station, San Francisco, Cal	32,475.00			32,475.00	
Experimental and research laboratory	1,000,000.00	500,000.00		500,000.00	
To reimburse the owner of property damaged by shell fired at naval proving ground, Indianhead, Md		550.00	550.00		
Repairs and preservation at navy yards and stations	1,100,000.00	1,250,000.00	150,000.00		
Total, public works	8,330,875.00	13,081,050.00	6,541,350.00	1,791,175.00	
Commission on additional navy yards and stations	10,000.00			10,000.00	
Improving and equipping navy yards for construction of ships	6,000,000.00			6,000,000.00	
Bureau of Medicine and Surgery:					
Medical department	921,740.00	1,121,740.00	200,000.00		
Contingent, Bureau of Medicine and Surgery	241,080.00	291,080.00	50,000.00		
Transportation of remains	24,908.00	32,658.00	7,750.00		
Total	1,187,728.00	1,445,478.00	257,750.00		
Pay of the Navy	50,226,912.65	51,023,776.15	796,863.50		
Camps of instruction, Naval Reserve force	30,000.00	30,000.00			
Organizing the Naval Reserve force	130,000.00	130,000.00			
Bureau of Supplies and Accounts:					
Provisions, Navy	9,820,900.25	10,144,943.00	324,042.75		
Naval Academy dairy	100,000.00			100,000.00	
Maintenance, Supplies and Accounts	2,623,640.00	2,750,000.00	126,360.00		
Freight	725,000.00	850,000.00	125,000.00		
Fuel and transportation	5,000,000.00	6,500,000.00	1,500,000.00		
Total	18,269,540.25	20,244,943.00	2,075,402.75	100,000.00	

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Bureau of Construction and Repair:					
Construction and repair of vessels	$10,071,069.16	$11,500,000.00	$1,428,930.84		
Improvement of construction plants:					
Navy yard, Portsmouth, N. H.	10,000.00	10,000.00			
Navy yard, Boston, Mass	25,000.00	25,000.00			
Navy yard, New York, N. Y	35,000.00	35,000.00			
Navy yard, Philadelphia, Pa	25,000.00	25,000.00			
Navy yard, Norfolk, Va	35,000.00	35,000.00			
Navy yard, Charleston, S. C	10,000.00	10,000.00			
Navy yard, Mare Island, Cal	35,000.00	35,000.00			
Navy yard, Puget Sound, Wash	25,000.00	25,000.00			
Total	10,271,069.16	11,700,000.00	1,428,930.84		
Bureau of Steam Engineering:					
Engineering	9,056,376.28	10,270,000.00	1,213,623.72		
High-power radio stations	300,000.00			$300,000.00	
Construction of propelling engines, North Dakota, Salem, Mayrant and Henley	1,000,000.00			1,000,000.00	
Engineering experiment station, United States Naval Academy, Annapolis, Md.—					
Experimental and research work	85,000.00	85,000.00			
Equipment of building	20,000.00	20,000.00			
Machinery plants	200,000.00	190,000.00		10,000.00	
Total	10,661,376.28	10,565,000.00	1,213,623.72	1,310,000.00	
Naval Academy:					
Civil establishment	334,521.92	376,843.20	42,321.28		
Current and miscellaneous expenses	37,585.00	49,500.00	11,915.00		
Maintenance and repairs	331,840.00	394,056.00	62,216.00		
Total	703,946.92	820,399.20	116,452.28		
United States Marine Corps:					
Pay of the Marine Corps—					
Pay, officers, active and reserve list	1,421,849.00	1,690,666.00	268,817.00		
Pay, officers, retired list	180,872.50	198,307.50	17,435.00		
Pay, noncommissioned officers, musicians, privates, active and reserve list	3,665,942.52	4,800,532.00	1,134,589.48		
Pay, enlisted men, retired list	152,091.00	175,986.00	23,895.00		

Undrawn clothing	100,000.00	100,000.00			
Mileage	58,000.00	58,000.00			
Commutation of quarters	61,000.00	75,000.00	14,000.00		
Pay, civil force—					
Office of the major general commandant	4,771.28	4,771.28			
Paymaster's Department	4,700.00	4,700.00			
Adjutant and Inspector's Department	7,900.00	7,900.00			
Quartermaster's Department	16,740.00	17,140.00	400.00		
Total	5,673,866.30	7,133,002.78	1,459,136.48		
Maintenance, Quartermaster's Department, Marine Corps—					
Provisions	1,491,621.90	1,676,000.00	184,378.10		
Clothing	1,158,058.50	1,580,000.00	421,941.50		
Fuel	243,561.92	260,000.00	16,438.08		
Military stores	1,657,021.74	852,000.00		805,021.74	
Camps of instruction	31,000.00	31,000.00			
Transportation and recruiting	549,630.65	500,000.00		49,630.65	
Repairs of barracks	220,000.00	220,000.00			
Forage	80,306.00	68,000.00		12,306.00	
Commutation of quarters	111,928.00	167,000.00	55,072.00		
Contingent	846,385.00	846,385.00			
Marine Corps Reserve		25,000.00	25,000.00		
Total	6,389,513.71	6,225,385.00	702,829.68	866,958.39	
Expenses, Marine Corps Reserve	25,000.00	(1)		25,000.00	
Increase of the Navy (exclusive of first year of new building program):					
Construction and machinery	14,086,534.00	73,639,902.00	59,553,368.00		
Torpedo boats	5,282,593.00	16,816,110.00	11,533,517.00		
Armor and armament	9,000,000.00	25,000,000.00	16,000,000.00		
Amunition		3,490,143.00	3,490,143.00		
Total	28,369,127.00	118,946,155.00	90,577,028.00		
Increase of the Navy (first year of new building program):					
Construction and machinery	44,913,660.00	51,100,000.00	6,186,340.00		
Torpedo boats	8,467,000.00	15,800,000.00	7,333,000.00		
Armor and armament	38,110,000.00	21,650,000.00		16,460,000.00	
Ammunition	19,485,500.00	8,412,200.00		11,073,300.00	
Total	110,976,160.00	96,962,200.00	13,519,340.00	27,533,300.00	

[1] Estimate for 1918 included under Quartermaster's Department, Marine Corps.

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

RECAPITULATION.

Naval Establishment.	Appropriated, 1917.	Estimates, 1918.	Net increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Net decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Pay, miscellaneous	$915,000.00	$1,000,000.00	$85,000.00		
Contingent, Navy	46,000.00	46,000.00			
Expenses, civilian naval consulting board	25,000.00	25,000.00			
Investigation of fuel oil, etc	60,000.00	60,000.00			
Aviation	3,500,000.00	5,133,000.00	1,633,000.00		
Advisory committee for aeronautics	82,515.70	107,000.00	24,484.30		
Arming and equipping Naval Militia	1,270,737.73	1,527,617.70	256,879.97		
Ships for Naval Militia	290,000.00			$290,000.00	
State marine schools	250,000.00			250,000.00	
Care of lepers, etc., Island of Guam	14,000.00	20,000.00	6,000.00		
Bureau of Navigation	5,288,982.84	6,042,312.84	753,330.00		
Bureau of Ordnance	41,856,720.00	24,808,382.00		17,048,338.00	
Bureau of Yards and Docks	1,824,000.00	2,075,000.00	251,000.00		
Public works, Bureau of Yards and Docks	8,330,875.00	13,081,050.00	4,750,175.00		
Commission on additional navy yards and stations	10,000.00			10,000.00	
Improving and equipping navy yards for construction of ships	6,000,000.00			6,000,000.00	
Bureau of Medicine and Surgery	1,187,728.00	1,445,478.00	257,750.00		
Pay of the Navy	50,226,912.65	51,023,776.15	796,863.50		
Camps of instruction, Naval Reserve force	30,000.00	30,000.00			
Organizing the Naval Reserve force	130,000.00	130,000.00			
Bureau of Supplies and Accounts	18,269,540.25	20,244,943.00	1,975,402.75		
Bureau of Construction and Repair	10,271,069.16	11,700,000.00	1,428,930.84		
Bureau of Steam Engineering	10,661,376.28	10,565,000.00		96,376.28	
Naval Academy	703,946.92	820,399.20	116,452.28		
Marine Corps—					
Paymaster	5,673,866.30	7,133,002.78	1,459,136.48		
Quartermaster	6,389,513.71	6,225,385.00		164,128.71	
Expenses, Marine Corps Reserve	25,000.00			25,000.00	
Total	173,332,784.54	163,243,346.67	13,794,405.12	23,883,842.99	
Increase of the Navy—old program:					
Construction and machinery	14,086,534.00	73,639,902.00	59,553,368.00		
Torpedo boats	5,282,593.00	16,816,110.00	11,533,517.00		

Armor and armament	9,000,000.00	25,000,000.00	16,000,000.00	.....	.....
Ammunition	.....	3,490,143.00	3,490,143.00	.....	.....
Total	28,369,127.00	118,946,155.00	90,577,028.00	.....	.....
Total, exclusive of new program	201,701,911.54	282,189,501.67	104,371,433.12	23,883,842.99	.....
Increase of the Navy—new program:					
Construction and machinery	44,913,660.00	51,100,000.00	6,186,340.00	.....	.....
Torpedo boats	8,467,000.00	15,800,000.00	7,333,000.00	.....	.....
Armor and armament	38,110,000.00	21,650,000.00	.....	16,460,000.00	.....
Ammunition	19,485,500.00	8,412,200.00	.....	11,073,300.00	.....
Total	110,976,160.00	96,962,200.00	13,519,340.00	27,533,300.00	.....
Total, old and new programs	139,345,287.00	215,908,355.00	104,096,368.00	27,533,300.00	.....
Grand total	312,678,071.54	379,151,701.67	117,890,773.12	51,417,142.99	.....

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Navy Department.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items 1918.
Office of the Secretary:					
Salaries	$85,020.00	$86,490.00			
Disbursing clerk, at $2,500 (increase of $250 submitted)			$250.00		
Estimate clerk, at $2,000 (increase of $200 submitted)			200.00		
Superintendent of indexers and records (in lieu of clerk of class 4)			200.00		
Purchasing clerk (in lieu of clerk of class 3)			400.00		
Carpenter, at $1,100 (increase of $200 submitted)			200.00		
Mail messenger (in lieu of messenger)			160.00		
Messenger to Secretary (in lieu of messenger)			60.00		
Total	85,020.00	86,490.00	1,470.00		
Office of the Solicitor:					
Salaries	20,590.00	20,590.00			
Office of Naval Records and Library:					
Salaries	21,000.00	21,250.00			
Chief clerk at $2,250 (increase of $250 submitted)			250.00		
Necessary traveling expenses	100.00	100.00			
Collecting, copying, or classifying Naval Records of the Revolutionary War		7,000.00	7,000.00		$7,000.00
Total	21,100.00	28,350.00	7,250.00		7,000.00
Office of Judge Advocate General:					
Salaries	16,760.00	17,510.00			
Chief law clerk, at $2,750 (increase of $750 submitted)			750.00		
Total	16,760.00	17,510.00	750.00		
Office of Chief of Naval Operations:					
Salaries	31,350.00	37,450.00			
Clerks—					
1 of class 2 (submitted)			1,400.00		1,400.00
1 of class 1 (submitted)			1,200.00		1,200.00
2, at $1,000 each (submitted)			2,000.00		2,000.00
Telegrapher (submitted)			1,100.00		1,100.00
Messenger boy (submitted)			400.00		400.00
Total	31,350.00	37,450.00	6,100.00		6,100.00

Bureau of Navigation:					
Salaries	94,190.00	104,990.00			
1 clerk, at $2,200 (new)			2,200.00		2,200.00
2 clerks, at $2,000 each (new)			4,000.00		4,000.00
1 clerk class 2 (new)			1,400.00		1,400.00
1 clerk class 1 (new)			1,200.00		1,200.00
2 clerks, at $1,000 each (new)			2,000.00		2,000.00
Total	94,190.00	104,990.00	10,800.00		10,800.00
Office of Naval Intelligence—					
Salaries	17,100.00	17,500.00			
Clerk of class 4 (in lieu of clerk of class 3)			200.00		
Draftsman, at $1,400 (increase of $200 submitted)			200.00		
Total	17,100.00	17,500.00	400.00		
Hydrographic Office—					
Salaries	123,660.00	133,660.00			
Chief clerk, at $2,000 (increase of $200 submitted)			200.00		
Nautical expert, at $2,000, in lieu of editor of Notices to Mariners, at $1,800			200.00		
Nautical expert, at $1,600 (increase of $200 submitted)			200.00		
2 nautical experts, at $1,400 each (increase of $200 each submitted)			400.00		
3 draftsmen, at $2,000 each (increase of $200 each submitted)			600.00		
Draftsman, at $1,800 (submitted)			1,800.00		1,800.00
Draftsman, at $1,400 (submitted)			1,400.00		1,400.00
Draftsman, at $1,200 (submitted)			1,200.00		1,200.00
3 draftsmen, at $900 each, in lieu of 3 apprentice draftsmen, at $700 each			600.00		
Engraver, at $1,400 (submitted in lieu of 1 at $720)			680.00		
Chief lithographer, at $2,000 (increase of $200 submitted)			200.00		
Clerk of class 3, in lieu of clerk of class 2			200.00		
Clerk of class 3, in lieu of compiler, at $1,400			200.00		
Clerk, at $1,000, in lieu of copyist, at $720			280.00		
2 helpers, at $720 each (submitted)			1,440.00		1,440.00
3 laborers, at $660 each (submitted)			1,980.00		1,980.00
2 helpers, at $660 each, omitted				$1,320.00	
2 helpers, at $600 each (submitted)			1,200.00		1,200.00
Helper, at $500, omitted				500.00	
2 feeders, at $480 each, omitted				960.00	
Contingent and miscellaneous expenses, Hydrographic Office—					
For purchase of copperplates, etc	26,000.00	30,000.00	4,000.00		
Contingent expenses of branch offices	10,000.00	12,000.00	2,000.00		
Services of necessary employees at branch offices	17,960.00	21,940.00	3,980.00		
Total	177,620.00	197,600.00	22,760.00	2,780.00	9,020.00
Naval Observatory—					
Salaries	44,240.00	50,600.00			
Astronomer, at $2,800 (submitted)			2,800.00		2,800.00
Assistant, department of nautical instruments, at $1,800 (increase of $200 submitted)			200.00		
Chief clerk, at $2,000, in lieu of clerk of class 4			200.00		
Clerk of class 1 (submitted)			1,200.00		1,200.00

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

Navy Department.	Appropriated, 1917.	Estimates, 1918.	Increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Bureau of Navigation—Continued.					
Naval Observatory—Continued.					
Salaries—Continued.					
Clerk, at $1,000 (submitted)			$1,000.00		$1,000.00
Skilled laborer, at $840, in lieu of elevator conductor, at $720			120.00		
Storeman and packer, at $840 (submitted)			840.00		840.00
Contingent and miscellaneous expenses—					
Miscellaneous computations	$5,000.00	$5,000.00			
Books, etc	750.00	750.00			
Apparatus, etc	2,000.00	2,000.00			
Repairs, etc	3,000.00	3,000.00			
Fuel, etc	8,000.00	8,000.00			
Grounds and roads, etc	5,000.00	5,000.00			
For observations of total solar eclipse of June 8, 1918 (submitted)		3,500.00	3,500.00		3,500.00
For addition to nautical instrument repair shop (submitted)		20,000.00	20,000.00		20,000.00
Total	67,990.00	97,850.00	29,860.00		29,340.00
Nautical Almanac Office—					
Salaries	19,240.00	19,240.00			
Pay of computers on piecework, etc	3,000.00	3,000.00			
Total	22,240.00	22,240.00			
Bureau of Steam Engineering:					
Salaries	64,490.00	65,610.00			
Chief of division of files and records in lieu of clerk, class 2			400.00		
1 blue printer (submitted)			720.00		720.00
Total	64,490.00	65,610.00	1,120.00		720.00
Bureau of Construction and Repair:					
Salaries	73,350.00	75,350.00			
Chief of division (submitted)			2,000.00		2,000.00
Total	73,350.00	75,350.00	2,000.00		2,000.00

Bureau of Ordnance:					
Salaries	34,610.00	36,810.00			
Clerk, class 1 (submitted)			1,200.00		1,200.00
Clerk, at $1,000 (submitted)			1,000.00		1,000.00
Total	34,610.00	36,810.00	2,200.00		2,200.00
Bureau of Supplies and Accounts:					
Salaries	136,270.00	155,570.00			
Civilian assistant, at $3,000 (increase of $500 submitted)			500.00		
8 principal clerks, at 2,100 each (4 new and 4 in lieu of 4 clerks of class 4)			9,600.00		8,400.00
2 principal clerks, at $2,000 each (1 new and 1 in lieu of 1 clerk of class 4)			2,200.00		2,000.00
5 clerks of class 4 (2 new and 3 in lieu of 3 clerks of class 3)			4,200.00		3,600.00
1 clerk of class 3 in lieu of 1 clerk of class 2			200.00		
4 clerks of class 2 in lieu of 4 clerks of class 1			800.00		
4 clerks of class 1 in lieu of 4 clerks at $1,100 each			400.00		
7 clerks, at $1,100 each, in lieu of 7 clerks, at $1,000 each			700.00		
7 clerks, at $1,000 each, in lieu of 7 clerks, at $900 each			700.00		
Total	136,720.00	155,570.00	19,300.00		14,000.00
Bureau of Medicine and Surgery:					
Salaries	24,150.00	24,150.00			
Bureau of Yards and Docks:					
Salaries	25,970.00	29,170.00			
Clerk, class 4 (submitted)			1,800.00		1,800.00
Clerk, class 2 (submitted)			1,400.00		1,400.00
Total	25,970.00	29,170.00	3,200.00		3,200.00
Contingent expenses, Navy Department	94,860.00	112,860.00	18,000.00		5,000.00

NOTE.—The Treasury Department has been requested to include an estimate of $160,000 for printing and binding for the Navy Department for the fiscal year ending June 30, 1918.

Comparative statement of estimates and appropriations, 1917–18, Navy Department—Continued.

RECAPITULATION.

Navy Department.	Appropriated, 1917.	Estimates, 1918.	Net increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Net decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Secretary's Office	$85,020.00	$86,490.00	$1,470.00		
Office of the Solicitor	20,590.00	20,590.00			
Library of the Navy Department	21,100.00	28,350.00	7,250.00		$7,000.00
Office of the Judge Advocate General	16,760.00	17,510.00	750.00		
Office of Chief of Naval Operations	31,350.00	37,450.00	6,100.00		6,100.00
Bureau of Navigation	94,190.00	104,990.00	10,800.00		10,800.00
Office of Naval Intelligence	17,100.00	17,500.00	400.00		
Hydrographic Office	177,620.00	197,600.00	19,980.00		9,020.00
Naval Observatory	67,990.00	97,850.00	29,860.00		29,340.00
Nautical Almanac Office	22,240.00	22,240.00			
Bureau of Steam Engineering	64,490.00	65,610.00	1,120.00		720.00
Bureau of Construction and Repair	73,350.00	75,350.00	2,000.00		2,000.00
Bureau of Ordnance	34,610.00	36,810.00	2,200.00		2,200.00
Bureau of Supplies and Accounts	136,270.00	155,570.00	19,300.00		14,000.00
Bureau of Medicine and Surgery	24,150.00	24,150.00			
Bureau of Yards and Dock	25,970.00	29,170.00	3,200.00		3,200.00
Contingent expenses, Navy Department	94,860.00	112,860.00	18,000.00		5,000.00
Total	1,007,660.00	1,130,090.00	122,430.00		89,380.00

NOTE.—The 1917 appropriation figures employed above include appropriations made in the general deficiency act approved Sept. 8, 1916 (Stat. L., v. 39, pp. 813–814). This act provided for additional employees under certain of the bureaus and offices and additional money under "Contingent expenses, Navy Department," and the appropriations for the additional employees were made on the basis of 10 months' service only. For comparative purposes the appropriations for these additional employees have been treated as if made for the whole year, and, therefore, the sum of the actual 1917 appropriations would be the sum above shown, less $12,926.67, or one-sixth of the yearly pay of the additional employees provided for in the general deficiency act, or $994,733.33.

SUMMARY.

Naval and Civil Establishments.	Appropriated, 1917.	Estimates, 1918.	Net increase of estimates for 1918 over amount appropriated for 1917 for same purpose.	Net decrease of estimates for 1918 as compared with amount appropriated for 1917 for same purpose.	New items, 1918.
Legislative bill	$1,007,660.00	$1,130,090.00	$122,430.00	.....	.....
Naval bill (exclusive of new building program)	201,701,911.54	282,189,501.67	80,487,590.13	.....	.....
Permanent annual and indefinite appropriations	1,898,117.00	2,215,745.00	317,628.00	.....	.....
Total, exclusive of new building progam	204,607,688.54	285,535,336.67	80,927,648.13	.....	.....
New building program (cost of first year's work)	110,976,160.00	96,962,200.00	.....	$14,013,960.00	.....
Grand total	315,583,848.54	382,497,536.67	80,927,648.13	14,013,960.00	.....

APPENDIX E.

INVESTMENT IN SHORE STATIONS.

Stations.	Date of establishment.	Expenditures.
NAVY YARDS (AT HOME).		
Portsmouth	1800	$11,337,338
Boston	1800	16,540,694
New York	1801	30,807,907
Philadelphia	1868	13,844,659
Washington	1800	15,670,359
Norfolk	1800	19,931,566
Mare Island	1854	21,108,155
Puget Sound	1891	10,645,931
Charleston	1901	5,111,335
Pensacola	1828	8,054,713
New Orleans	1849	2,636,982
NAVY YARDS (ABROAD).		
Hawaii	1899	10,209,755
Cavite	1898	2,649,279
Olongapo	1901	3,399,874
NAVAL STATIONS (AT HOME).		
Port Royal	1883	1,288,201
Key West	1854	2,666,327
NAVAL STATIONS (ABROAD).		
Guantanamo	1903	2,115,991
Guam	1898	524,277
Tutuila	1900	529,710
TRAINING STATIONS.		
Newport	1869	2,223,688
San Francisco	1898	434,509
Great Lakes	1905	,696,374
COALING STATIONS.		
Frenchmans Bay	1899	532,678
Melville	1900	1,218,353
Pichilinque Bay, Mexico	1900	57,093
San Diego	1904	291,229
Tiburon	1904	1,075,827
MISCELLANEOUS.		
Sitka	1900	145,482
New London	1868	442,922
Yokohama, Japan	1900	85,236
Annapolis (Naval Academy)	1845	11,950,890
Naval Proving Ground	1890	2,100,487
Las Animas	1907	433,306
Torpedo Station, Newport	1869	1,952,158
Torpedo Station, Pacific coast	1914	108,088
Radio stations	.....	3,072,767
Total	.....	208,894,090

Statement of sales of charts and Hydrographic Office publications and condemned property sold by the Navy Department during the fiscal year ended June 30, 1916.

Articles.	Gross amount received.	Expense of sale.	Net proceeds.
Charts and Hydrographic Office publications	$13,307.70	.....	$13,307.70
Old furniture, carpets, etc., belonging to bureaus and offices of the Navy Department	272.28	$2.25	270.03
Old mail wagons	59.75	1.05	58.70
Total	13,639.73	3.30	13,636.43

Deposited to credit:

Miscellaneous receipts, proceeds of sales	$328.73
Contingent and miscellaneous expenses, Hydrographic Office, 1916	13,307.70
Total	13,636.43

APPENDIX F.

SHIPS OF THE NAVY AND THEIR COST.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
Total	$389,819,271.45	$92,556,527.97	$115,415,848.61
BATTLESHIPS—FIRST LINE.			
Delaware	4,802,714.65	2,028,081.23	686,245.35
North Dakota	5,190,584.85	2,056,102.19	709,779.35
Florida	[1] 6,929,602.70	2,054,152.76	344,681.90
Utah	4,901,037.18	2,101,257.84	322,018.75
Wyoming	5,360,609.09	2,881,588.69	369,150.45
Arkansas	5,515,043.62	2,861,778.08	331,343.20
New York	[1] 6,806,857.21	2,973,897.46	165,995.86
Texas	6,526,755.98	2,994,311.10	203,601.63
Nevada	[2] 6,283,266.74	3,389,899.98	3,757.35
Oklahoma	[2] 6,091,488.41	3,418,869.52	863.16
Pennsylvania	[2] 7,580,020.11	3,930,224.57	1,554.20
Arizona	[1, 2] 6,084,523.38	3,682,857.31	196.50
New Mexico	[1, 2] 1,002,957.22	3,067,677.14	.....
Mississippi	[2] 3,158,396.51	3,661,252.92	.....
Idaho	[2] 4,256,761.71	3,635,078.09	.....
Tennessee	[1, 2] 16,293.09	.....	.....
California	[1, 2] 603.64	.....	.....
Total	80,507,516.09	44,737,028.88	3,139,187.70
BATTLESHIPS—SECOND LINE.			
Indiana	3,629,068.10	1,704,639.95	2,125,306.70
Massachusetts	3,684,778.02	1,753,066.95	1,937,408.60
Oregon	4,132,834.43	1,781,187.47	1,727,344.84
Iowa	3,570,388.03	1,592,199.09	1,608,235.01
Kearsarge	2,723,859.83	1,706,030.86	1,436,131.12
Kentucky	2,704,812.52	1,713,282.47	1,464,456.48
Illinois	2,984,237.95	1,089,191.31	1,290,315.22
Alabama	2,994,023.60	1,082,986.49	1,340,723.94
Wisconsin	3,018,549.29	1,144,068.24	1,171,193.06
Maine	3,437,085.48	1,130,379.04	1,371,867.86
Missouri	3,288,288.83	1,150,636.25	1,094,860.21
Ohio	3,265,515.25	1,209,860.20	1,178,965.33
Virginia	4,005,937.24	1,485,098.88	1,117,812.87
Nebraska	4,206,507.09	1,473,008.87	1,074,843.13
Georgia	4,069,460.60	1,471,818.98	1,076,839.64
New Jersey	3,911,787.26	1,474,019.15	1,347,611.09
Rhode Island	3,889,665.75	1,470,459.77	1,267,399.01
Connecticut	[1] 4,815,744.17	1,579,013.60	1,238,315.83
Louisiana	4,472,067.30	1,593,463.89	1,172,958.54
Vermont	4,580,084.69	1,586,182.59	1,295,976.58
Kansas	4,607,675.53	1,600,865.36	889,660.55
Minnesota	4,567,419.86	1,582,454.61	1,022,663.69
New Hampshire	4,415,975.28	1,560,261.71	837,539.22
South Carolina	4,354,007.00	1,315,179.53	654,708.77
Michigan	4,371,212.42	1,322,407.45	607,551.19
Total	95,664,985.52	36,571,762.71	31,350,687.58
ARMORED CRUISERS.			
Colorado	4,059,133.78	772,808.60	1,329,721.12
Maryland	4,079,877.85	794,996.31	908,755.73
Memphis	4,313,566.18	900,351.86	792,219.41
Montana	3,886,270.06	894,819.14	467,920.76
North Carolina	3,863,833.84	915,546.43	374,141.75
Pittsburgh	4,081,494.49	775,591.75	1,245,667.72
San Diego	3,925,226.13	788,047.98	611,690.94
South Dakota	3,941,729.43	793,431.15	565,527.17
Washington	4,305,352.82	896,552.82	744,675.46
West Virginia	4,087,812.12	797,404.39	1,187,107.12
Total	40,544,296.70	8,329,550.43	8,227,427.18
CRUISERS—FIRST CLASS.			
Brooklyn	3,470,716.30	474,104.43	1,398,346.93
Charleston	3,167,234.16	.....	502,435.11
Milwaukee	3,275,217.29	.....	307,654.19
Saratoga	3,675,593.04	322,247.28	2,322,584.91
St. Louis	3,173,782.63	.....	506,698.50
Total	16,662,543.42	796,351.71	5,037,989.64

[1] Government-built ship.

[2] Under construction; payments not complete.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
CRUISERS—SECOND CLASS.			
Chicago	[1] $1,150,000.00		$1,942,381.03
Columbia	3,461,960.26		787,098.16
Minneapolis	3,403,707.07		691,858.42
Olympia	2,484,027.54		1,064,086.56
Total	10,499,694.87		4,485,424.17
CRUISERS—THIRD CLASS.			
Albany	1,207,644.13		718,262.97
Birmingham	1,629,956.43		391,155.02
Boston	[2] 700,000.00		1,007,266.68
Chattanooga	1,378,445.75		354,341.15
Chester	1,766,293.52		336,358.03
Cincinnati	[2] 2,023,326.91		1,289,897.72
Cleveland	1,098,320.33		402,086.86
Denver	1,136,146.06		432,522.79
Des Moines	1,156,256.68		326,816.43
Galveston	1,426,850.73		239,322.26
Marblehead	1,061,426.30		682,800.90
Montgomery	1,050,933.54		912,313.72
New Orleans	1,430,091.59		769,212.26
Raleigh	[2] 1,867,934.32		1,262,384.16
Salem	1,619,325.00		410,916.96
Tacoma	1,113,395.45		356,412.03
Total	21,666,346.74		9,892,069.94
MONITORS.			
Amphitrite	1,571,392.46	$380,475.71	447,482.94
Cheyenne	1,147,174.13	224,919.03	310,583.43
Monadnock	2,148,974.52	400,196.18	382,927.91
Monterey	1,866,084.03	435,020.72	596,661.13
Ozark	1,184,176.74	229,786.25	285,211.93
Tallahassee	1,079,081.31	228,049.60	307,673.06
Tonopah	1,173,101.86	223,386.75	254,169.88
Total	10,169,985.05	2,121,834.24	2,584,710.28
DESTROYERS.			
Allen	[3] 682,081.61		
Ammen	655,460.56		83,760.81
Aylwin	795,495.92		37,330.78
Balch	780,711.36		20,758.95
Beale	669,396.42		54,700.88
Benham	780,911.25		27,907.14
Burrows	679,741.78		59,861.04
Caldwell	[2] [3] 25,769.73		
Cassin	781,387.87		33,886.52
Conner	[3] 42,250.00		
Conyngham	[3] 852,362.38		17.89
Craven	[2] [3] 6,000.16		
Cummings	778,086.53		39,937.24
Cushing	866,423.14		4,791.23
Davis	[3] 682,094.10		
Downes	735,587.93		2,445.86
Drayton	643,864.54		81,855.88
Duncan	806,084.38		13,424.45
Ericsson	873,173.37		[4] 2,720.52
Fanning	642,387.76		60,263.47
Flusser	639,962.56		145,403.06
Gwin	([4])		
Henley	683,873.23		63,094.18
Jacob Jones	[1] 813,645.64		656.63
Jarvis	651,509.74		48,605.83
Jenkins	665,778.73		62,791.86
Jouett	666,511.33		66,946.46
Lamson	604,801.09		139,420.07
McCall	684,286.82		99,304.28
McDougal	848,064.17		24,451.26
Manly	[3] 87,950.00		

[1] Appraised value 1889; original cost of Atlanta, Boston, Chicago, and Dolphin was $4,268,801.80.
[2] Government-built ship.
[3] Under construction; payments not complete.
[4] Recently authorized; no charges.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
DESTROYERS—continued.			
Mayrant	$673,943.53		$77,497.70
Monaghan	644,444.29		84,290.96
Nicholson	846,312.44		8,382.90
O'Brien	836,985.01		1,665.50
Parker	778,917.70		34,557.21
Patterson	647,707.66		72,165.68
Paulding	652,928.16		84,568.46
Perkins	615,132.21		95,014.01
Porter	847,409.82		2.69
Preston	662,864.46		124,924.52
Reid	637,600.99		167,027.43
Roe	643,092.74		101,841.48
Rowan	[1] 716,438.88		
Sampson	[1] 721,600.23		6,435.51
Shaw	[2] 1 312,077.88		
Smith	608,437.32		138,935.13
Sterett	618,325.71		106,329.92
Stockton	[1] 42,250.00		
Terry	639,505.55		108,618.40
Trippe	665,843.70		89,096.76
Tucker	838,592.56		69.55
Wadsworth	907,684.66		1,629.48
Wainwright	[1] 762,230.31		11,254.64
Walke	650,396.79		93,519.97
Warrington	676,469.28		126,261.96
Wilkes	[1] 609,803.60		
Winslow	841,716.79		2,139.98
Total	37,224,366.37		2,710,566.13
COAST TORPEDO VESSELS—DESTROYERS.			
Bainbridge	303,900.63		243,447.91
Barry	303,389.15		259,894.08
Chauncey	303,287.48		266,126.51
Dale	278,990.35		235,836.09
Decatur	276,038.01		347,252.11
Hopkins	313,350.79		262,093.24
Hull	318,316.05		228,043.36
Lawrence	296,659.77		208,061.38
Macdonough	297,023.98		180,536.49
Paul Jones	301,279.01		251,348.87
Perry	303,390.47		189,974.01
Preble	302,882.71		220,053.55
Stewart	299,877.30		283,567.23
Truxtun	304,537.10		227,806.66
Whipple	303,754.39		253,931.89
Worden	303,301.00		214,255.92
Total	4,809,978.19		3,872,229.30
COAST TORPEDO VESSELS—TORPEDO BOATS.			
Bagley	166,065.40		81,306.46
Bailey	234,299.09		177,159.00
Barney	165,752.26		91,446.97
Biddle	165,804.01		81,199.17
Blakely	182,105.02		68,230.94
Dahlgren	200,771.07		83,924.36
De Long	174,810.88		86,433.01
Dupont	165,501.03		121,416.95
Farragut	246,902.23		140,792.34
Foote	119,216.74		70,188.30
Fox	100,285.93		57,314.45
Goldsborough	266,208.69		65,268.76
Morris	94,923.87		72,261.58
Rodgers	110,720.63		112,520.66
Shubrick	145,299.20		101,295.92
Somers	72,997.50		38,349.62
Thornton	144,425.90		81,253.57
Tingey	196,707.65		59,801.32
Total	2,952,797.10		1,590,153.38

[1] Under construction; payments not complete. [2] Government-built ship.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
SUBMARINES.			
A-2	$178,657.80		$76,406.47
A-3	173,364.35		78,172.16
A-4	173,671.04		79,216.91
A-5	173,288.41		77,098.55
A-6	171,843.44		87,105.86
A-7	171,431.34		76,771.88
B-1	200,957.48		53,235.81
B-2	187,982.32		38,241.35
B-3	185,077.84		59,342.42
C-1	253,119.81		54,206.88
C-2	299,833.16		38,257.01
C-3	300,331.08		45,150.36
C-4	299,078.27		54,386.07
C-5	344,142.36		34,479.21
D-1	377,234.25		84,631.69
D-2	376,100.98		84,498.23
D-3	380,318.81		69,557.05
E-1	387,788.57		97,270.40
E-2	390,930.12		65,364.14
F-1	468,770.48		35,739.98
F-2	470,519.44		31,769.63
F-3	469,588.17		20,687.05
G-1	470,904.29		105,388.81
G-2	[1] 475,783.96		21,630.83
G-3	[1] 519,883.83		1,978.92
G-4	426,736.24		24,943.20
H-1	518,462.92		29,262.09
H-2	518,608.88		21,212.84
H-3	519,134.63		23,455.78
K-1	490,607.99		20,411.90
K-2	490,693.09		22,663.51
K-3	521,687.43		12,731.18
K-4	520,941.95		13,358.10
K-5	502,450.95		22,397.91
K-6	478,706.94		29,889.85
K-7	533,840.76		12,725.78
K-8	533,982.94		12,709.78
L-1	[1] 526,310.40		395.99
L-2	[1] 509,049.83		
L-3	[1] 499,143.28		64.25
L-4	[1] 499,427.76		
L-5	[1] 455,057.36		15.00
L-6	[1] 419,784.84		15.00
L-7	[1] 391,785.18		15.00
L-8	[2] 1 190,006.44		137.89
L-9	[1] 490,879.30		
L-10	[1] 499,259.30		
L-11	[1] 478,806.78		
M-1	[1] 547,668.83		
Schley	[1] 236,270.11		
N-1	[1] 270,011.08		15.00
N-2	[1] 270,011.10		15.00
N-3	[1] 225,011.10		15.00
N-4	[1] 170,800.00		
N-5	[1] 170,800.16		
N-6	[1] 170,800.00		
N-7	[1] 170,800.00		
Number 60	(3)		
Number 61	(3)		
O-1	[2] 1 5,729.93		
O-2	[2] 1 5,039.08		
O-3	(3)		
O-4	(3)		
O-5	(3)		
O-6	(3)		
O-7	(3)		
O-8	(3)		
O-9	(3)		
O-10	(3)		
O-11	54,500.00		
O-12	[1] 54,500.00		
O-13	[1] 54,500.00		

[1] Under construction; payments not complete.
[2] Government-built ship.
[3] Recently authorized; no charges.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
SUBMARINES—continued.			
O-14	[1] $27,425.00		
O-15	[1] 27,425.00		
O-16	[1] 27,425.00		
Total	21,399,683.18		$1,717,037.07
TENDERS TO TORPEDO VESSELS.			
Alert	[2] 118,000.00		423,650.96
Bushnell	918,423.30		563.78
Dixie	575,000.00		1,104,130.26
Fulton	525,542.07		21,011.50
Iris	145,000.00		540,566.23
Melville	1,275,845.96		1,494.85
Panther	375,000.00		703,164.35
Pompey	111,929.50		217,928.35
Total	4,044,740.83		3,012,510.28
GUNBOATS.			
Annapolis	278,131.52		375,969.99
Castine	510,878.13		554,341.20
Dolphin	[3] 350,000.00		672,171.03
Don Juan de Austria	[2] 187,000.00		342,073.11
Dubuque	334,974.23		148,584.11
Elcano	[2 4] 29,750.00		154,020.46
Helena	430,669.05		333,750.90
Isla de Luzon	[2 5] 219,700.00		370,952.92
Machias	492,502.32		513,902.24
Marietta	260,572.02		387,313.25
Monocacy	[5] 145,281.74		7,896.92
Nashville	476,722.06		516,705.12
Newport	298,615.14		195,511.07
Paducah	392,698.97		160,952.63
Palos	[5] 146,153.99		2,594.08
Pampanga	[2 4] 18,000.00		90,173.65
Petrel	309,981.65		415,515.58
Princeton	313,176.68		273,681.14
Quiros			106,003.06
Ranger	[2] 127,962.00		491,618.24
Sacramento	500,667.51		29,481.34
Samar	[2 4] 18,000.00		88,757.65
Sandoval	[2 5] 17,000.00		42,851.32
Vicksburg	286,050.92		331,813.36
Villalobos			48,658.52
Wheeling	256,069.19		330,901.48
Wilmington	424,868.65		378,436.19
Yorktown	548,906.61		809,906.20
Total	7,374.332.38		8,174,536.76
TRANSPORTS.			
Buffalo	550,000.00		908,978.11
General Alava, Quiros, and Villalobos	[7] 99,760.00		
General Alava			165,813.40
Hancock	[6] 600,000.00		641,162.14
Henderson	[6 1] 758,646.92		
Prairie	575,000.00		1,022,446.33
Total	2,583,406.92		2,738,399.98
SUPPLY SHIPS.			
Bridge	[6 1] 630,493.32		
Celtic	340,900.00		601,470.45
Culgoa	247,704.85		743,265.64
Glacier	340,550.00		708,424.08
Supply	325,000.00		686,916.00
Total	1,884,648.17		2,740,076.17

[1] Under construction; payments not complete.
[2] Appraised value 1899; no record of original cost.
[3] Appraised value 1889; original cost of Atlanta, Boston, Chicago, and Dolphin was $1,268,801.80
[4] Transferred by War Department to Navy without reimbursement.
[5] Captured.
[6] Government-built ship.
[7] General Alava, Quiros, and Villalobos purchased from Army at a total cost of $99,760.
[8] Purchased by War Department from appropriation "National defense"; transferred to Navy without reimbursement.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
HOSPITAL SHIP.			
Solace	$600,000.00		$1,020,791.73
FUEL SHIPS.			
Abarenda	175,000.00		408,275.45
Ajax	267,675.50		554,175.50
Arethusa	218,992.50		552,891.51
Brutus	215,000.00		402,053.72
Cæsar	175,194.00		368,487.80
Cuyama	[1] [2] 484,369.73		
Cyclops	871,518.35		184,100.35
Hector	514,027.60		142,251.98
Jason	971,869.99		67,531.38
Jupiter	[1] 1,326,111.36		82,668.22
Kanawha	[1] 973,632.27		22,695.09
Mars	514,634.05		186,308.35
Maumee	[1] [2] 1,160,629.61		2,283.28
Nanshan	155,728.00		249,787.08
Neptune	907,340.65		148,135.95
Nereus	1,023,854.15		56,795.29
Nero	215,000.00		517,458.55
Orion	974,823.72		89,355.54
Proteus	998,652.53		91,019.76
Saturn	290,000.00		478,282.64
Sterling	190,000.00		280,190.67
Vulcan	515,136.49		156,858.66
Total	13,139,172.50		5,011,616.77
CONVERTED YACHTS.			
Aileen	55,000.00		30,134.64
Dorothea	187,500.00		93,091.35
Eagle	110,000.00		225,049.11
Elfrida	50,000.00		35,425.00
Gloucester	225,000.00		193,481.61
Hawk	50,000.00		65,517.90
Huntress	27,500.00		27,466.05
Mayflower	430,000.00		639,856.92
Scorpion	300,000.00		334,167.30
Sylph	50,000.00		111,201.37
Sylvia	25,000.00		58,323.44
Vixen	150,000.00		243,354.86
Wasp	95,000.00		167,980.11
Yankton	125,000.00		293,525.08
Total	1,880,000.00		2,518,574.74
TUGS.			
Accomac	40,000.00		72,803.63
Active	75,000.00		87,616.46
Apache	54,510.00		115,485.65
Arapaho	125,666.67		4,869.33
Choctaw	82,500.00		101,390.78
Fortune	146,600.00		212,200.00
Hercules	40,000.00		94,292.21
Iroquois	150,000.00		137,517.34
Iwana	33,253.57		72,632.44
Massasoit	30,000.00		42,892.14
Modoc	30,000.00		42,346.16
Mohave	125,666.67		11,869.47
Mohawk	44,000.00		109,891.47
Narkeeta	33,648.91		133,793.36
Navajo	115,000.00		56,179.65
Ontario	210,137.97		31,368.88
Osceola	100,000.00		118,991.81
Patapsco	[1] 219,402.53		58,180.76
Patuxent	[1] 212,167.02		57,266.50
Pawnee	25,000.00		53,391.07
Pawtucket	[1] 75,366.49		54,107.88
Penacook	[1] 84,465.68		56,063.00
Pentucket	[1] 95,181.86		42,438.98
Peoria	100,000.00		123,377.40
Piscataqua	130,000.00		160,227.39
Pocahontas	[1] [2] 134,331.96		19.20

[1] Government-built ship. [2] Under construction; payments not complete.

Ships of the Navy and their cost—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
TUGS—continued.			
Pontiac	$30,000.00		$91,553.24
Potomac	125,300.00		277,003.08
Powhatan	42,500.00		99,879.14
Rapido	[1] [6] 5,000.00		51,438.51
Rocket	29,000.00		47,175.43
Samoset	[3] 73,505.28		51,359.16
Sebago	28,000.00		59,206.51
Sioux	25,553.51		83,557.46
Sonoma	198,778.55		43,470.21
Sotoyomo	[3] 71,143.05		67,728.32
Standish	48,380.00		168,884.79
Tecumseh	45,000.00		110,190.16
Tillamook	125,666.66		7,801.10
Traffic	26,400.00		79,133.47
Transfer	[6] 133,053.00		19,231.25
Triton	35,000.00		96,302.81
Unadilla	[3] 101,145.08		104,577.69
Uncas	75,000.00		155,892.11
Vigilant	60,000.00		114,126.57
Waban	20,000.00		74,480.54
Wahneta	33,176.52		97,170.59
Wando	[2] [3] 78,709.95		
Wompatuck	65,000.00		119,545.18
Total	3,987,210.93		4,070,975.28
SPECIAL TYPE.			
Baltimore	1,554,483.94		1,840,800.27
Hannibal	147,941.60		282,628.93
Lebanon	225,000.00		318,460.80
Leonidas	147,941.60		287,373.00
Prometheus	[3] 1,605,622.20		448,646.19
San Francisco	1,738,257.82		1,767,477.60
Vestal	[3] 1,625,417.26		455,324.99
Vesuvius	360,007.94		362,528.55
Total	7,404,672.36		5,763,240.33
UNSERVICEABLE FOR WAR PURPOSES.			
Adams	[1] 55,185.00		315,632.17
Boxer	[3] 94,703.14		1,065.59
Constellation	[3] [1] 18,785.00		192,368.64
Constitution	[3] [1] 13,320.00		133,854.99
Cumberland	[3] 427,463.37		33,667.10
Essex	[1] 117,800.00		256,256.78
Gopher	[1] [4] 41,060.00		146,787.49
Granite State	[3] [1] 61,600.00		15,448.58
Hartford	[3] [1] 256,964.05		868,216.58
Intrepid	[3] 403,948.19		31,418.60
Mohican	[3] 76,800.00		429,377.48
Philadelphia	1,561,392.47		814,355.11
Rainbow	176,260.00		695,234.34
Reina Mercedes			387,322.03
Relief	[5] 450,000.00		191,689.29
Richmond	[3] [1] 43,380.00		92,322.58
Severn	357,641.96		120,399.56
Southery	100,000.00		247,660.10
Topeka	170,327.50		508,308.59
Wolverine	[1] 47,795.00		28,180.02
Yantic	[3] [1] 62,030.00		52,980.83
Total	4,536,455.68		5,562,546.46
AIR CRAFT	282,439.45		146,405.92
Grand total	389,819,271.45	$92,556,527.97	115,367,156.79

[1] Appraised value 1899; no record of original cost.
[2] Under construction; payments not complete.
[3] Government-built ship.
[4] Transferred by Light House Board to Navy without reimbursement.
[5] Purchased by War Department from appropriation "National defense"; transferred to Navy without reimbursement.
[6] Captured.

APPENDIX G.

ANNUAL COST OF THE NAVY.

[All expenses of receiving ship organizations including pay and subsistence of men carried on recruit rolls are charged to "The Receiving Ship" and not to the individual vessels acting as such.]

RECAPITULATION.

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.	Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Battleships:						Submarines	76	.....	5.8	$1,576,616.78	$42,920.60
First line	17	467,450	6.04	$7,364,564.87	$860,676.84	Tenders and torpedo vessels	8	31,927	10	1,305,685.96	195,852.89
Second line	25	340,146	10	11,491,626.96	551,598.09	Gunboats	30	29,180	9.25	2,958,721.98	129,944.73
Armored cruisers	10	140,070	10	5,130,280.08	615,633.61	Transports	5	22,235	6.2	751,342.17	290,842.13
Cruisers:						Supply ships	5	33,900	9.6	848,213.01	212,053.25
First class	5	46,465	12	1,792,066.85	358,413.37	Hospital ship	1	5,700	12	265,515.41	265,515.41
Second class	4	25,065	6	560,857.74	280,478.87	Fuel ships	23	268,430	10.5	2,641,307.42	131,245.09
Third class	16	50,820	10.6	3,522,037.56	249,200.77	Converted yachts	16	9,476	4	590,332.79	110,693.64
Monitors	9	32,944	8.5	1,089,338.50	170,863.94	Tugs	50	20,899	10.2	1,020,403.08	24,009.48
Destroyers	57	46,876	8.25	4,231,092.07	107,965.18	Special type	11	45,904	9	1,771,557.50	35,789.04
Coast torpedo vessels	16	6,695	12	1,537,826.56	96,114.16	Unserviceable for war purposes	22	46,291	6.25	1,516,663.04	132,363.31
Torpedo boats	20	3,395	4.2	152,707.42	21,815.34	Miscellaneous	19	.....	.....	4,414,667.76	.....

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C. Accrued pay.	Title C. Public vouchers (including commuted rations).	Title C. Stores issued (including provisions and medical stores).	Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission. Full commission.	Months in commission. Commission in reserve.
	Total	$30,566,165.62	$1,130,192.55	$16,280,562.65	$47,976,920.82	$8,556,504.69	$56,533,425.51				
	BATTLESHIPS—FIRST LINE.										
28	Delaware	474,006.74	8,567.05	218,521.71	701,094.50	157,785.08	858,879.58	20,000	Apr. 4,1910	12	
29	North Dakota	180,917.33	2,138.30	86,587.52	269,643.15	69,524.69	339,167.84	20,000	Apr. 11,1910		12
30	Florida	505,432.34	8,967.39	274,116.31	788,516.04	91,515.82	880,031.86	21,825	July 15,1911	12	
31	Utah	474,925.21	8,784.81	233,110.60	716,820.62	82,210.43	799,031.05	21,825	Aug. 31,1911	12	
33	Wyoming	623,610.66	19,837.45	283,865.13	927,313.24	164,387.76	1,091,701.00	26,000	Sept. 25,1912	12	
32	Arkansas	586,790.49	8,468.87	301,226.08	896,485.44	148,670.40	1,045,155.84	26,000	Sept. 17,1912	12	
34	New York	539,749.35	10,320.59	292,614.91	842,684.85	113,676.86	956,361.71	27,000	Apr. 15,1914	12	
37	Texas	535,538.69	14,186.77	280,368.69	830,114.15	125,330.34	955,444.49	27,000	Mar. 12,1914	12	
35	Nevada	163,860.84	3,473.64	91,685.26	259,019.74	4,463.23	263,482.97	27,500	Mar. 11,1916	4	
36	Oklahoma	83,070.81	1,446.37	49,097.95	133,615.13	1,039.22	134,654.35	27,500	May 2,1916	2	
38	Pennsylvania	21,662.52	70.00	16,518.37	38,250.89	1,554.20	39,805.09	31,400	June 12,1916	.6	
39	Arizona					212.91	212.91	31,400	Building		
40	New Mexico					204.94	204.94	32,000	do		
41	Mississippi					204.92	204.92	32,000	do		
42	Idaho					227.32	227.32	32,000	do		
43	Tennessee							32,000	do		
44	California							32,000	do		
	Total	4,189,563.98	86,261.24	2,127,731.53	6,403,556.75	961,008.12	7,364,564.87				
	BATTLESHIPS—SECOND LINE.										
1	Indiana					12,285.44	12,285.44	10,288	Nov. 20,1895		
2	Massachusetts					11,000.36	11,000.36	10,288	June 10,1896		
3	Oregon	180,111.97	5,099.92	84,392.73	269,604.62	4,798.54	274,403.16	10,288	July 15,1896	7	5
4	Iowa					24,962.52	24,962.52	11,346	June 16,1897		
5	Kearsarge	208,948.90	25,907.43	90,346.02	325,202.35	24,006.55	349,208.90	11,520	Feb. 20,1900	9	
6	Kentucky	232,457.53	5,761.25	103,232.49	341,451.27	8,952.45	350,403.72	11,520	May 15,1900	12	
8	Illinois	84,768.60	905.30	36,875.66	122,549.56	21,656.21	144,205.77	11,552	Sept. 16,1901		6
7	Alabama	165,957.28	1,486.96	50,288.77	217,733.01	13,334.50	231,067.51	11,552	Oct. 16,1900	1	11
9	Wisconsin	172,723.27	10,711.62	89,897.10	273,331.99	36,215.38	309,547.37	11,552	Feb. 4,1901	5	7
10	Maine	135,015.89	1,458.57	61,800.83	198,275.29	26,688.47	224,963.76	12,500	Dec. 29,1902		12
11	Missouri	205,849.90	5,619.45	111,633.68	323,103.03	43,835.63	366,938.66	12,500	Dec. 1,1903	5	7
12	Ohio	176,178.81	4,483.62	83,289.61	263,952.04	59,270.06	323,222.10	12,500	Oct. 4,1904	4	8
19	Virginia	407,582.56	8,490.77	214,967.72	631,041.05	78,639.60	709,680.65	14,948	May 7,1906	9	3

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	BATTLESHIPS—SECOND LINE—continued.										
16	Nebraska	$419,159.47	$7,402.58	$201,029.77	$627,582.82	$83,804.69	$711,387.51	14,948	July 1,1907	11	1
15	Georgia	326,380.08	5,201.39	122,631.62	454,213.09	71,773.81	525,986.90	14,948	Sept. 24,1906	7	5
17	New Jersey	424,265.16	7,282.21	214,233.14	645,780.51	71,992.98	717,773.49	14,948	May 12,1906	11	1
18	Rhode Island	412,055.26	7,479.54	208,932.04	628,466.84	130,666.91	759,133.75	14,948	Feb. 19,1906	11	1
20	Connecticut	341,377.20	4,605.29	122,312.86	468,295.35	138,638.67	606,934.02	16,000	Sept. 29,1906	11	1
22	Louisiana	490,534.76	9,065.73	274,452.86	764,053.35	102,473.20	866,526.55	16,000	June 2,1906	11	1
27	Vermont	315,050.39	5,135.12	126,780.44	446,965.95	78,613.02	525,578.97	16,000	Mar. 4,1907	12	.....
21	Kansas	350,741.46	8,099.07	189,318.54	548,159.07	100,621.78	648,780.85	16,000	Apr. 18,1907	12	.....
24	Minnesota	355,957.21	6,735.68	142,314.69	505,007.58	142,365.66	647,373.24	16,000	Mar. 9,1907	12	.....
25	New Hampshire	377,207.88	6,193.49	172,761.42	556,162.79	118,615.58	674,778.37	16,000	Mar. 19,1908	12	.....
26	South Carolina	423,049.70	8,931.11	174,738.69	606,719.50	69,790.91	676,510.41	16,000	Mar. 1,1910	12	.....
23	Michigan	441,136.51	9,262.84	188,784.98	639,184.33	159,788.65	798,972.98	16,000	Jan. 4,1910	12	.....
	Total	6,636,500.79	155,318.94	3,065,015.66	9,856,835.39	1,634,791.57	11,491,626.96	.....	.....	.....	.....
	ARMORED CRUISERS.										
126	Colorado	259,476.10	5,470.08	134,312.44	399,258.62	121,942.45	521,201.07	13,680	Jan. 19,1905	3	2
127	Maryland	300,128.29	6,583.24	221,769.44	528,480.97	59,715.01	588,195.98	13,680	Apr. 18,1905	.....	19
133	Memphis	300,790.39	8,618.33	280,385.00	589,793.72	118,678.29	708,472.01	14,500	July 17,1906	.....	.....
131	Montana	312,551.34	2,931.73	142,734.95	458,218.02	71,593.93	529,811.95	14,500	July 21,1908	12	.....
132	North Carolina	242,864.17	6,566.97	124,053.20	373,484.34	59,542.32	433,026.66	14,500	May 7,1908	12	.....
128	Pittsburgh	120,033.95	4,741.30	83,079.74	207,854.99	19,474.54	227,329.53	13,680	Mar. 9,1905	.....	5
125	San Diego	447,152.70	8,141.30	272,016.86	727,310.86	36,043.08	763,353.94	13,680	Aug. 1,1907	3	9
129	South Dakota	126,812.66	6,739.26	147,749.76	281,301.68	40,337.75	321,639.43	13,680	Jan. 27,1908	.....	12
134	Washington	379,989.02	6,832.34	114,016.02	500,837.38	124,856.89	625,694.27	14,500	Aug. 7,1906	9	3
130	West Virginia	131,538.32	2,173.35	71,840.03	205,551.70	206,002.54	411,554.24	13,680	Feb. 23,1905	.....	12
	Total	2,621,336.94	58,797.90	1,591,958.44	4,272,093.28	858,186.80	5,130,280.08	.....	.....	.....	.....
	CRUISERS—FIRST CLASS.										
121	Brooklyn	357,649.91	15,297.53	183,978.56	556,926.00	75,725.08	632,651.08	9,215	Dec. 1,1896	12	.....
122	Charleston	117,815.79	3,105.24	59,407.44	180,328.47	14,518.51	194,846.98	9,700	Oct. 17,1905	.....	12

123	Milwaukee	173,328.52	4,376.13	116,866.02	294,572.67	7,628.57	302,196.24	9,700	May 11, 1906		12
120	Saratoga	274,585.27	9,550.78	92,692.23	376,928.28	19,893.69	396,821.97	8,150	Aug. 1, 1898	8	4
124	St. Louis	127,157.85	5,042.32	74,646.87	206,846.54	58,704.04	265,550.58	9,700	Aug. 18, 1906		12
	Total	1,050,536.84	37,472.00	527,593.12	1,615,601.96	176,464.89	1,792,066.85				
	CRUISERS—SECOND CLASS.										
116	Chicago	46,198.47	347.72	38,469.06	85,010.25	8,382.32	93,392.57	4,500	Apr. 17, 1889		12
118	Columbia	230,225.20	3,441.91	92,193.71	325,860.82	56,572.87	382,433.69	7,350	Apr. 28, 1894	12	
119	Minneapolis					4,974.78	4,974.78	7,350	Dec. 18, 1894		
117	Olympia		45.00	120.89	165.38	79,891.32	80,056.70	5,865	Feb. 8, 1895		
	Total	276,418.67	3,834.63	130,783.15	411,036.45	149,821.29	560,857.74				
	CRUISERS—THIRD CLASS.										
111	Albany	84,689.45	1,635.48	49,838.19	136,163.12	24,409.76	160,572.88	3,430	May 29, 1900	2	10
113	Birmingham	242,351.27	2,169.11	99,941.17	344,461.55	60,147.27	404,608.82	3,750	Apr. 11, 1908	12	
102	Boston	8,746.06	984.02	1,194.09	10,924.17	138.00	11,062.17	3,000	May 2, 1887		
105	Chattanooga	148,152.48	3,764.58	81,334.61	233,251.67	37,954.94	271,206.61	3,200	Oct. 11, 1904	12	
114	Chester	192,624.15	6,463.96	203,847.88	402,935.99	8,981.11	411,917.10	3,750	Apr. 25, 1908	10	2
103	Cincinnati	154,691.27	7,830.46	69,963.89	232,485.62	5,031.50	237,517.12	3,183	June 16, 1894	12	
106	Cleveland	155,735.15	4,417.60	75,015.78	235,218.53	56,045.15	291,263.68	3,200	Nov. 2, 1903	12	
107	Denver	168,243.07	3,404.70	72,897.92	244,545.69	28,227.01	272,772.70	3,200	May 17, 1904	12	
108	Des Moines	160,893.72	4,413.93	91,359.30	256,696.95	601.41	257,298.36	3,200	Mar. 5, 1904	12	
109	Galveston	125,232.61	3,559.83	94,548.95	223,341.39	12,890.71	236,232.10	3,200	Feb. 15, 1905	12	
100	Marblehead	47,347.26	170.03	17,717.06	65,234.35	26,320.28	91,554.63	2,072	Apr. 2, 1894		12
101	Montgomery		138.70	20,991.88	21,130.58	9,298.88	30,429.46	2,072	June 21, 1894		12
112	New Orleans	138,790.14	4,731.88	80,744.64	224,266.66	53,705.10	277,971.76	3,430	Mar. 18, 1898		12
104	Raleigh	107,552.83	3,928.95	91,530.16	203,011.94	47,110.72	250,122.66	3,183	Apr. 17, 1894	12	
115	Salem	92,727.71	1,769.88	41,429.82	135,927.41	65,597.01	201,524.42	3,750	Aug. 1, 1908	2	10
110	Tacoma	34,127.66	100.00	19,176.20	56,403.86	59,579.23	115,983.09	3,200	Jan. 30, 1904		2
	Total	1,861,954.83	49,513.11	1,114,531.54	3,025,999.48	496,038.08	3,522,037.56				
	MONITORS.										
704	Amphitrite	37,030.41	4,464.11	23,418.36	64,912.88	20,160.31	85,073.19	3,990	Apr. 28, 1895		12
700	Cheyenne	132,202.10	1,818.37	77,591.01	211,611.48	19,972.96	231,584.44	3,225	Dec. 8, 1902	12	
705	Miantonomoh					4,818.57	4,818.57	3,990	Oct. 27, 1891		
706	Monadnock	83,396.07	2,247.83	112,800.72	198,444.62	4,499.15	202,943.77	3,990	Feb. 20, 1896	12	
708	Monterey	67,131.68	3,175.85	39,554.48	110,162.01	15,872.86	126,034.87	4,084	Feb. 13, 1893		12
701	Ozark	92,104.93	3,880.26	42,287.91	138,273.10	31,635.01	169,908.11	3,225	Oct. 28, 1902	12	
702	Tallahassee	95,519.61	1,783.43	54,545.55	151,848.59	18,759.57	170,608.16	3,225	June 18, 1903	12	
707	Terror					4,505.11	4,505.11	3,990	Apr. 15, 1896		
703	Tonopah	56,479.71	2,704.70	26,901.21	86,085.62	7,776.66	93,862.28	3,225	Mar. 5, 1903	5	
	Total	563,864.51	20,074.55	377,399.24	961,338.30	128,000.20	1,089,338.50				

Annual cost of the Navy—Continued

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	DESTROYERS.										
266	Allen							1,071	Building		
221	Ammen	$49,278.04	$1,045.62	$30,879.85	$81,203.51	$20,308.54	$101,512.05	742	May 23, 1911	12	
246	Aylwin	57,501.00	236.10	54,337.12	112,074.22	13,906.03	125,980.25	1,036	Jan. 17, 1914	12	
247	Balch	58,977.97	435.68	55,524.24	114,937.89	16,383.65	131,321.54	1,036	Mar. 26, 1914	12	
222	Beale	35,689.99	299.45	22,751.66	58,741.10	21,871.69	80,612.79	742	Aug. 30, 1912	12	
248	Benham	54,306.16	389.09	47,119.39	101,814.64	17,269.42	119,084.06	1,036	Jan. 20, 1914	12	
223	Burrows	48,227.45	482.96	36,147.44	84,857.85	8,217.59	92,985.44	742	Feb. 21, 1911	12	
269	Caldwell								Building		
243	Cassin	58,474.10	159.07	55,991.68	114,624.85	15,839.96	130,464.81	1,020	Aug. 9, 1913	12	
272	Conner								Building		
255	Conyngham	23,725.03	183.28	23,532.51	47,440.82	23.05	47,463.87	1,090	Jan. 21, 1916	5	
270	Craven								Building		
244	Cummings	56,274.58	154.90	51,959.49	108,388.97	21,778.51	130,167.48	1,020	Sept. 19, 1913	12	
250	Cushing	49,614.90	312.07	53,284.73	103,211.70	5,034.51	108,246.21	1,050	Aug. 21, 1915	10	
265	Davis					9.42	9.42	1,071	Building		
254	Downes	28,642.58	326.20	12,265.52	41,234.30	1,912.74	43,147.04	1,072	Feb. 11, 1915	3	
224	Drayton	50,881.15	220.46	35,461.71	86,563.32	28,667.80	115,231.12	742	Oct. 29, 1910	12	
242	Duncan	22,780.62	522.50	29,739.98	53,043.10	11,565.56	64,608.66	1,014	Aug. 30, 1913	5	
256	Ericsson	52 750.75	321.37	59,036.86	112,108.98	3,178.37	115,287.35	1,090	Aug. 14, 1915	10	
225	Fanning	52,293.15	200.50	40,225.60	92,719.25	22,118.52	114,837.77	742	June 21, 1912	12	
216	Flusser	35,930.50	447.44	23,769.28	60,147.22	5,566.90	65,714.12	700	Oct. 28, 1909		12
271	Gwin								Building		
226	Henley	40,251.39	208.15	43,579.08	84,038.62	12,369.81	96,408.43	742	Dec. 6, 1912	12	
257	Jacob Jones	21,847.47	5.98	33,271.01	55,124.46	690.20	55,814.66	1,150	Feb. 10, 1916	5	
227	Jarvis	49,110.43	1,665.52	38,908.96	89,684.91	20,739.30	110,424.21	742	Oct. 22, 1912	12	
228	Jenkins	52,318.58	434.85	34,263.03	87,016.46	19,220.51	106,236.97	742	June 15, 1912	12	
229	Jewett	47,663.72	199.36	29,509.25	77,372.33	23,796.96	101,169.29	742	May 25, 1912	12	
217	Lamson	35,186.54	209.85	34,670.66	70,067.05	17,915.50	87,982.55	700	Feb. 10, 1910		12
231	McCall	45,137.63	274.07	28,928.66	74,340.36	37,602.92	111,943.28	742	Jan. 23, 1911	12	
245	McDougal	57,343.25	669.44	57,907.22	115,919.91	15,668.28	131,588.19	1,020	June 16, 1914	12	
230	Mayrant			1,469.80	1,469.80	13,123.66	14,593.46	742	July 12, 1911		
232	Monaghan	35,505.23	426.81	27,474.14	63,406.18	29,904.73	93,310.91	742	June 21, 1911		12
251	Nicholson	57,439.13	631.47	57,286.22	115,356.82	8,688.59	124,045.41	1,050	Apr. 30, 1915	1	
252	O'Brien	58,320.76	98.92	63,029.02	121,448.70	1,801.37	123,250.07	1,050	May 22, 1915	12	
249	Parker	56,703.08	383.21	59,412.47	116,498.76	19,404.42	135,903.18	1,036	Dec. 30, 1913	12	
233	Patterson	52,253.25	371.10	41,648.24	94,272.59	24,077.85	118,350.44	742	Oct. 11, 1911	12	

234	Paulding	46,151.62	120.52	26,129.05	72,401.19	21,186.52	93,587.71	742	Sept. 29, 1910	12	
235	Perkins	34,353.42	92.80	30,305.38	64,751.60	21,346.19	86,097.79	742	Nov. 18, 1910		12
258	Porter	10,047.11	18.60	8,784.36	18,850.07	44.64	18,894.71	1,090	Apr. 17, 1916	2	
218	Preston	32,685.64	223.88	21,588.97	54,498.49	16,553.36	71,051.85	700	Dec. 24, 1909		12
219	Reid	37,445.37	280.63	30,122.20	67,848.20	11,007.49	78,855.69	700	Dec. 3, 1909		12
236	Roe	34,142.92	150.55	23,599.29	57,892.76	18,719.82	76,612.58	742	Sept. 17, 1910		12
264	Rowan							1,111	Building		
263	Sampson	103.90			103.90	6.35	110.25	1,111	....do		
268	Shaw							1,110	....do		
220	Smith	35,415.68	30.00	23,266.26	58,711.94	25,034.63	83,746.57	700	Nov. 26, 1909		12
237	Sterett	30,965.01	77.81	40,950.17	71,992.99	16,418.45	88,411.44	742	Dec. 15, 1910		12
273	Stockton								Building		
238	Terry	34,306.47	198.77	24,136.71	58,641.95	14,886.72	73,528.67	742	Oct. 18, 1910		12
239	Trippe	32,336.18	199.28	23,013.28	55,548.74	27,114.63	82,663.37	742	Mar. 23, 1911	7	
259	Tucker	11,592.10	33.34	16,151.95	27,777.39	110.16	27,887.55	1,090	Apr. 11, 1916	3	
260	Wadsworth	57,118.66	634.93	44,157.31	101,910.90	1,839.49	103,750.39	1,060	July 23, 1915	11	
261	Wainwright	7,056.01	18.60	5,676.78	12,751.39	11,254.64	24,006.03	1,150	May 12, 1916	2	
240	Walke	35,996.79	83.70	27,451.26	63,531.75	19,345.98	82,877.73	742	July 22, 1911		12
241	Warrington	53,393.11	356.40	36,259.37	90,008.88	34,385.60	124,394.48	742	Mar. 20, 1911	11	1
267	Wilkes							1,110	Building		
253	Winslow	52,213.04	93.37	62,315.44	114,621.85	2,298.38	116,920.23	1,050	Aug. 7, 1915	11	
	Total	1,889,751.46	13,928.60	1,627,292.60	3,530,972.66	700,119.41	4,231,092.07				
	COAST TORPEDO VESSELS.										
204	Bainbridge	44,942.15	2,165.17	46,309.41	93,416.73	3,477.73	96,894.46	420	Nov. 24, 1902	12	
205	Barry	41,309.09	366.32	33,079.86	74,755.27	14,151.89	88,907.16	420	....do	12	
206	Chauncey	43,387.97	140.95	37,511.67	81,040.59	21,835.63	102,876.22	420	Nov. 20, 1902	12	
207	Dale	46,821.73	291.96	36,632.87	83,746.56	6,264.60	90,011.16	420	Nov. 24, 1902	12	
208	Decatur	41,964.28	466.17	35,336.72	77,767.17	32,839.40	110,606.57	420	May 19, 1902	12	
202	Hopkins	32,931.42	206.76	31,434.13	64,572.31	17,738.60	82,310.91	408	Sept. 23, 1903		12
203	Hull	34,671.43	313.35	33,562.83	68,547.61	14,336.88	82,884.49	408	May 20, 1903		12
200	Lawrence	28,890.28	279.17	21,641.06	50,810.51	1,893.94	52,704.45	400	Apr. 14, 1903		12
201	Macdonough	32,920.92	392.69	23,569.89	56,883.50	15,342.59	72,226.09	400	Sept. 5, 1903		12
209	Paul Jones	52,205.52	729.90	47,920.05	100,855.47	31,488.90	132,344.37	420	July 10, 1902	12	
210	Perry	43,675.55	806.80	42,668.63	87,150.98	24,572.81	111,723.79	420	Sept. 4, 1902	10	
211	Preble	47,350.99	147.45	43,062.74	90,561.18	29,434.94	119,996.12	420	June 21, 1902	12	
212	Stewart	52,433.39	129.00	55,245.75	107,808.14	17,378.71	125,186.85	420	Dec. 17, 1902	2	10
213	Truxtun	33,931.73	288.01	28,483.25	62,702.99	13,248.46	75,951.45	433	Sept. 11, 1902	1	11
214	Whipple	47,689.95	437.92	43,710.72	91,838.59	28,260.34	120,098.93	433	Oct. 21, 1902	12	
215	Worden	34,536.07	52.70	30,726.86	65,315.63	7,787.91	73,103.54	433	Dec. 31, 1902		12
	Total	659,662.47	7,214.32	590,896.44	1,257,773.23	280,053.33	1,537,826.56				
	TORPEDO BOATS.										
719	Bagley					12,830.57	12,830.57	175	Oct. 18, 1901		
728	Bailey	3,882.20		4,573.14	8,455.34	1,477.47	9,932.81	280	June 10, 1901		
720	Barney	2,104.24	11.00	2,445.72	4,560.96	1,358.55	5,919.51	175	Oct. 21, 1901		12
721	Biddle	2,407.21	31.80	2,931.11	5,370.12	414.29	5,784.41	175	Oct. 26, 1901		
722	Blakely			1,957.42	1,957.42	5,172.21	7,129.63	196	Dec. 27, 1904		

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	TORPEDO BOATS—contd.										
714	Dahlgren		$35.00	$219.90	$254.90	$5,193.53	$5,448.43	146	June 16, 1900		12
723	De Long		40.00	260.13	300.13	5,086.53	5,386.66	196	Oct. 27, 1902		
717	Dupont		2,162.42	1,778.04	3,940.46	2,512.24	6,452.70	165	Sept. 23, 1897		
727	Farragut	$17,492.03	453.23	10,782.71	28,727.97	1,664.08	30,392.05	279	Mar. 22, 1899		12
712	Foote		471.94	447.66	919.60	11.50	931.10	142	Aug. 7, 1897		
716	Fox		279.00	303.88	582.88	197.21	780.09	154	July 8, 1899		
726	Goldsborough		1,562.86	2,072.10	3,634.96	1,360.13	4,995.09	255	Apr. 9, 1903		12
710	Mackenzie		558.64	246.43	805.07	1,758.29	2,563.36	65	May 1, 1899		
729	Manley (old)					118.70	118.70	30	1898		
711	Morris			1,358.49	1,358.49	9,022.61	10,381.10	105	May 11, 1898		12
713	Rodgers		2,073.50	1,392.71	3,466.21	11,014.26	14,480.47	142	Apr. 2, 1898		
724	Shubrick		40.00	285.00	325.00	15,144.24	15,469.24	200	Sept. 21, 1905		12
715	Somers		443.50	272.48	715.98	75.00	790.98	150	Mar. 28, 1898	12	
725	Thornton		35.00	231.74	266.74	6,477.40	6,744.14	200	June 9, 1902		
718	Tingey			545.23	545.23	5,631.15	6,176.38	165	Jan. 7, 1904		
	Total	25,885.68	8,197.89	32,103.89	66,187.46	86,519.96	152,707.42				
	SUBMARINES.										
300	A-2	10,469.58		9,791.65	20,261.23	3,096.87	23,358.10		Jan. 12, 1903	12	
301	A-3	9,506.50	7.50	4,571.05	14,085.05	3,346.80	17,431.85		May 28, 1903	12	
302	A-4	9,233.19		6,490.84	15,724.03	2,753.95	18,477.98		Jan. 17, 1903	12	
303	A-5	8,885.20	7.50	14,436.47	23,329.17	5,525.43	28,854.60		May 28, 1903	12	
304	A-6	9,183.27		6,536.35	15,719.62	4,195.79	19,915.41		Sept. 19, 1903	12	
305	A-7	8,560.74		4,632.29	13,193.03	6,053.21	19,246.24		do	12	
306	B-1	9,110.97	14.25	7,368.73	16,493.95	5,733.59	22,227.54		Oct. 18, 1907	12	
307	B-2	11,176.16	6.95	12,536.38	23,719.49	7,976.78	31,696.27		do	12	
308	B-3	12,696.37		6,752.35	19,448.72	5,573.60	25,022.32		Dec. 3, 1907	12	
309	C-1	14,843.16	3,804.04	6,851.01	25,493.21	675.81	26,174.02		June 30, 1908	12	
310	C-2	14,967.80	4,658.97	8,526.24	28,153.01	1,210.53	29,363.54		Nov. 23, 1909	12	
311	C-3	16,171.69	5,425.99	7,657.56	29,255.24	859.37	30,114.61		do	12	
312	C-4	14,460.71	3,782.68	10,354.26	28,597.65	1,031.41	29,629.06		do	12	
313	C-5	16,090.75	3,209.36	22,270.44	41,570.55	1,043.21	42,713.76		Feb. 2, 1910	12	
314	D-1	19,182.13		13,568.85	32,750.98	19,214.99	51,965.97		Nov. 23, 1909	12	
315	D-2	19,851.75		9,574.89	29,426.64	18,979.07	48,405.71		do	12	

316	D-3	19,145.08		30,052.47	49,197.50	14,940.43	64,137.93		Sept. 8, 1910	12	
317	E-1	23,631.49		15,295.40	38,926.89	61,195.11	100,122.00		Feb. 14, 1912	12	
318	E-2	12,057.20		1,693.03	13,750.23	31,990.99	45,741.22		do	9	
319	F-1	14,625.00		2,661.41	17,286.41	7,703.35	24,989.76		June 19, 1912	9	
320	F-2	13,036.15		2,149.00	15,185.15	7,559.59	22,744.74		June 25, 1912	9	
321	F-3	14,666.77		2,029.92	16,696.69	7,907.88	24,604.57		Aug. 5, 1912	9	
322	F-4	6,242.48	9.00	8,524.26	14,775.74	4,384.62	19,160.36		May 3, 1913	2	
323	G-1	22,380.28		15,152.90	37,533.18	20,847.81	58,380.99		Oct. 28, 1912	12	
324	G-2	27,603.58		14,640.88	42,244.46	12,112.43	54,356.89		Feb. 6, 1915	12	
325	G-3	20,129.79	1,395.00	5,025.50	26,550.29	1,868.11	28,418.40		Mar. 22, 1915	12	
326	G-4	18,466.90		16,286.39	34,753.29	23,260.62	58,013.91		Jan. 22, 1914	12	
327	H-1	20,816.84	15.00	8,842.34	29,674.18	22,448.77	52,122.95		Dec. 1, 1913	12	
328	H-2	17,834.91	50.00	11,603.64	29,488.55	9,043.57	38,532.12		do	12	
329	H-3	20,200.35	50.00	8,321.47	28,571.82	16,443.32	45,015.14		Jan. 16, 1914	12	
330	K-1	25,618.43		18,443.75	44,062.18	17,656.27	61,718.45		Mar. 17, 1914	12	
331	K-2	23,601.88		23,498.83	47,100.71	18,478.40	65,579.11		Jan. 31, 1914	12	
332	K-3	24,573.46		11,036.32	35,609.78	11,914.54	47,524.32		Oct. 30, 1914	12	
333	K-4	25,330.87		6,875.49	32,206.36	17,830.49	50,036.85		Oct. 24, 1914	12	
334	K-5	27,528.51		18,658.26	46,186.77	22,197.67	68,384.44		Nov. 22, 1914	12	
335	K-6	27,337.45		15,837.99	43,175.44	29,756.52	72,931.96		Sept. 9, 1914	12	
336	K-7	23,961.78		8,052.17	32,013.95	11,690.33	43,704.28		Dec. 11, 1914	12	
337	K-8	27,230.94		7,785.95	35,016.89	11,224.70	46,241.59		Dec. 1, 1914	12	
338	L-1	4,970.89	68.10	1,782.19	6,821.18		6,821.18		Apr. 11, 1916	3	
339	L-2								Building		
340	L-3	4,061.27	53.10	1,488.42	5,602.79	64.25	5,667.04		Apr. 22, 1916	2	
341	L-4	3,243.45	50.90	1,442.87	4,737.22		4,737.22		May 4, 1916	2	
342	L-5					15.00	15.00		Building		
343	L-6					15.00	15.00		do		
344	L-7	2,074.52			2,074.52	15.00	2,089.52		do		
345	L-8					137.89	137.89		do		
346	L-9								do		
347	L-10								do		
348	L-11					28.07	28.07		do		
349	M-1								do		
350	Schley								do		
351	N-1		1.90		1.90	15.00	16.90		do		
352	N-2					15.00	15.00		do		
353	N-3					15.00	15.00		do		
354	N-4								do		
355	N-5								do		
356	N-6								do		
357	N-7								do		
358	Submarine No. 60								do		
359	Submarine No. 61								do		
360	O-1								do		
361	O-2								do		
362	O-3								do		
363	O-4								do		
364	O-5								do		
365	O-6								do		
366	O-7								do		
367	O-8								do		

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C. Accrued pay.	Title C. Public vouchers (including commuted rations).	Title C. Stores issued (including provisions and medical stores).	Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission. Full commission.	Months in commission. Commission in reserve.
	SUBMARINES—continued.										
368	O-9								Building		
369	O-10								do		
370	O-11								do		
371	O-12								do		
372	O-13								do		
373	O-14								do		
374	O-15								do		
375	O-16								do		
	Total	$674,760.19	$22,710.24	$499,100.21	$1,906,570.64	$476,046.14	$1,576,616.78				
	TENDERS TO TORPEDO VESSELS.										
730	Alert	94,619.44	3,892.77	60,489.89	159,002.10	9,101.15	168,103.25	1,110	No record	12	
735	Bushnell	60,710.14	3,067.78	36,324.39	100,102.31	1,446.28	101,548.59	3,580	Nov. 24, 1915	8	
737	Dixie	164,001.72	4,201.48	62,144.99	230,948.19	6,821.24	237,769.43	6,114	Apr. 19, 1898	6	6
732	Fulton	118,665.56	4,473.17	42,048.52	165,187.25	18,809.99	183,997.24	1,406	Dec. 7, 1914	12	
736	Iris	102,062.67	1,608.21	31,935.60	135,596.38	6,894.14	142,490.52	6,100	Apr. 1, 1898	10	
738	Melville	118,620.15	4,316.59	85,920.57	208,857.31	1,730.83	210,588.14	7,150	Dec. 3, 1915	7	
850	Panther	117,020.63	1,779.92	38,835.39	157,644.85	26,134.83	183,779.68	3,380	Apr. 22, 1898		12
734	Pompey	35,073.55	3,627.08	32,090.47	70,796.10	6,613.01	77,409.11	3,085	May 26, 1898	7	
	Total	811,377.76	26,967.00	389,789.72	1,228,134.49	77,551.47	1,305,685.96				
	GUNBOATS.										
412	Annapolis	92,601.11	1,886.14	43,857.94	138,345.19	12,377.43	150,722.67	1,010	July 20, 1897	12	
403	Callao	14,079.06	1,534.36	5,107.48	20,720.90	488.00	21,208.90	243	July 31, 1898	6	
420	Castine	94,741.38	2,236.99	52,944.28	149,922.65	7,895.55	157,818.20	1,177	Oct. 22, 1894	12	
428	Concord					195.59	195.59		Feb. 14, 1891		
427	Dolphin	118,130.93	5,098.03	40,305.67	163,534.63	14,744.50	178,279.13	1,486	Dec. 8, 1885	12	
419	Don Juan de Austria		1,069.80	1,580.07	2,649.87	4,674.16	7,324.03	1,130	Apr. 11, 1900		
417	Dubuque	37,969.55	1,156.63	89,346.96	128,467.19	22,138.51	150,605.70	1,685	June 3, 1905	11	1

408	Elcano	53,216.66	9,141.30	54,171.30	116,529.76	4,430.47	120,960.23	630	Nov. 20, 1902	12	.....
424	Helena	120,213.42	27,543.61	51,491.92	199,248.95	5,811.77	205,060.72	1,392	July 8, 1897	12	.....
416	Isla de Luzon	.....	1,765.38	5,606.70	7,372.08	872.68	8,244.76	1,030	Jan. 31, 1900	.....	.....
421	Machias	94,326.64	1,375.46	46,809.00	142,511.10	4,478.79	146,984.89	1,177	July 26, 1893	12	.....
410	Marietta	94,522.74	1,248.22	46,123.37	141,894.33	743.91	142,638.24	900	Sept. 1, 1897	12	.....
401	Monocacy	30,724.30	7,561.07	12,022.50	50,307.87	7,624.12	57,931.99	190	June 24, 1914	12	.....
423	Nashville	101,453.64	2,331.82	37,330.91	141,116.37	34,561.71	175,678.08	1,371	Aug. 19, 1897	10	.....
413	Newport	.....	.....	.....	.....	6,431.70	6,431.70	1,010	Oct. 5, 1897	.....	.....
418	Paducah	133,500.26	6,596.39	67,292.13	207,388.78	25,800.12	233,188.90	1,085	Sept. 2, 1905	12	.....
402	Palos	32,021.48	5,841.68	11,393.15	49,256.31	338.71	49,595.02	190	June 24, 1914	12	.....
404	Pampanga	6,583.57	808.82	5,468.46	12,860.85	9,388.78	22,249.63	243	June 8, 1899	12	.....
409	Petrel	61,640.24	1,159.45	26,426.52	89,226.21	24,950.72	114,176.93	800	Dec. 10, 1889	7	5
414	Princeton	30,677.94	1,199.62	17,184.27	49,061.83	1,189.99	50,251.82	1,010	May 27, 1898	9	.....
406	Quiros	24,749.50	4,784.55	12,582.61	42,116.66	358.53	42,475.19	350	Mar. 14, 1900	12	.....
422	Ranger	.....	.....	.....	.....	14,072.83	14,072.83	1,261	No record	.....	.....
426	Sacramento	87,455.04	2,674.41	38,594.02	128,723.47	29,578.43	158,301.99	1,425	Apr. 26, 1914	12	.....
405	Samar	27,094.50	4,598.49	10,084.42	41,777.41	3,889.20	45,666.61	243	May 26, 1899	12	.....
400	Sandoval	.....	952.75	466.67	1,419.42	1,133.47	2,552.89	160	Sept. 2, 1898	.....	.....
415	Vicksburg	21,804.88	922.28	19,593.42	42,320.58	55,037.69	97,358.27	1,010	Oct. 23, 1897	.....	12
407	Villalobos	33,118.98	5,420.60	13,359.27	51,898.85	3,574.18	55,473.03	370	Mar. 5, 1900	12	.....
411	Wheeling	70,259.27	1,164.08	34,554.02	105,977.37	23,648.54	129,625.91	990	Aug. 10, 1897	12	.....
425	Wilmington	131,695.70	12,727.06	45,267.52	189,690.28	14,380.76	204,071.04	1,392	May 13, 1897	12	.....
429	Yorktown	110,988.95	1,813.98	64,777.70	177,580.63	31,996.55	209,577.18	1,710	Apr. 23, 1889	12	.....
	Total	1,673,569.74	114,613.02	803,736.78	2,591,919.54	366,802.44	2,958,721.98	.....	.....	.....	.....
	TRANSPORTS.										
752	Buffalo	74,782.12	2,769.50	73,633.23	151,184.85	62,599.67	213,784.52	6,000	July 18, 1898	7	.....
750	General Alava	.....	.....	3,813.72	3,813.72	25,885.94	29,699.66	1,115	Mar. 19, 1900	.....	.....
754	Hancock	111,228.42	4,356.91	53,053.04	168,638.37	87,923.22	256,561.59	8,508	Nov. 20, 1902	12	.....
755	Henderson	.....	.....	.....	.....	.....	.....	10,000	Building	.....	.....
753	Prairie	127,844.17	4,983.66	70,933.93	203,761.76	47,534.64	251,296.40	6,620	Apr. 14, 1898	12	.....
	Total	313,854.71	12,110.07	201,433.92	527,398.70	223,943.47	751,342.17	.....	.....	.....	.....
	SUPPLY SHIPS.										
779	Bridge	.....	.....	.....	.....	.....	.....	8,500	Building	.....	.....
777	Celtic	99,566.72	1,745.09	49,272.02	150,583.83	34,337.70	184,921.53	6,750	May 25, 1898	12	.....
776	Culgoa	92,625.79	3,607.15	48,042.13	144,365.07	41,226.70	185,591.77	6,000	Dec. 3, 1898	12	.....
778	Glacier	94,663.06	4,610.35	78,275.36	177,548.77	49,047.21	226,595.98	8,325	July 5, 1898	12	.....
775	Supply	87,812.07	4,211.69	59,544.63	151,568.39	99,535.34	251,103.73	4,325	1896	12	.....
	Total	374,667.64	14,264.28	235,134.14	624,066.06	224,146.95	848,213.01	.....	.....	.....	.....
	HOSPITAL SHIP.										
801	Solace	102,543.66	8,390.75	47,015.33	157,949.76	107,565.65	265,515.41	5,700	Apr. 14, 1898	12	.....

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	FUEL SHIPS.										
611	Abarenda	$25,901.05	$9,829.31	$26,283.00	$62,013.36	$18,331.34	$80,344.70	6,680	May 20, 1898	12	.....
612	Ajax	29,140.85	13,021.67	33,186.68	75,358.20	9,158.99	84,517.19	9,250	May 21, 1898	12	.....
608	Arethusa	25,640.85	5,403.90	26,644.62	57,689.37	46,827.47	104,516.84	6,160	1898	12	.....
610	Brutus	22,466.33	4,194.08	21,046.30	47,706.71	64,949.68	112,656.39	6,550	May 27, 1898	12	.....
606	Caesar	26,305.71	9,135.99	17,238.24	52,679.94	24,007.61	76,687.55	5,940	May 13, 1898	12	.....
624	Cuyama	.....	.....	.....	.....	.....	.....	14,500	Building	.....	.....
607	Cyclops	50,830.14	5,555.74	46,741.09	103,126.97	46,723.26	149,850.23	19,360	Nov. 7, 1910	12	.....
613	Hector	40,437.54	6,701.77	43,414.29	90,553.60	29,815.06	120,368.66	11,250	Oct. 22, 1909	12	.....
620	Jason	45,460.00	8,657.58	58,311.64	112,429.22	34,166.06	146,595.28	19,250	June 26, 1913	12	.....
622	Jupiter	108,876.12	3,087.56	72,041.75	184,005.43	40,711.01	224,716.44	19,360	Apr. 7, 1913	12	.....
600	Justin	11,751.44	1,905.75	25,359.91	39,017.10	3,269.19	42,286.29	.....	Apr. 27, 1898	7	.....
616	Kanawha	39,246.68	7,580.55	73,821.15	120,648.38	22,685.96	143,334.34	14,500	June 5, 1915	12	.....
614	Mars	42,120.48	19,157.27	49,510.49	110,788.24	45,002.41	155,790.65	11,250	Aug. 26, 1909	12	.....
617	Maumee	.....	692.70	5,310.75	6,003.45	2,330.78	8,334.23	14,500	Building	.....	.....
604	Nanshan	25,076.15	3,879.26	46,988.96	75,944.37	11,798.97	87,743.34	5,140	1898	12	.....
623	Neptune	105,536.62	5,126.14	46,900.27	157,563.03	33,313.85	190,876.88	19,480	Sept. 20, 1911	12	.....
618	Nereus	56,337.20	27,173.23	59,888.42	143,398.85	3,303.98	146,702.83	19,080	Sept. 10, 1913	12	.....
609	Nero	29,804.82	4,402.08	36,326.17	70,532.53	32,238.54	102,771.07	6,100	June 8, 1898	12	.....
621	Orion	41,588.68	4,926.16	67,816.76	114,331.60	45,005.57	159,337.17	19,250	July 29, 1912	12	.....
619	Proteus	50,261.72	61,811.89	47,541.55	159,615.16	13,557.14	173,172.30	19,080	July 9, 1913	12	.....
603	Saturn	26,535.27	6,542.01	34,119.54	67,196.82	83,056.64	150,253.46	4,840	Apr. 11, 1898	12	.....
605	Sterling	10,461.49	11,145.83	12,140.04	33,747.36	16,345.98	50,093.34	5,660	Apr. 16, 1898	5	.....
615	Vulcan	37,108.08	5,457.91	35,890.73	78,456.72	51,901.52	130,358.24	11,250	Oct. 2, 1902	12	.....
	Total	850,895.68	22,388.38	886,522.35	1,962,806.41	678,501.01	2,641,307.42	.....	.....	.....	.....
	CONVERTED YACHTS.										
829	Aileen	.....	597.00	107.72	704.72	95.76	800.48	192	May 14, 1898	.....	.....
834	Dorothea	121.00	1,254.32	2,870.69	4,246.01	4,946.23	9,192.24	594	June 1, 1898	.....	.....
833	Eagle	47,717.98	1,192.55	35,475.75	84,386.28	14,745.77	99,132.05	434	Mar. 26, 1898	12	.....
828	Elfrida	.....	363.80	623.38	987.18	230.85	1,218.03	164	June 30, 1898	.....	.....
837	Gloucester	.....	991.80	3,218.22	4,210.02	5,588.27	9,798.29	786	May 20, 1899	.....	.....
832	Hawk	.....	942.00	890.79	1,832.79	708.83	2,541.62	375	Apr. 5, 1898	.....	.....

825	Huntress		941.44	505.84	1,447.28	7,451.87	8,898.65	82	July 1, 1898		
840	Mayflower	123,286.83	6,275.05	31,595.20	161,157.08	19,816.30	180,973.38	2,690	1898	12	
826	Oneida					3,862.64	3,862.64	150	Apr. 30, 1898	4	
836	Scorpion	47,659.81	1,817.20	45,141.58	94,648.59	146.17	94,794.76	775	Apr. 11, 1898	12	
831	Stranger		544.20	32.95	577.15	955.83	1,532.98	369	June 30, 1898		
827	Sylph	60,449.93	7,533.56	6,647.86	74,631.35	3,430.26	78,061.61	152	Aug. 18, 1898	12	
830	Sylvia		1,272.60	946.91	2,219.51	3,659.07	5,878.58	302	June 29, 1898		
838	Vixen		908.40	716.48	1,624.88	319.49	1,944.37	306	Apr. 11, 1898		
835	Wasp		603.00	1,522.56	2,125.56	4,350.22	6,475.83	630	....do		
839	Yankton	47,136.87	313.80	20,818.16	68,268.83	16,958.45	85,227.28	975	May 16, 1898	12	
	Total	326,402.42	25,550.72	151,114.09	503,067.23	87,265.56	590,332.79				
	TUGS.										
504	Accomac		65.00	1,291.78	1,356.78	4,455.56	5,812.34	187	1898	12	
522	Active			3,583.60	3,583.60	6,566.41	10,150.01	296	1898	12	
524	Alice			490.40	490.40	1,264.01	1,754.41	318	1898	10	
534	Apache		1,672.72	1,936.74	3,609.46	3,217.61	6,827.07	650	1898	12	
545	Arapaho		1,998.26	4,208.50	6,206.76	3,018.35	9,225.11	575	Dec. 2, 1914		
519	Choctaw	9,728.22	312.67	3,847.15	13,888.04	1,238.89	15,126.93	274	1898	12	
529	Fortune	30,050.13	125.13	19,995.58	50,170.84	393.00	50,563.84	450	1864	12	
507	Hercules			1,949.74	1,949.74	7,827.44	9,777.18	198	1898	12	
536	Iroquois	18,614.55	241.31	12,867.33	31,723.19	2,858.29	34,581.48	702	1898		
505	Iwana			1,500.88	1,500.88	6,541.86	8,042.74	192	Dec. 20, 1891	12	
508	Massasoit			1,108.00	1,108.00	2,292.93	3,400.93	202	1898	12	
516	Modoc			2,665.05	2,665.05	2,725.32	5,390.37	241	1898	12	
546	Mohave	4,888.34	1,533.09	5,438.98	11,860.41	9,213.60	21,074.01	575	1914		
526	Mohawk			2,047.83	2,047.83	11,325.12	13,372.95	368	1898	12	
506	Narkeeta		894.66	2,312.10	3,206.76	7,628.52	10,835.28	192	Dec. 20, 1891	12	
541	Navajo	32,123.40	2,135.46	35,386.00	69,644.86	3,568.53	73,213.39	800	Nov. 2, 1907	12	
543	Ontario	33,229.46	91.08	19,721.25	53,041.79	12,100.18	65,141.97	1,120	Aug. 24, 1912	12	
533	Osceola	21,843.04	32.40	15,108.72	36,984.16	21,637.30	58,621.46	571	1898	12	
537	Patapsco	31,431.97	1.96	18,984.22	50,418.45	10,651.21	61,069.66	755	1908	12	
538	Patuxent	24,129.93	2.56	20,854.23	44,986.72	15,630.47	60,617.19	755	1908	12	
520	Pawnee		1,120.01	1,610.44	2,730.45	3,772.65	6,503.10	275	1898	12	
511	Pawtucket	5,490.81	2,381.97	5,196.27	13,069.05	2,732.16	15,801.21	225	1898	12	
513	Penacook	4,477.57		2,601.42	7,078.99	2,834.22	9,913.21	230	1898	12	
514	Pentucket		1,344.56	2,137.14	3,481.70	7,095.08	10,576.78	230	1908	12	
532	Peoria	24,985.45	744.32	17,120.53	42,850.30	2,764.86	45,615.16	487	1898	12	
542	Piscataqua	20,803.17	200.10	19,040.73	40,044.00	5,106.40	45,150.40	854	1898	12	
549	Pocahontas					19.20	19.20	575	Building		
527	Pontiac		436.77	65.60	502.37	441.96	944.33	401	1898	12	
539	Potomac	30,505.08	2,454.74	12,228.83	45,188.65	1,266.60	46,455.25	785	1898	12	
540	Powhatan		1,547.32	2,565.77	4,113.09	8,992.07	13,105.16	194	1898	12	
503	Rapido			2,743.72	2,743.72	1,825.07	4,568.79	186	1898		
518	Rocket			1,153.48	1,153.48	6,300.35	7,453.83	206	1898	12	
512	Samoset			2,540.22	2,540.22	5,668.94	8,209.16	225	Mar. 20, 1897	12	
517	Sebago		208.00	774.17	977.17	2,256.02	3,233.19	243	1898	12	

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public voucher (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	TUGS—continued.										
502	Sioux		$13.00	$1,474.88	$1,487.88	$3,221.97	$4,709.85	155	1898	12	
544	Sonoma	$34,362.45	253.68	20,968.21	55,584.34	13,764.04	69,348.38	1,120	Aug. 24, 1912	12	
515	Sotoyomo	5,815.89	1,165.32	3,981.79	10,963.00	4,000.89	14,963.89	230	1903	12	
530	Standish			4,941.76	4,941.76	2,927.57	7,869.33	450	No record	12	
510	Tecumseh	8,198.31	293.84	4,002.81	12,494.96	4,329.34	16,824.30	221	1898	12	
547	Tillamook		980.84	3,431.44	4,412.28	4,961.51	9,373.79	575	Dec. 2, 1914		
521	Traffic		919.44	1,056.32	1,975.76	5,274.36	7,250.12	280	1898	12	
535	Transfer		848.53	2,613.62	3,462.15	2,206.45	5,668.60	684	1905	12	
509	Triton	11,139.79	327.90	3,499.34	14,967.03	972.73	15,939.76	212	No record	12	
525	Unadilla		824.54	2,420.45	3,244.99	2,147.11	5,392.10	355	1895	12	
528	Uncas	19,195.98	382.53	10,154.77	29,733.28	18,231.07	47,964.35	441	1898	12	
523	Vigilant			5,140.99	5,140.99	5,632.08	10,773.07	300	1898	12	
500	Waban	7,472.27		4,653.92	12,126.19	572.25	12,698.44	150	1898	12	
501	Wahneta			3,184.00	3,184.00	11,046.17	14,230.17	152	1891	12	
548	Wando							575	Building		
531	Wompatuck	12,537.22	154.59	16,514.01	29,205.82	6,044.02	35,249.84	462	1898	12	
	Total	391,023.03	25,703.30	333,115.01	749,841.34	270,561.74	1,020,403.08				
	SPECIAL TYPE.										
951	Albatross	58,206.64	1,162.43	13,973.10	73,342.17		73,342.17				
876	Baltimore	171,806.68	4,167.00	77,167.92	253,141.60	31,329.15	284,470.75	4,413	Jan. 7, 1890	12	
958	Fish Hawk	24,569.36		15,021.46	39,590.82		39,590.82	4,600		12	
601	Hannibal	101,325.91	2,856.96	43,236.27	147,419.14	35,591.78	183,010.92	4,000	June 7, 1898	12	
910	Lebanon	34,131.66	134.90	36,400.12	70,666.68	20,494.73	91,161.41	3,285	Apr. 16, 1898	12	
602	Leonidas	102,068.84	4,765.45	39,313.35	146,147.64	27,966.06	174,113.70	4,023	May 21, 1898	12	
852	Prometheus	150,357.64	5,635.30	81,725.52	237,718.46	35,283.61	273,002.07	12,585	Jan. 15, 1910	12	
875	San Francisco	171,605.44	4,998.50	67,833.20	244,437.14	89,202.10	333,639.24	4,083	Aug. 21, 1911		12
851	Vestal	207,120.09	6,420.78	75,710.13	289,251.00	16,719.81	305,970.81	12,585	Oct. 4, 1909	12	
909	Vesuvius			2,650.29	2,650.29	10,605.32	13,255.61	930	June 7, 1890		12
	Total	1,021,192.26	30,141.32	453,031.36	1,504,364.94	267,192.56	1,771,557.50				

	UNSERVICEABLE FOR WAR PURPOSES.											
950	Adams		1,344.40	1,258.45	2,502.85	2,808.87	5,311.72	1,400	1876			
953	Boxer		25.00	56,903.03	56,928.03	714.24	57,642.27	346	1905	12		
954	Constellation	422,493.89	6,453.01	252,341.64	681,288.54	6,213.22	687,501.76	1,970	1797	12		
955	Constitution					1,194.39	1,194.39	2,200	1797			
956	Cumberland			2,749.25	2,749.25	1,023.33	3,772.58	1,800	1904	12		
957	Essex		1,128.00	1,081.63	2,209.63	8,321.93	10,531.56	1,375	1876			
959	Franklin					3,989.10	3,989.10		1865	4		
960	Gopher		837.45	1,621.81	2,459.26	5,145.40	7,604.66	840	1871			
961	Granite State		1,243.20	2,899.04	4,142.24	3,207.41	7,349.65	4,150	1818			
962	Hartford	159,552.74		58,186.99	217,739.73	10,034.97	227,774.70	2,790	1858			12
963	Intrepid	2,402.19	15.50	4,682.78	7,100.47	5,487.28	12,587.75	1,800	1904			
783	Mohican	60,476.75	5,674.67	19,469.14	85,620.56	7,238.50	92,859.06	1,900	No record	12		
967	Philadelphia	23,178.87	1,717.04	18,188.83	43,084.74	11,393.21	54,477.95	4,410	1890	6		6
751	Rainbow	13,868.53	279.85	15,660.42	29,808.80	22,974.51	52,783.31	4,360	July 18, 1898			5
969	Reina Mercedes		1,516.57	6,465.66	7,982.23	7,926.80	15,909.03	2,835	Dec. 3, 1909	12		
800	Relief					3,852.02	3,852.02	3,300	1898			
970	Richmond			653.63	653.63	1,413.75	2,067.38	2,700	1858	12		
731	Severn	81,303.84	9,720.00	40,720.18	131,744.02	2,484.69	134,228.71	1,175	Dec. 3, 1896	12		
971	Southery	89,650.11	89.98	31,669.78	121,409.87	3,705.16	125,115.03	3,100	1898	12		
973	Topeka			2,300.26	2,300.26	1,652.77	3,953.03	2,255	1898	12		
974	Wolverine		816.90	955.73	1,772.63	1,621.65	3,394.28	685	1844			
975	Yantic		510.60	1,035.88	1,546.48	1,216.62	2,763.10	900	1864			
	Total	852,926.92	31,272.17	518,844.13	1,403,040.22	113,619.82	1,516,663.04					
	MISCELLANEOUS.											
980	Receiving ship at Portsmouth	10,658.95	168.95		10,827.90		10,827.90					
981	Receiving ship at Boston	419,192.99	29,338.39	26,712.98	475,244.36	105.70	475,350.06					
982	Receiving ship at Newport	65,647.75	3,951.45	10,519.52	80,118.72		80,118.72					
983	Receiving ship at New York	844,117.16	36,258.52	73,591.71	953,967.39	511.05	954,478.44					
984	Receiving ship at Philadelphia	397,186.00	17,904.93	38,589.03	453,668.96	45.21	453,714.17					
985	Receiving ship at Norfolk	836,914.29	23,804.41	235,712.74	1,096,431.44	23.75	1,096,455.19					
986	Receiving ship at Charleston	25,259.43	8,585.24	225.46	34,070.13	5.00	34,075.13					
987	Receiving ship at Mare Island			331.62	331.62		331.62					
988	Receiving ship at San Francisco	247,857.32	1,660.22	166,415.09	415,932.63	335.05	416,267.68					
989	Receiving ship at Puget Sound	173,610.40	9,518.12	31,607.81	214,736.33	1,387.71	216,124.04					
990	Receiving ship at Cavite	26,997.44	237.79	1,242.87	28,478.10		28,478.10					
991	Receiving ship at Olongapo	16,177.49	525.98	3,606.73	14,310.12	70.87	14,380.99					
992	Reserve torpedo division, Annapolis	32,317.40	22.50	6,558.23	38,898.13	5.25	38,903.38					
993	Reserve torpedo division, Charleston	3,785.24	49.50	3,399.24	7,233.98		7,233.98					

Annual cost of the Navy—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public voucher (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	MISCELLANEOUS—contd.										
994	Yard craft	$81,122.30	$12,483.78	$32,970.07	$126,576.15	$49,043.49	$175,619.64				
995	Ships, Naval Academy	172,871.41	1,644.76	31,017.27	205,533.44		205,533.44				
995	Seamen's quarters, Washington	49,759.85	439.09	3,928.62	54,127.56	5.62	54,133.18				
998	Target rafts					89,043.36	89,043.36				
999	Airships		5,874.57		5,874.57	57,722.17	63,596.74				
	Total	3,397,475.42	152,468.12	666,419.99	4,216,363.53	198,304.23	4,414,667.76				
	Grand total	30,566,165.62	1,130,192.55	16,280,562.65	47,976,920.82	8,556,504.69	56,533,425.51				

RECAPITULATION.

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.	Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Battleships:						Submarines	76		5.8	$1,576,616.78	$42,920.60
First line	17	467,450	6.04	$7,364,564.87	$360,676.84	Tenders and torpedo vessels	8	31,927	10	1,305,685.96	195,852.89
Second line	25	340,146	10	11,491,626.96	551,598.09	Gunboats	30	26,180	9.25	2,958,721.98	129,944.73
Armored cruisers	10	140,070	10	5,130,280.08	615,633.61	Transports	5	22,235	6.2	751,342.17	290,842.13
Cruisers:						Supply ships	5	33,900	9.6	848,213.01	212,053.25
First class	5	46,465	12	1,792,066.85	358,413.37	Hospital ship	1	5,700	12	265,515.41	265,515.41
Second class	4	25,065	6	560,857.74	280,478.87	Fuel ships	23	268,430	10.5	2,641,307.42	131,245.09
Third class	16	50,820	10.6	3,522,037.56	249,200.77	Converted yachts	16	9,476	4	590,332.79	110,693.64
Monitors	9	32,944	8.5	1,089,338.50	170,863.94	Tugs	50	20,899	10.2	1,020,403.08	24,009.48
Destroyers	57	46,876	8.25	4,231,092.07	107,965.18	Special type	11	45,904	9	1,771,557.50	35,789.04
Coast torpedo vessels	16	6,695	12	1,537,826.56	96,114.16	Unserviceable for war purposes	22	46,291	6.25	1,516,663.04	132,363.81
Torpedo boats	20	3,395	4.2	152,707.42	21,815.34	Miscellaneous	19			4,414,667.76	

APPENDIX H.

PERCENTAGE BASES OF PERSONNEL.

The following table gives the practical working out of the provisions of the act of August 29, 1916, as it relates to the personnel at the present time:

Computed numbers, or "authorized strength," of the Navy—officers and enlisted men, midshipmen, Flying Corps, etc.—allowed under the act of Congress approved August 29, 1916, for the current half of the calendar year 1916, upon which computed numbers are further computed the fixed numbers, or "authorized strength," of the various grades and ranks for the current half of the calendar year 1916.

[Computations all made subsequent to August 29, 1916, "as of" July 1, 1916.]

Computed Numbers of Line, Staff, and Warrant Officers, Enlisted Men, Midshipmen, Etc., for Current Half of Calendar Year 1916.		"Authorized Strength" of Various Grades and Ranks for Current Half of Calendar Year 1916, Based on Total Computed Numbers.		
Enlisted men proper	a 68,709			
Apprentice seamen	a 6,000			
Hospital Corps (including chief pharmacists and pharmacists)	a 2,929			
Enlisted men sentenced to discharge	b 2,034			
Enlisted men detailed to Naval Militia	b 1,309			
Enlisted men of Flying Corps.	a 350			
Line	c 2,086	Rear Admirals	upper half.. / lower half..	21
		Captains		80
		Commanders		146
		Lieutenant Commanders		292
		Lieutenants		678
		Lieutenants, junior grade / Ensigns		869
				2,086
Medical	c 362	Medical Directors, Rear Admiral	upper half.. / lower half..	2
		Medical Directors, Captains		15
		Medical Inspectors, Commanders		26
		Surgeons / Passed Assistant Surgeons / Assistant Surgeons	Lieut. Comdr. / Lieutenant / Lieut., jr. grade..	319
				362
Pay	c 234	Pay Director, Rear Admiral	upper half.. / lower half..	1
		Pay Directors, Captain		13
		Pay Inspectors, Commander		18
		Paymasters / Passed Assistant Paymasters / Assistant Paymasters	Lieut. Comdr. / Lieutenant / Lieut., jr. grade.. / Ensign	202
				234

a Number "fixed" permanently—does not change under existing law
b Number "fixed" temporarily—for date of July 1, 1916—fluctuates from day to day.
c Number "fixed" temporarily—does not change until new computations are made for the succeeding half calendar year.

Computed numbers, or "authorized strength," of the Navy, etc.—Continued.

Computed Numbers of Line, Staff, and Warrant Officers, Enlisted Men, Midshipmen, Etc., for Current Half of Calendar Year 1916.		"Authorized Strength" of Various Grades and Ranks for Current Half of Calendar Year 1916, Based on Total Computed Numbers.		
Construction	a 94	Naval Constructor, Rear Admiral	upper half	1
			lower half	
		Naval Constructors, Captain		7
		Naval Constructors, Commander		11
		Naval Constructors / Assistant Naval Constructors	Lieut. Comdr.	75
			Lieutenant	
			Lieut., jr. grade	
				94
Civil Engineer	a 44	Civil Engineer, Rear Admiral	upper half	1
			lower half	
		Civil Engineers, Captain		2
		Civil Engineers, Commander		5
		Civil Engineers / Assistant Civil Engineers	Lieut. Comdr.	36
			Lieutenant	
			Lieut., jr. grade	
				44
Chaplains	b 84	Chaplains	Captain	8
			Commander	17
			Lieutenant Commander	17
			Lieutenant	42
			Lieutenant, junior grade	
				84
Professors of Mathematics	c 12	Professors	Captain	3
			Commander	4
			Lieutenant Commander	5
			Lieutenant	
				12
Dental Corps	b 84	Dental Surgeons	Lieutenant Commander	
			Lieutenant	
			Lieutenant, junior grade	
Midshipmen	b 1,762			
Flying Corps (officers)	b 150			
Chief warrant officers	d 502			
Warrant officers	d 362			
Chief pay clerks, pay clerks, and acting pay clerks	a 325			
Marine Corps (officers, line, staff, and warrant), 637; additional numbers in grade, 3; clerks to assistant paymasters, 9	649			
Marine enlisted men proper (including 67 members of band)	b 14,961			
Marine, enlisted men sentenced to discharge	d 505			

a Number "fixed" temporarily—does not change until new computations are made for the succeeding half calendar year.
b Number "fixed" permanently—does not change under existing law.
c Number "fixed" permanently—but corps will die out with passing of present members from the active list.
d Number "fixed" temporarily—for date of July 1, 1916—fluctuates from day to day.

The above figures were computed by the Secretary of the Navy in accordance with a provision contained in the Naval Appropriation Act approved August 29, 1916, reading:

That to determine the authorized number in the various grades and ranks of the line and of the staff corps as herein provided, computations shall be made by the Secretary of the Navy semi-annually, as of July 1st and January 1st of each year, and the resulting numbers in the various grades and ranks, as

so computed, shall be held and considered for all purposes as the authorized number of officers in such various grades and ranks and shall not be varied between such dates.

The following table shows the total number of officers authorized when the Navy has reached its maximum authorized strength under the provisions of the act of August 29, 1916:

Line	2,988
Medical	688
Pay	359
Construction	149
Civil engineer	60
Chaplain	84
Professor of mathematics	11
Dental	84
Midshipmen	1,762
Flying Corps	150
Chief warrant officers	502
Warrant officers	362
Chief pay clerks, pay clerks, and acting pay clerks	325
Marine officers	637
Total (officers)	8,156

NOTE.—All numbers shown above are the total maximum numbers that the Navy can attain under existing law (act of Aug. 29, 1916), except the numbers of chief warrant officers and of warrant officers which are variable, unlimited by law, and always stand "fixed" at the actual number we may have as of July 1 or January 1 of future calendar years. (Numbers above are as of July 1, 1916.) It is also possible for the total number of medical, chaplains, and pay clerks to increase slightly, owing to possible increases in certain unlimited classes of enlisted men—prisoners under sentence of discharge, enlisted men detailed to Naval Militia, etc.—but the increase will be negligible. Percentages of officers in these corps are based on percentages of total enlisted men of all classes.

An estimate of the officers in the various grades of the line on the completion of the building program corresponds very closely with the percentages in grades established by the last bill. The estimated numbers are:

Flag	46
Captain	166
Commander	34
Lieutenant commander	731
Lieutenant	1,430
Lieutenant (junior grade) and ensign	1,773

And on the present percentage basis would be—

Flag (1 per cent)	45
Captain (4 per cent)	179
Commander (7 per cent)	314
Lieutenant commander (14 per cent)	628
Lieutenant (32½ per cent)	1,458
Lieutenant (junior grade) and ensign (4½ per cent)	1,863

REPORT OF THE DIRECTOR OF NAVAL COMMUNICATIONS.

NAVY DEPARTMENT,
NAVAL COMMUNICATION SERVICE,
OFFICE OF THE DIRECTOR,
Radio, Va., October 7, 1916.

To: Chief of Naval Operations.

Subject: Report of United States Naval Radio Service for the fiscal year 1916.

Since the end of the fiscal year the office of Superintendent of the Radio Service has been changed to that of the "Director Naval Communications" and the term "Communication Service" is used instead of "Radio Service." Since this report covers a period prior to the above change the terms "Superintendent of Radio Service" and "Radio Service" are retained in the body of this report.

ORGANIZATION FOR ADMINISTRATION AND OFFICE FORCE.

Capt. W. H. G. Bullard, United States Navy, has held the office of Superintendent of Radio Service during the period covered by this report. Commander D. W. Todd, United States Navy, reported as his assistant June 16, 1916, preparatory to relieving Capt. Bullard upon being ordered to sea duty.

Capt. Bullard has been the Superintendent of Radio Service since the office was established by the Navy Department General Order No. 240 of November 9, 1912, to carry out certain provisions of the radio act approved August 13, 1912, and the International Radiotelegraphic Convention of London. The thorough organization and present efficient operation of the Radio Service is the direct result of his administration of this office.

The work of the office is carried on under two general divisions—namely Government work and commercial work.

Under Government work is classified all official business of the Navy Department and other departments of the Government wherein radio is concerned. This includes communication between shore stations and communication between shore and ship as well as administration, where operation of stations and their personnel is concerned. This work is under the immediate supervision of the Assistant Superintendent of Radio Service, who is also Atlantic coast superintendent, and directly responsible to the superintendent for operation of the service on the Atlantic coast. This office has been held by Lieut.

Commander S. W. Bryant, until June 1, 1916, when he was relieved by Lieut. Reed M. Fawell.

The Pacific coast superintendent has similar duties on the Pacific coast, and is directly responsible to the Superintendent of Radio Service for the operation of stations on that coast. In addition, the Pacific coast superintendent is the representative of the Bureau of Steam Engineering for all radio installations on the Pacific coast. The office of Pacific coast superintendent is held by Lieut. Commander E. H. Dodd.

The commercial work is under the direct supervision of Mr. Charles J. Pannill, expert radio aid, and covers commercial work of every character handled wholly or in part by radio and traffic arrangements concerning same. In addition, international accounts as well as work connected with Tuckerton-Eilvese and Sayville-Nauen traffic are handled in this office.

The accounting division, under direct supervision of Passed Asst. Paymaster J. H. Knapp, United States Navy, handles the accounting in connection with commercial work and is a division of the commercial branch.

The clerical force consists of three stenographers and typewriters, who are civil service appointees, and the following enlisted men: Four chief yeomen; three yeomen, first class, who perform the following duties: One stenographer and typewriter, three audit clerks, one bookkeeper, two assistant bookkeepers.

RECOMMENDATIONS.

Recommendations for changes in organization of the Radio Service were made in the supplementary report of a board on organization of the Radio Service ordered by the Secretary of the Navy in his letter 624–109 of May 1, 1916. In general, it was recommended that the office of the Superintendent of Radio Service be changed to the office of Director Naval Communications, and that the name "Naval Radio Service," be changed to "Naval Communication Service;" that the Director Naval Communications be charged with the duties now performed by the Superintendent of Radio Service, and, in addition, be responsible for the efficient handling of all telegraph, telephone, cable, and, generally, all dispatch work between the Navy Department and the fleet and throughout the naval service outside the fleet. In the administration of the foregoing, that he have general charge of the operation, organization, and administration of the Communication Service.

The following general organization was recommended for the administration of the Communication Service:

1. Director naval communications.
2. Assistant for administration and Atlantic coast superintendent.
3. Assistant for communications and four communication officers.
4. Pacific coast superintendent.
5. Philippine communication superintendent.
6. Assistant for commercial traffic.
7. A communication superintendent for each district.

The board further recommended that the office of the director be established in the Navy Department as soon as space could be made available. This is considered of great importance.

The above report is of a confidential nature and the details of the organization are not set forth herein.

Recommendations regarding the clerical force for commercial work will be made the subject of a special letter when estimates for 1918 are submitted to the Bureau of Steam Engineering. It will be noted that the enlisted men included under clerical force are performing duties which are largely commercial rather than military in nature, and while this staff is highly efficient and composed of most capable men, the regulations requiring certain sea and shore service during the enlistment of these men work a hardship on this office on account of changes in the force from time to time. As each change requires several months to make a new man proficient in his duties, due to the nature of the work being different from any work encountered in military duties, it is recommended that only civilian clerical force be used for this work, and that such of the present force who desire to take the civil service examination for their present duties be permitted to do so.

It is recommended that a disbursing clerk be appointed from the classified service for the duties now performed by the pay officer. This change is desired because the duties performed are foreign to the usual duties of a pay officer of the Navy, so that in addition to the time required for a relief to become familiar with such duties, the pay officer is out of touch with naval duties during the time he is attached to this office. Furthermore, owing to the nature of the duties, the position should be filled by some person not required to perform sea duty. This recommendation will be incorporated in the letter to the Bureau of Steam Engineering, submitting estimates for the fiscal year 1918.

OPERATION AND ORGANIZATION OF RADIO SERVICE.

The details of operation and organization have undergone some development and considerable improvement. These changes and improvement have resulted from the carrying out of the recommendations contained in the report of the board on organization of the Radio Service of February 20, 1915. Such changes in the foregoing report that have not been carried out, with additional changes recommended, are covered by the supplementary report to the original board's report, in accordance with the Secretary of the Navy's order N-31/W 624-109 of May 1, 1916, to Capt. W. H. G. Bullard, United States Navy.

It is desired to make special mention of the commercial and amateur radio operators who have volunteered their services in time of public peril. Through the cooperation of commercial radio companies, 200 applicants have offered their services in time of war and additional applications are being received regularly. Similarly, amateur radio organizations have cooperated with this office and the amateurs have been organized by districts throughout the United States, such organizations being under the immediate supervision of the district radio superintendent of the district concerned.

The assistance and cooperation from both commercial and amateur organizations has been most gratifying.

PERSONNEL.

The need of more radiomen for the Naval Service continues to be a handicap, but steps have been taken to provide for all contingencies.

LEGISLATION.

The necessity for strong Government control of radio communication becomes more necessary as ship and shore stations increase in number. Interference and consequent inefficient communication will continue until such control is obtained.

The Navy Department operates sufficient suitable stations along both coasts of the United States, Alaska, and United States possessions over seas to take over commercial business at shore stations and handle same efficiently with but little additional personnel. At present this service maintains radio stations for public reasons at some points where small commercial stations operate continuously within 100 miles, by which the naval stations are prevented from handling commercial business in accordance with the present radio act.

To avoid interference and to centralize control of traffic, it is desirable to open all naval stations, except a few reserved for Government work exclusively, to commercial business, and the purchase of all commercial shore stations engaged in ship to shore work is essential. In time of war or threatened war all such stations would be operated by the Government, and their operation in time of peace would avoid the period of inefficiency following a sudden change from commercial to Government operation, until the new stations could be worked into the naval organization.

It is therefore strongly recommended that the necessary legislation be requested to permit all naval radio stations to be opened to commercial traffic at the discretion of the department, and that the necessary appropriation be requested from Congress to purchase all the commercial shore stations mentioned above.

A board consisting of members from all the executive departments is now preparing a new radio act to be submitted to Congress, which, it is hoped, will embody the above.

CENSORSHIP.

The censorship of commercial radio stations, to carry out the proclamation of the President dated August 5, 1914, and his executive order of September 5, 1914, relating to radio, has substantially the same status as was in effect at the time of the last annual report. The regulations have been enforced so as to inflict the minimum amount of inconvenience on the public consistent with the neutrality requirements.

MOBILIZATION OF COMMUNICATIONS.

On May 6, 7, and 8, 1916, in conjunction with the American Telephone & Telegraph Co., mobilization of communication tests were held. The Navy Department was connected by telephone and telegraph with all navy yards and radio stations in the United States. Radio telephone apparatus was installed on board the *New Hamp-*

shire, enabling the department to be in direct communication with the commanding officer of that vessel underway off Cape Henry; and communication was effected between the commandant of the Mare Island Navy Yard and the commanding officer of the *New Hampshire*. The object of this test was to demonstrate the possibility of successful service by telephone, telegraph, and radio between the Navy Department, all naval stations, and the fleet. The test was highly successful. A detailed report of this mobilization was made to the Secretary of the Navy by the superintendent, under date of June 7, 1916. Particular attention is invited to the following recommendation in above-mentioned report:

"In this connection this office strongly recommends that negotiations be entered into at once with the American Telephone & Telegraph Co. for permanent telephone and telegraph circuits between the department and important yards and stations in time of peace. The desirability of such permanent circuits has been manifested on numerous occasions."

COMMERCIAL TRAFFIC.

STATIONS.

The statements made herein refer to a period of 12 months instead of 18 months as covered by the last report of this office. In drawing a comparison between the two reports this fact should be borne in mind.

The necessity for a station on the coast of Texas has been apparent for some time. It is expected that the station now under construction at Point Isabel, Tex., will be of great service to the merchant marine in that section, as well as to naval and other Government vessels in Mexican waters. The station will be placed in commission about August 15, 1916.

Upon recommendation of the commander in chief, Asiatic Fleet, the naval radio station at Cavite, P. I., was authorized by the department to handle commercial traffic on and after July 1, 1916. Suitable arrangements have been made by the superintendent to cover the wire connection between the radio station and the insular telegraph system connecting with the various islands and cable at Manila. The department has arranged with the Bureau of Insular Affairs for a word rate for radiograms at radio count. Notice of this rate, as well as the opening of the Cavite station to commercial traffic, has been announced to the service and to the public.

Inasmuch as the station at Unalga, Alaska, was inaccessible during a large part of the year, it was abandoned after it became apparent that the station at Dutch Harbor could take care of the traffic formerly handled by the Unalga station.

With the closing of the naval radio station at Jupiter, Fla., to commercial traffic the bulk of the traffic formerly handled by that station was thrown upon the Key West station. The manner in which the heavy traffic at this point has been handled is most satisfactory. The Key West station is required to look out for all official and commercial traffic between shore and Government ships, official traffic between various naval stations, commercial traffic between shore and all Government and merchant vessels, and traffic to and from Nassau.

Practically no serious delays or errors occurred in the handling of this great volume of business. Steps are now being taken to increase the efficiency of this station, along with some of the other important stations. With the new arrangement in operation it will be possible to assign separate operators to look after the different classes of traffic.

ACCOUNTING.

The superintendent is now able to report that satisfactory arrangements have been completed with all radio, telegraph, telephone, and cable companies, as well as with numerous shipowners operating their radio apparatus, for the proper accounting for traffic exchanged with the Naval Radio Service. In a majority of cases a three-way check system for the traffic is provided for. Prompt payment of all accounts against this service is made, and the superintendent is pleased to report that no trouble has been experienced in this connection during this fiscal year. The large increase in both official and commercial traffic during this year over that covered by the last report has been taken care of by practically the same force. Should all of our radio stations be opened to commercial traffic, the accounting and other work in connection with such service can be taken care of with but slight increase to present force. The accounting necessary in connection with traffic handled by Tuckerton is very heavy and is handled in a satisfactory manner. The accounts of the Sayville station are handled by the Atlantic Communication Co., the present owners of the station. The superintendent, however, supervises this traffic in a general way.

During the year the bookkeeping part of the accounting has undergone several changes. The abstract or report of messages handled by the various radio stations serving as the basis of the accounts are now entered in a journal, and from there posted to the general ledgers, a double-entry system prevailing. A trial balance is taken quarterly to insure accuracy in the accounts and to trace errors in posting. The accounts are divided into five classes, with a separate ledger for each class, as follows:

(*a*) Naval radio stations.
(*b*) Other systems (radio and telegraph).
(*c*) Special and subsidiary.
(*d*) International (rendered by foreign governments).
(*e*) Tuckerton radio station.

As each abstract would require entries in at least three ledgers, it was decided to use a card system instead of the loose-leaf ledgers formerly in use. The use of cards was begun with traffic for the month of April, 1916, and the system has proven very satisfactory A record is kept of each card opened and a serial number assigned to prevent the possible loss of an account.

ALASKAN SERVICE.

The superintendent considers it very desirable to have the traffic arrangements in Alaska conform to the present methods for other sections. The Alaskan service, owing to the conditions, is required to operate between fixed points, as well as between shore and ship,

for both official and commercial traffic. In a number of places in Alaska there are no rapid means of communication except through naval radio stations. It is recommended that Mr. Charles J. Pannill be ordered to Seattle to confer with the various officials concerned in this service, to bring about better cooperation between this service and other systems in that section.

The following changes are desirable: All stations in Alaska should apply a coast tax of 6 cents per word, 10-word minimum, radio count, for traffic to and from ships at sea. A charge of 5 cents per word, radio count, should be made for service to and from all stations to any point in Alaska reached by this service and the Alaska cable system, as well as between such stations and Seattle or North Head, Wash., for all traffic to and from ships at sea. The rates for this service should conform to rates of the War Department cable where the naval radio service parallels the cable system in the case of domestic traffic; that is, traffic between fixed points. The 10-word minimum should apply, but address and signature should not be counted, in accordance with the present scheme of counting this traffic by the War Department. A rate of 4 cents per word (day) and 3 cents per word (night) should apply between Cordova and other naval stations in Alaska, except Sitka. The rates to Cordova radio station and Cordova cable office and Sitka radio station and Sitka cable office should be based on through rate, and no charge should be made for loop service between these points except for local business.

ABOLITION OF MINIMUM.

Owing to unsettled conditions in foreign countries, nothing further has been done by the superintendent in connection with the abolition of the 10-word minimum. The naval radio service has refrained from abolishing this minimum, as it is more desirable to do so at a time when all other systems are ready to do so.

COMMUNICATION CHART.

Since the last report, a communication chart has been devised and is now issued monthly to the service and to the public. A large number of letters have been received showing appreciation of the usefulness of this chart. It is compiled in the superintendent's office each month and is printed and mailed by the Government Printing Office. About 1,400 copies are issued. The chart contains all the necessary information in connection with the filing, forwarding, and handling of commercial traffic to and from ships at sea, via radio stations, regardless of system employed, on the Atlantic and Gulf coasts. It contains the names of the stations, call letters, shore tax, owners, and the land-line rates to and from them for traffic to all points in the United States, Mexico, and Canada. It also contains a complete list of all merchant ships in the North and South American trade that are fitted with radio apparatus, their call letters, ship tax, and the stations through which they may be reached any time during the month. The chart also shows the days such ships are in port. On the back of the chart appears censorship regulations pertaining to this traffic.

SHIP-REPORTING SERVICE.

Since the naval radio stations have been permitted to accept and forward, without charge, reports showing the daily positions of all ships to various newspapers throughout the country, a large number of requests have been received for this service. Newspapers on all three coasts of the United States now use these reports, giving the Naval Radio Service proper credit for same. The newspapers are required to pay the land-line charges at press rates for these reports. No other expense is involved. Reports through San Juan or Guantanamo stations are forwarded by radio to either Charleston or Key West, without charge, in order to reach the land lines. Vessels not fitted with radio apparatus may report their positions by signaling Nantucket Shoals, Diamond Shoals, Frying Pan Shoals, or Heald Bank lightships. These reports are then forwarded to the nearest shore station and by them placed on the land line.

NASSAU SERVICE.

The service between Key West and Nassau has been successful in every particular during this year. Practically no complaints of any nature have been received. This traffic has been excessive, especially during the height of the tourist season. It has been clearly shown that the radio service above mentioned has been able to replace the cable which was formerly operated at Jupiter Inlet, Fla., and abandoned.

PRESS BROADCASTED.

The press service furnished through the Washington and Key West stations has been of great service to the ships of the Atlantic Fleet and other Government vessels. Thanks are due to the Associated Press and the Western Union for this excellent service. It is recommended that this press service be extended to include forwarding of same by certain stations on the Pacific coast. It is also recommended that arrangements be made with the Army cable system to secure suitable press service at Cordova and Sitka for the purpose of transmitting same nightly to Government vessels and stations in Alaska.

EMERGENCY SERVICE.

As an experiment the superintendent authorized certain stations to handle traffic between fixed points during a break in the land-line connections under special instructions. In a number of instances on the Pacific coast and the Gulf it was found that this service was of inestimable value to the public. The traffic is to be accepted from a radio or telegraph company for transmission across the break in land-line connections only, to be delivered to the same system at the other end of the break. No charges are made for this service and no accounting is involved, in so far as this office is concerned.

MAP.

A map has been issued to the service and the public, showing an outline of the coasts of the United States and Alaska and the posi-

*Effective

tion of our stations. This map will be modified to cover the changes due to the growth of the service.

SUCCESSFUL COMMERCIAL OPERATION.

The superintendent is pleased to report that the handling of commercial traffic by the Naval Radio Service during this year has been successful from every standpoint. Reliable radio service has been furnished to merchant ships in addition to all Government vessels. It is pleasing to note the interest taken in this service by the various shipowners, who have cooperated with this office to assist in increasing the efficiency of the service. The commercial traffic during the past year has grown steadily, as will be noted from the report for period from December 13, 1912, to December 31, 1913, which shows a total of 12,854 commercial messages handled during that period; report from January 1, 1914, to June 30, 1915, which shows a total of 70,709 commercial messages, while the report from July 1, 1915, to June 30, 1916, shows a total of 97,084.

INTERNATIONAL CLEARING HOUSE FOR RADIO ACCOUNTS.

For a number of years this office has been handling international accounts covering radiograms through foreign coastal stations or those from foreign ships through our stations. This work has gradually increased in volume, and satisfactory arrangements have been made with all foreign governments for the clearance of their accounts covering this traffic. During the year covered by this report this office handled the sum of $7,298.94 for this business. These accounts embrace not only traffic handled with vessels of the Navy, but also for any vessel flying the American flag that exchanges traffic with a foreign coast station. Further, radiograms originating in telegraph offices in the United States, destined to any ship via a foreign coast station, appear in these accounts, the United States being debited with all radio charges on such messages. No little difficulty has been experienced in the liquidation of the accounts last mentioned, owing to the fact that this office had no clue to the name of the telegraph company of origin. Cooperation on the part of all telegraph companies is necessary in this matter.

TUTUILA-HONOLULU CIRCUIT.

The operation of the Tutuila-Honolulu circuit has been successful during the past year. Although the traffic can be handled only at night, owing to small-power sets at both ends of the circuit, traffic has been handled successfully each night. Steps are being taken by the Bureau of Steam Engineering to increase the power at Tutuila and it is expected that continuous service will then be available.

REPORT OF TRAFFIC.

The table below shows the number and character of all messages handled by the various naval radio stations. The grand total shows 726,081 messages, made up as follows: Commercial, 97,084; official, 628,997. While there is a slight increase in official traffic over the

18-month period covered by the last report, the increase in commercial traffic during this year is very large. The service, in addition to handling traffic to and from ships at sea, is also engaged in handling traffic between fixed points. The following table includes both classes of traffic:

Summary showing number of messages sent and received by the naval radio stations.

[July 1, 1915, to June 30, 1916.]

Stations.	Total commercial.	Total official.	Grand total.
Portland, Me		6,335	6,335
Portsmouth, N. H		7,530	7,530
Boston, Mass	1	19,645	19,646
Cape Cod, Mass		5,436	5,436
Newport, R. I	20	26,364	26,384
Nantucket Shoals		2,575	2,575
Fire Island, N. Y		2,468	2,468
New York, N. Y	2	25,540	25,542
Philadelphia, Pa		21,358	21,358
Annapolis, Md	1	4,919	4,920
Washington, D. C. (department and yard)		67,748	67,748
Norfolk, Va	342	21,668	22,010
Diamond Shoals	2	1,065	1,067
Beaufort, N. C		8,676	8,676
Frying Pan Shoals		1,616	1,616
Charleston, S. C	667	15,413	16,080
St. Augustine, Fla	205	6,713	6,918
Jupiter, Fla	318	4,269	4,587
Key West, Fla	14,120	22,617	36,737
Pensacola, Fla	73	5,339	5,412
New Orleans, La	4	12,736	12,740
Guantanamo, Cuba	1,790	24,531	26,321
San Juan, P. R	4,033	4,705	8,738
Colon, R. P	20,627	11,596	32,223
Darien, Canal Zone	841	10,449	11,290
Balboa, Canal Zone	1,837	3,663	5,500
Great Lakes, Ill		10,990	10,990
St. Paul, Pribilof Islands	1,864	9,118	10,982
St. George, Pribilof Islands		1,179	1,179
Dutch Harbor, Alaska	1,179	3,109	4,288
Kodiak, Alaska	4,010	16,418	20,428
Cordova, Alaska	14,759	11,678	26,437
Sitka, Alaska	14,619	12,673	27,292
Tatoosh, Wash	343	7,660	8,003
Puget Sound, Wash	109	9,101	9,210
North Head, Wash	3,956	34,656	38,612
Cape Blanco, Oreg	254	11,289	11,543
Eureka, Cal	995	24,014	25,009
Point Arguello, Cal	883	7,634	8,517
Farallons, Cal	15	11,936	11,951
San Francisco, Cal	45	43,986	44,031
San Diego, Cal	8,237	45,315	53,552
Pearl Harbor, Oahu, T. H		401	401
Guam, M. I	16	964	980
Cavite, P. I	1	12,019	12,020
Olongapo, P. I	16	8,992	9,008
Tutuila, Samoa	900	364	1,264
Peking, China		527	527
	97,084	628,997	726,081

The revenue account shows a balance of $37,510.76, which represents the earnings of the service for the commercial work handled, in addition to the sum of $55,865.46, already deposited in the Treasury since the service was inaugurated, as "Miscellaneous receipts," in accordance with the radio act. The first-named figures represent the amount due on June 30, 1916, and cover a portion of the traffic handled for April and May, 1916, but none of June. The traffic not covered is in the process of auditing.

GENERAL WORK OF GOVERNMENT STATIONS.

Government stations send out the following broadcast information for the benefit of shipping at sea at specified times, the detailed information of which is covered by Hydrographic Office bulletins as changes in procedure take effect:

Storm warnings and weather reports supplied by the United States Weather Bureau at Washington, D. C., for the Atlantic coast and Great Lakes, and by the San Francisco office for the Pacific coast.

Obstructions to navigation at sea, including wrecks, derelicts, and ice, which reports are supplied by the Hydrographic Office.

Time signals, originating at the Naval Observatory, Washington, D. C., or the observatory at Mare Island, Cal.

Arrangements are in effect for receiving from vessels at sea and forwarding hydrographic reports to the hydrographer, Washington, D. C., on the Atlantic coast, and to the branch hydrographic office at San Francisco, on the Pacific coast. Similarly, weather reports from sea are forwarded to the Weather Bureau at Washington, D. C., or the branch office of the Weather Bureau at San Francisco.

COOPERATION OF GOVERNMENT DEPARTMENTS.

The cooperation of the Coast Guard and Weather Bureau, as well as other important offices of the Government, has been highly satisfactory.

WORK WITH CANAL ZONE.

The amount of traffic handled between the United States and the Canal Zone through Washington and New Orleans to Darien has resulted in a saving of tolls to the Government of about $3,000 per month. A great part of this work is for the Panama Canal Commission. The War and Navy Departments also send a fair amount of such traffic.

ASSISTANCE TO VESSELS IN DISTRESS.

This office has arranged certain listening-in periods on the 600-meter wave length at all shore and ship stations. The London convention requires all ship and shore stations to listen for three minutes in every 15 minutes on this wave length. In order to make this requirement effective it is very necessary for all ships and shore stations within range of each other to listen in at the same time. It is hoped that all radio-operating companies and shipowners operating their own apparatus direct their operators to use the same time as the Naval Radio Service. Our radio stations have been of inestimable assistance to vessels in distress. Our men have in all cases used good judgment and have spared nothing to give all aid to distressed craft. The attached detailed report, marked "Appendix A," shows the service rendered during this year.

D. W. Todd.

APPENDIX A.

ASSISTANCE RENDERED TO VESSELS IN DISTRESS BY NAVAL RADIO STATIONS.

[July 1, 1915, to July 1, 1916.]

July 23, 1915.—NORFOLK station notified cutter *Apache* and collector of customs at Norfolk that schooner *Ella Flaherty* was in danger of total loss. and requested assistance of cutter at once.

July 24, 1915.—NORFOLK station informed cutter *Onondaga* and manager, Norfolk, that the tug *W. B. Keene* needed immediate assistance at Lynnhaven; hawser jammed in wheel and man badly hurt; arranged for diver needed; notified Coast Guard at Washington that ship was being assisted.

October 2, 1915.—TATOOSH ISLAND station requested captain steamship *Hilonian* for report to Hydrographic Office regarding steam schooner *Graywood*, which had been reported as obstruction to navigation, abandoned, and in sinking condition off Umatilla light. *Hilonian* confirmed report that ship had been abandoned, and stated that lines had been parted, and requested power boat from life-saving station to save five men on board. Life-savers were notified of position of *Hilonian* and wreckage, and *Hilonian* informed that life-savers were en route. *Hilonian* reported position of *Graywood* and stated latter was sinking fast and drifting toward shore. Information received was forwarded to Hydrographic Office, San Francisco.

November 1, 1915.—TATOOSH ISLAND station received information that schooner *Anne Larsen* had lost jibboom and both anchors, and was without ground tackle, also position, from U. S. S. *Major J. S. Ringgold*, which had made an unsuccessful attempt to tow schooner to harbor, on account of hawsers parting. Sick man on board would not leave ship. Tatoosh notified cutter *Snohomish*, and report received that *Snohomish* was under way for *Anne Larsen*. Information requested from Gray's Harbor Tugboat Co. as to status of schooner, and report received stated tug *Daring* was in search for *Anne Larsen*. Later report stated schooner reached harbor November 3, 1915, and Coast Guard Division, Seattle, Wash., was notified.

December 6, 1915.—PORTLAND (Me.) station notified cutter *Ossipee* that a three-masted schooner was aground. Report received that cutter *Ossipee* was under way for vessel in distress. Later report received that the vessel filled rapidly and had to be abandoned, but the master and crew of five men had been saved and landed in Portland.

December 10, 1915.—PORTLAND (Me.) station notified cutter *Ossipee* that vessel had gone to leeward and required assistance. *Ossipee* left at once for the scene of distress. Coast Guard station at Popham Beach so notified. Naval stations Boston and Portsmouth informed of disaster. Later report received from U. S. S. *Conyngham* stated that she had picked up the boat and had it in tow, with life-saving crew and men aboard.

December 15, 1915.—PORTLAND (Me.) station broadcasted report that a two-masted schooner was anchored in dangerous position inside Seguin Island and wanted immediate assistance. Cutter *Ossipee* also notified, and she proceeded immediately. Message received from *Ossipee* for surgeon to meet her on arrival at Boothbay Harbor, as captain of the ship in distress, which proved to be the schooner *Irene T. Meservely* had been seriously injured. Report that ship was in tow and captain injured made to Coast Guard Division, Boston.

December 22, 1915.—TATOOSH ISLAND station received report from tug *Tatoosh* that barkentine *S. N. Castle* was in distress, flag flying half-mast, upside down. and 6 feet of water in her. Cutter *Snohomish* notified, which proceeded for the *Castle* to assist tug *Tatoosh*.

December 24, 1915.—TATOOSH ISLAND station notified cutter *Snohomish* that bark *Callao* was in distress. *Snohomish* proceed for *Callao*. Puget Sound Tugboat Co. also informed. Inquiry signal made for position of any tugs in vicinity, but no answer received. Report received December 26 showed *Snohomish* searching for the *Callao*.

December 27, 1915.—TATOOSH ISLAND station notified U. S. S. *Chattanooga* of report from Weather Bureau that three-masted schooner was whistling distress call, giving approximate position. Communication attempted with cutter *Snohomish*, but without success. Message relayed to Pachina Point, British Columbia, and reached *Snohomish;* also steamship *Chicago*. Waddah Point lifesavers rescued entire crew of eight men and reported name of ship as *Sausalito*. Ship lost, but lives saved.

January 14, 1916.—PORTLAND (Me.) station notified cutter *Ossipee* that three-masted schooner *Myrtle* was aground. *Ossipee* proceeded to assistance of the *Myrtle*.

January 22, 1916.—TATOOSH ISLAND station notified by steamship *Princess Adelaide* that gasoline launch and scow were broken down off Marrowstone Point. Notified cutter *Unalga*, requesting assistance be given. Message later received reporting *Princess Adelaide* with launch in tow and tug from Seattle assisting.

January 29, 1916.—PORTLAND (Me.) station informed cutter *Ossipee* of report from custom office, Portland, stating that 45-foot motor boat was ashore and owner requested assistance of cutter to float ship. *Ossipee* reported that she would proceed to assist motor boat at once. Boat was floated by *Ossipee* and Coast Guard Division notified.

February 11, 1916.—CAPE COD station received message from Block Port, Mass., that apparently a vessel was afire off Isle of Shoals. District superintendent of Coast Guard informed.

February 14, 1916.—CAPE COD station received message from Old Harbor that four-masted schooner had flag apparently union down at foremast head, snow squalls preventing good sight. Requested further information from Provincetown Coast Guard station. Reply stated weather stormy, sea rough, ship anchored, and snow squalls too rough for boat to row to shore; been there three days.

February 16, 1916.—KODIAK (Alaska) station received distress message from steamship *Pavlof*. Message relayed to *Pavlof* from steamship *Dora* offering to attempt to save lives, but stating *Dora* was unable to tow. *Pavlof* requested Kodiak to have launch come to take off crew if necessary; propeller on *Pavlof* lost; also requested Pacific-American Fisheries to send tug. Operator Kodiak asked by *Pavlof* to notify Cordova or Seward to send steamer to assistance. *Alameda* communicated with; proceeded to assistance and saved crew.

March 5, 1916.—BOSTON station notified cutter *Gresham* that unidentified barge was ashore and another at edge of breakers and a third barge and tug offshore unable to help.

March 7, 1916.—PORTLAND (Me.) station informed cutter *Ossipee* that a schooner was flying distress signals, giving approximate position; also notified division commander Coast Guard Service, Boston, and superintendent Coast Guard Service, Portsmouth, N. H.; also naval radio stations Portsmouth and Boston. Report received from *Ossipee* that crew of schooner had been rescued, but that *Ossipee* would be of no further assistance until weather moderated and vessel was lightered.

March 15, 1916.—PORTSMOUTH (N. H.) station received information from steamship *Millinocket* that schooner *William Beisby* needed assistance. Coast Guard Division, Boston and Portsmouth, notified.

March 16, 1916.—SAN JUAN station was informed by steamship *Macona* that she was ashore and required immediate assistance. Collector of customs was informed by San Juan and arrangements made for tug *Berwind* to go to assistance of the *Macona*. Vessel was floated and left for New York.

San Juan station at request of collector of customs broadcasted and requested the Ensenada station to broadcast a message requesting all vessels to look out for two-masted vessel *Criolla*. The *Criolla* was picked up and towed into port disabled.

March 16, 1916.—BOSTON station notified cutter *Gresham* that schooner *William Bisbee* was in distress. *Gresham* reported she was attempting to assist British schooner *Lawson*, which was ashore. Coast Guard Service at Provincetown and Boston informed. Steamship *Northland* reported that she was standing by until arrival of cutter to assist schooner *William Bisbee*. Boston notified *Gresham* that cutter *Ossipee* was in search of *Bisbee*. Cutter *Acushnet* later reported having the schooner *Bisbee* in tow.

March 16, 1916.—BOSTON station received report from cutter *Gresham* that British schooner *Lawson* had run ashore and was sending distress signal.

REPORT OF THE JUDGE ADVOCATE GENERAL.

DEPARTMENT OF THE NAVY,
OFFICE OF THE JUDGE ADVOCATE GENERAL,
Washington, October 1, 1916.

From: The Judge Advocate General.
To: The Secretary of the Navy.
Subject: Annual report of the Judge Advocate General of the Navy.

The past year has been a notable one in the operations of this office, in the direction of accomplishing much valuable work of a permanent and constructive character. Among the various items which this includes, the following are deemed particularly worthy of mention:

(*a*) The system of probation under suspended sentence introduced on trial during part of the previous year has been established on a permanent basis after fully demonstrating its merit. As a result, a reduction of more than 66 per cent has been effected in the number of men imprisoned under previous systems, the number of naval prisons has correspondingly been reduced, discipline has been improved, as is almost unanimously testified to by commanding officers, and at the same time a saving to the Government is assured of more than $850,000 each year in administering the penal system of the Navy. The number of courts-martial has been materially reduced, the number of discharges in an honorable status materially increased, and discharges in other than an honorable status have also materially decreased.

(*b*) A reduction of approximately 55 per cent has been accomplished in the average time—already short—elapsing between the confinement of an accused for trial by general court-martial and final disposition of his case. Except where length of record prohibits, all routine cases of general courts-martial convened in the United States are reviewed by the Judge Advocate General, acted upon by the Secretary of the Navy, and promulgated, upon date of receipt in the department, cases tried at the most distant stations in the United States, namely, on the Pacific coast, being promulgated by radio.

(*c*) Legislation has been secured amending the articles for the government of the Navy in various particulars in which they had become antiquated and inadequate for conditions resulting from the growth and present organization of the Navy. Defects in the former articles which tended to hinder the efficient administration of justice in the Navy and Marine Corps, produce needless delays and develop red tape principally by imposing an undue mass of detail upon commanders in chief or senior officers present, have

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being in type or ready for the printer. This work, which gives every indication of being the most important individual contribution to naval law that has been produced under our Government, should be ready for publication during the coming year.

(*j*) A course of practical instruction in military law was inaugurated at the Naval Academy by this office upon request of the superintendent, as part of the curriculum for the graduating year, the course consisting of lectures and moot court-martial work prepared by the officers and civilian lawyers in this office and conducted by them in four periods assigned by the superintendent. By these means, the general subject of military law was briefly covered and midshipmen were informed as to the object and jurisdiction of military courts, their relation to the civil law, how to keep the record of court-martial proceedings, how a trial should be conducted, the method of examining witnesses, and other salient features of the practical work falling under the jurisdiction of this office.. The reports received from the Naval Academy were enthusiastically favorable, and the superintendent urges a continuance of this method of military law training at the Naval Academy in future years.

(*k*) The subject of international law, which in the organization of the Navy Department had not previously been definitely provided for, has, upon my recommendation, been assigned by regulation to this office. In preparation for the new duties thus created, I required seven officers belonging to this office, including myself, to take a special course in international law at a local university. In addition, a retired officer has been assigned exclusively to the international law desk in this office, so that the Department will be afforded expert advice upon such matters, and the study of international law developed along lines most favorable from a naval point of view. This is the more important because of the fact that, as a result of the present European war, a vast amount of international law will be made and it is contemplated that, when required, the specialist in this office will be available to represent the Navy as a delegate at international conventions and conferences where it may be desirable to have someone able to speak with authority concerning naval subjects.

(*l*) Regulations governing internment of belligerent vessels in United States ports were framed by this office and, having received the approval of the Chief of Naval Operations and the General Board, are now in course of publication by the Department.

(*m*) Preparations have been made by this office with reference to the treatment of prisoners of war, including detailed arrangements for their internment, and the drafting of proposed regulations governing their care and custody.

(*n*) Preparations have also been made for the examination of various classes of officers and men who will enter the Navy immediately upon the outbreak of war, and for the detail of Reserve and Volunteer officers to permanent courts-martial to replace regular commissioned officers, who would be required, in the event of war, to proceed to their regularly assigned mobilization stations.

(*o*) Greater cooperation between the civil and naval authorities has been established to mutual advantage, with the result that this department has secured the utmost assistance of the Depart-

ment of Justice as well as State authorities in reference to cases in the civil courts involving the naval personnel, and has reciprocated by extending the maximum assistance to the civil authorities in cases where persons in the Navy are wanted for trial or as witnesses in prosecutions in the civil courts.

GENERAL WORK OF THE OFFICE.

The work of the Judge Advocate General's office is closely interwoven with the activities of every branch of the naval personnel. The office is officially acquainted with every officer appointed to the Navy or Marine Corps, either from civil life or from the enlisted personnel. This acquaintance commences with the officer's examination for appointment, and follows him throughout his career in the service, as he is examined for promotion from grade to grade; as questions arise concerning the emoluments to which he is entitled under the varying conditions of his service; as he encounters difficulties in the execution of his duties upon which he requires legal assistance; as he is, perhaps, brought to account before a court-martial or court of inquiry for his official or private misconduct; and finally as he appears before a retiring board upon becoming physically incapacitated for the arduous duties of his office; or, should he die in service, the cause of his death must be investigated by a board of inquest, followed perhaps by the more formal court of inquiry to determine whether or not his death was in line of duty or the result of misconduct on the part of himself or any other person in the Navy. This is necessary in order that the Department's records in his case may be closed and information obtained to determine whether his legal beneficiary may be paid the death gratuity and pension authorized by statutes, and whether disciplinary proceedings should be had against any member of the naval personnel for responsibility in connection with any matter developed by the inquiry as possibly contributing to the death.

The complete record of every officer in the Navy and Marine Corps, covering his entire career from his appointment to the termination of his active service, must be filed and preserved by the Judge Advocate General, whether the officer has been fortunate enough to enter the ranks of naval heroes or has had the misfortune to disgrace his uniform. This record embraces the officer's complete set of efficiency reports relating to every duty which he has performed in the service, the letters of commendation or reprimand which he has received, his examinations for appointment, promotion, and retirement, his trials by court-martial—in short, it is a complete history of the officer's career.

Similarly, in the case of the enlisted personnel, every question of a legal nature, extending from the recruiting to the discharge, promotion, retirement, desertion, or death of an enlisted man, is under the cognizance of the Judge Advocate General and must be submitted to him for opinion.

Likewise, all legislative matters relating to the naval personnel, from the drafting of statutes for submission to Congress to their interpretation and application to actual service conditions, are assigned to the Judge Advocate General, as are also all matters relating to naval courts and boards, the custody and discharge of prisoners or

their restoration to duty, applications for pardons, the relations existing between the naval and civil authorities, all matters of international law arising in the administration of the Navy, and a variety of other subjects of interest and importance to the service.

The duties of this office as briefly outlined in the above paragraphs are in intimate touch with the pulse of the service and directly affect the efficiency thereof. In accepting my appointment to the position of Judge Advocate General it was with the hope that I might effect certain improvements in matters falling under the jurisdiction of this office which my experience in the fleet had taught me were desirable. My previous experience with matters of a strictly technical nature as well as with those of a legal nature had impressed upon me the necessity of a modification of our laws in regard to administration of justice in order that they might conform to the recent remarkable growth and changes in the organization of the Navy; with the inadequacy of our naval publications in matters of legal procedure; with what I believed to be an unnecessarily expensive and cumbersome penal system; as well as with the necessity for the permanent assignment of international law and its allied features of an administrative nature falling under the jurisdiction of the Navy Department. It is therefore with satisfaction that I find myself able to report the successful accomplishment of the work which I had laid out for myself upon accepting my appointment.

The above paragraphs set forth in brief the achievements which have either taken place or have been completed during the past year. The other work of the office will be amplified under the following headings:

I. Administration of justice.
II. Officers' records.
III. Legislation.
IV. Legal questions, opinions, and decisions
V. International law.
VI. Miscellaneous.

I.

ADMINISTRATION OF JUSTICE.

This branch of the work of this office has been formed into a separate division of the office under the immediate charge of one officer, who has the exclusive assistance of several officers and clerks. This division handles all matters relating in any way to the administration of justice, commencing with the consideration of original reports against officers and enlisted men and passing through the various stages of investigation, the drafting of charges and specifications, preparation of cases for trial, the convening of courts-martial and making of changes in their membership, the reviewing of court-martial records, the drafting of action thereon, promulgation of sentences, imprisonment of offenders, and their restoration to duty or discharge from the service. It includes the administration of naval prisons and all correspondence relating in any way to the above subjects; also boards of inquest, courts of inquiry, boards of investigation, and the correspondence relating thereto. The work of this

division is estimated as approximately 40 per cent of the work of the office.

The statistical data relating to the number of trials, number of boards of investigation and inquest, etc., as well as the number of prisoners, detentioners, and probationers, are hereinafter set forth in full in tabular form under the heading "Data relating to the administration of justice," pages 183 to 195 of this report. The following remarks are intended to cover in a general manner the operations of this division apart from statistics:

PROBATIONARY SYSTEM, GENERAL ORDER 110.

In my last annual report I dealt at some length with the apparent results following the adoption, during the previous nine months, of the probationary system of punishment commonly referred to in the service as General Order 110. I indicated that, though this system had been in operation too short a time to permit of definite comparison of its results with those obtained under the detention system which it largely replaced, nevertheless it was confidently believed from the data at hand that it would prove an epoch-making step in progressive naval penology. Reports of commanding officers at that time forecast its overwhelming advantages from the viewpoint of economy, discipline, and humanitarianism. Toward the end of the past year, in reply to a circular letter, many suggestions were received as to minor changes in the system. These were all carefully studied by a board consisting of one officer of high rank from the Bureau of Navigation and another from headquarters of the Marine Corps, both of whom had had practical experience with this system in actual service, and a third officer, detailed from this office, who was familiar with all of the correspondence and recommendations which had been received from the service on the subject. After thorough deliberation General Order 110 was redrafted by this board. This revision, which received the department's approval, was not published until recently, because of the administrative advantage of obtaining data covering one uninterrupted year of operation of the former order, by which we could judge with accuracy the effect of this new system. The revision, which has now been issued, makes few radical changes, the majority of the changes being intended merely to remove petty defects and clarify various points in the old order.

RESULTS OF DISCIPLINARY OR DETENTION SYSTEM.

In connection with last year's report a special effort was made to obtain accurate data concerning the final results which had been obtained under the detention system. The history of all men who had been transferred to disciplinary barracks was traced and accurate data collected as to the percentages of men who were restored to duty and who "made good," that is, those men who were discharged in good standing or who remained in the service in good standing for six months after unconditional restoration to duty. As this data covered several years it indicated accurately the results which were accomplished by the former system.

RESULTS OF PROBATIONARY SYSTEM (GENERAL ORDER 110).

General Order 110 having been in operation throughout the entire fiscal year, the data contained in this report accurately sets forth the results of this system and furnishes data for accurate comparison with the detention system.

Comparing the results obtained from the reports of last year in regard to the detention system with the results obtained since the inauguration of the probation system, and remembering that approximately the same class of offenders are now placed on probation under suspended sentences that were formerly confined in disciplinary barracks, we have the following figures:

	Successful.	Unsuccessful.
	Per cent.	*Per cent.*
Former detentioners restored to duty	32.4	67.6
Probationers under General Order No. 110	34.56	65.44

The above statement shows that a somewhat larger percentage of probationers under General Order 110 have "made good" than was the case with former detentioners who were restored to duty. This means that under the present system the percentage of men who eventually "make good" is somewhat greater than was formerly the case when this same general class of offenders were sent to the disciplinary barracks and subsequently restored to duty after a term of nonproductive confinement. The result of this has been a steady further decrease in the number of naval prisoners, in the number of naval prisons, in the number of prison guards, and in the consequent expenses for this feature of naval administration. All of the above results would be vain and fruitless had they been obtained at the expense of discipline. It is therefore pertinent to examine that feature through the eyes of the commanding officers who have reported thereon. The effect of General Order 110 upon the discipline of the service was clearly set forth in last year's report, which stated in referring to the 125 replies of commanding officers concerning the effects of this order upon discipline:

As a final summary of these letters received to date, it may be stated that every reply from commanding officers of marines expressed the opinion that the order had had a beneficial effect upon discipline, or that it had reduced the offenses of unauthorized absence and drunkenness, several officers furnishing statistics of their commands as a basis for their opinion. Of more than 100 replies from flag officers and commanding officers of vessels only four expressed themselves adversely, while the remainder varied from noncommittal replies in the cases of two or three, through various stages from slight commendation to unqualified praise of its beneficial effect. Fully 90 per cent of the letters from commanding officers of vessels contained statements such as, "effect good," "most excellent in every respect," "absence over leave reduced to practically nothing," "most excellent; will go a long way toward stopping absence over leave," "effect very desirable," "excellent," and "has done much good." It is fair to state that the younger commanding officers appear most enthusiastic, while from the captains of battleships three adverse and three noncommittal replies were received.

The general improvement in discipline, which, in a measure, is due to the operation of General Order No. 110, will be seen from the following table. The term "premature discharge" includes men whose con-

nection with the service was severed under such circumstances as to preclude their being allowed to reenlist; i. e., such as "ordinary discharges, not recommended for reenlistment," discharged as undesirable, for inaptitude, or by medical survey as unfit for the service, etc.

	Navy.		Marines.	
	1916	1915	1916	1915
Discharged in honorable status at expiration of enlistment	10,284	8,714	1,960	1,582
Discharged as undesirable for inaptitude or with ordinary discharge not recommended for reenlistment	756	1,075	161	339
Discharged with dishonorable discharge	1,000	1,033	187	192
Discharged with bad conduct discharge	2,296	2,728	487	762
Total number prematurely discharged	4,052	4,836	835	1,293
Excess of premature discharges occurring in 1915 over 1916	.....	784	.....	458
Total deserters for fiscal year	1,681	1,730	659	891
Total number of men handled during fiscal year	72,885	71,511	13,887	13,953

From the foregoing it will be observed that though 1,308 more men were handled during 1916 than during the previous year, there has been a decrease of a total of 1,251 "premature discharges," viz, 784 Navy and 458 Marines, this decrease in spite of the abnormal demand for labor and corresponding inducements for enlisted men to seek lucrative employment in civil life. There has been a decrease of 1.4 per cent of desertion in the Marine Corps and 0.46 per cent in the Navy, and an increase of 1,848 (or 18 per cent) of men discharged in an honorable status as compared with the previous year.

The records show that in April, 1914, shortly before General Order 110 became effective, there were 1,835 naval prisoners of all classes; at the present date there are only 620, making a reduction of 1,215 in the number of naval prisoners.

Since April, 1914, the following penal institutions have been closed: Naval prison, navy yard, Boston, Mass.; U. S. S. *Philadelphia*, and U. S. S. *Topeka*, which have been wholly abandoned as prison ships and returned to other duty in the Navy; and the disciplinary barracks, Port Royal, S. C., and Puget Sound, Wash.

The only naval prisons remaining in operation are: The naval prison, Portsmouth, N. H., the naval prison, Mare Island, Cal., and the U. S. S. *Southery*, as a detention ship at Portsmouth, N. H.; the naval prison, Cavite, P. I., being used as a clearing house for prisoners tried on the Asiatic station. The *Southery* is used as a detention barracks for about 60 offenders whose sentences have been mitigated to detention and as a segregation camp for prisoners before they are transferred to the prison ashore; also a limited number of prisoners are kept on board for the performance of certain work under the direction of the commanding officer. However, the use of the *Southery* could and should be dispensed with in so far as her services are required for this work, such use of her being made for this purpose solely because she is also employed as a receiving ship at the navy yard, Portsmouth, N. H. If the department should deem it advisable to dispense with the services of the *Southery* as the receiving ship, I deem it highly desirable and advisable and do so recommend that the prisoners now confined on her be transferred to the

prison ashore, wherein there are ample facilities for their accommodation at a reduced cost both in actual expenses and in the number of guards required; the detentioners at present under instruction and observation could be either restored to duty unconditionally on probation or discharged in accordance with the terms of their sentences as their records, etc., appear to warrant. Henceforth naval prisoners who appear to be desirous of rehabilitating themselves and who have completed a portion of their sentence in the naval prisons could either be restored to duty unconditionally or on probation subject to the provisions of General Order 110.

The abolishment of the detention system on the *Southery* would result in the saving of several thousand dollars annually, and it is believed that the same results would obtain from the handling of the present population of the *Southery* as outlined above.

In addition to the above, a small number of naval prisoners are confined at the navy yards at Norfolk, Philadelphia, and Puget Sound, and at the marine recruit depot at Port Royal, S. C. These are not naval prisons, but a limited number of prisoners are kept at these stations and cared for and guarded by the regular marine guard for the benefit of the police duty that they perform.

In regard to the saving in expense: The prison account for the fiscal year 1913 showed an expenditure of $1,190,514 39; in 1914, $822,923.03; in 1915, $643,461.34; and the account for the fiscal year 1916, while not completed, is sufficiently so to show that the cost of prisons under the present system of discipline is at the present time at the rate of approximately $350,000 per year, and this could immediately be further reduced to $300,000 per year if the detention system on the *Southery* be abolished and that vessel be returned to such general service as she may be best fitted to perform. (The actual cost for the fiscal year 1916 will be in excess of this because during a portion of that year it was necessary to maintain the disciplinary barracks at Port Royal and the U. S. S. *Philadelphia*, the combined annual expense of which was approximately $250,000.) A monetary saving of $850,000 per year is thus shown for the system, besides certain other expenses which are saved but which do not appear, such as transportation for prisoners and guards between stations, unusual medical treatment, etc. The marine guard at prisons has been reduced from 23 officers and 849 men in 1913, to 7 officers and 326 men in 1916.

If the above-mentioned reductions in prisons and expenses had been effected at a sacrifice to the discipline of the service I would most certainly feel that they were not of value. However, in view of the almost unanimous verdict of the service, as well as the data in regard to desertions, discharges, etc., as set forth above, that the system of probation under suspended sentence has resulted in improving discipline, I point with pride to the above enumerated results accomplished by this reform.

RECENT LEGISLATION AFFECTING ADMINISTRATION OF JUSTICE.

The act approved August 29, 1916, contained several items to which attention is specially invited. It had for some years been apparent that the Navy as an organization had outgrown the original "Articles for the government of the Navy," especially with reference

to the officers who were authorized to order and approve courts-martial, courts of inquiry, etc. The old Articles contained no adequate authority for officers in command on shore to discipline the men under their command and were otherwise defective. In the act approved August 29, 1916, Congress enacted provisions which are more elastic and efficient in these particulars. In exceptional cases the Secretary of the Navy is empowered to authorize commanding officers to order courts which they would not otherwise be authorized to convene. Marines embarked on a naval vessel as a separate organization bear the same relation to the commanding officer under the new law as they bore under former laws to the commandant of a naval station. Officers authorized by law to convene general courts-martial are under the new laws authorized to convene courts of inquiry, and action upon summary courts-martial may now be taken by the convening officer's immediate senior in command present instead of by the senior officer present. Finally all officers of the Navy and Marine Corps who are authorized to order either general or summary courts-martial may under the new laws order deck courts upon enlisted men under their command and are given the same authority to inflict minor punishments as is conferred by the Articles for the government of the Navy upon the commander of a naval vessel. During the recent session of Congress there was also enacted a law under which definite provision is made for the trial of marines and personnel of the Medical Department of the Navy for offenses committed while detached for service with the Army, thereby remedying the lack of jurisdiction mentioned in my last report which was discovered in the case of a marine after his return to the Navy charged with an offense committed while under Army jurisdiction.

The naval appropriation act also contains legislation which should have a material bearing upon desertion. The following is quoted:

> *Provided*, That any person who may hereafter enlist in the Navy for the first time shall, in time of peace, if he so elects, receive discharge therefrom without cost to himself during the month of June or December, respectively, following the completion of one year's service at sea. An honorable discharge may be granted under this provision; but when so granted shall not entitle the holder, in case of reenlistment, to the benefits of an honorable discharge granted upon completion of an enlistment: *And provided further*, That, at the time, he is not under charges, or undergoing punishment, or in debt to the Government: * * *

In view of this provision, there would seem to be absolutely no excuse in the future for any man to desert, as it practically authorizes any man to demand his discharge in any month of June or December, following one year's service, if he is not under charges or in debt to the Government.

Another feature in this act which renders it easier for any enlisted man to obtain his release from service is the following:

> The Secretary of the Navy is hereby authorized to grant furlough without pay to enlisted men for a period covering the unexpired portion of their enlistment: *Provided*, That such furlough be granted under the same conditions and in lieu of discharge by purchase or by special order of the department. * * *

Under this paragraph an enlisted man may obtain a furlough without pay for the unexpired portion of his enlistment under the same conditions which under the former laws authorized his discharge by purchase. It would seem that these two provisions of the bill should put an end to desertion by men who are not mental defectives.

DEFECTIVES.

Though the examination of prisoners is continued with much the same results as heretofore noted, no test has been developed of sufficient accuracy to be of very great practical use in recruiting in the direction of keeping out of the Navy those defectives who eventually find their way to prison.

CLEMENCY LETTERS.

As stated in previous reports from 1 to 10 letters imploring clemency are received in the case of practically every man who is court-martialed for offenses of a serious nature. As stereotyped replies to such requests are not desirable, a heavy burden of correspondence results. Many of these letters base the plea for clemency on the ground of alleged destitution of the prisoner's dependents. All such cases are thoroughly investigated with the assistance of charitable organizations in the various cities, and in deserving cases, a certain amount of relief, when practicable, is extended to dependents of prisoners who would otherwise become a public charge. In numerous cases where the prisoner is not in a pay status and it would be prejudicial to discipline to liberate him without punishment, it is necessary to permit his dependents to endure the inconvenience which his misconduct has caused them.

PRISON LABOR.

At various times during past years prisoners have been employed in useful labor which would be remunerative to the Government. During my incumbency in office I have made many recommendations in favor of this practice, but with experience I now realize the uselessness of such recommendations owing to the opposition developed to the employment of Federal prisoners in competition with ordinary labor. For that reason the field for employing prisoners is exceedingly limited. During the past year a joint resolution was adopted by Congress providing for a special joint commission of the Senate and House of Representatives to investigate the employment of Federal prisoners in industrial occupations for the benefit of the Government of the United States. As there is no possible doubt that the employment of prisoners for practical work which would at the same time teach them a trade and be remunerative to the Government would be mutually beneficial to them and to the Government, it is hoped that through the means of this commission we may in the future be enabled to employ naval prisoners upon useful labor. Work such as is done in rigging lofts, manufacturing coal bags, hammocks, puddings, mats, pendants, etc., could readily be done at naval prisons and the men thus taught a useful and remunerative trade while confined. A stockade is now well advanced in construction at the Portsmouth Prison which will permit of such employment of prisoners without guard, and will also afford them needed recreation. This very extensive work has been done exclusively by prison labor.

REDUCTION IN TIME OF TRIALS.

A special effort has been made to reduce the period of time elapsing between the first report against an accused and the final completion of his trial and commencement of his confinement in cases of conviction and sentence involving imprisonment. The following table shows the marked improvement made in this feature:

Trial of general court-martial cases at the navy yard, New York.

	Number of cases cited.	Average number of days elapsed from—			
		Date confined to receipt of charges and specifications.	Receipt of specification to trial.	Trial to final disposition.	Confinement to final disposition.
July	35	14	4	10	28
August	24	12	7	12	31
September	19	15	8	10	33
October	26	13	8	10	31
November	19	11	11	12	34
December	27	5	5	11	21
January	30	6	4	10	20
February	27	5	3	6	14
March	17	4	2	6	12
April	15	5	2	6	13
May	23	5	3	9	17
June	30	6	2	6	14

	Days.
Average time during first 5 months from date confined to final disposition	31½
Average time during last 5 months from date confined to final disposition	14
Reduction in average time (55 per cent)	17½

Except in special instances, all cases are reviewed, approved, and promulgated upon date of receipt in the department, cases tried on the west coast being promulgated by radio. The reduction in the period of confinement preceding trial has been due in a great measure to the fact that the return of deserters and stragglers to naval jurisdiction is now reported by radio or wire instead of by letter, as was previously the practice. In order to accomplish the final improvement, as shown in the last column above, it was necessary to analyze delays as given in the first three columns and reduce each separately. Lack of absolute uniformity in all cases must necessarily exist due to greater length of time required for the preparation of cases received from the west coast, occasional unusual delays due to an accused not being ready for trial, and in exceptional cases to a lengthy case causing congestion of the docket. Aside from the benefits from a humanitarian point of view in so greatly reducing the average length of time prior to trial and imprisonment, the monetary saving to the Government during the course of a year is considerable.

CLASSES OF PRISONERS.

At the present time naval prisoners are divided into four general classes, as follows:

I. *Criminals.*—These are men whose offenses involve moral turpitude. Such men are by special arrangement confined in the State

prisons of New Hampshire, Connecticut, Pennsylvania, and California.

II. *Naval prisoners.*—These are men convicted of purely military offenses; they wear the prison garb and perform hard labor, but if their conduct and attention to duty justify clemency, an opportunity is afforded the deserving—subject to certain conditions—to secure mitigation and obtain their restoration to duty through the detention system.

III. *Detentioners.*—These are offenders who are less than 21 years old, or who have worked through a naval prison and whose sentences have been mitigated to detention as indicated in the preceding paragraph. These men wear the uniform of their rating in the service, and in lieu of hard labor undergo drills and exercises and receive instruction to better qualify them for their continuance in the service if restored to duty. The work required of them is only such as might be required of any enlisted man in good standing.

IV. *Probationers under suspended sentence.*—These are men convicted by general or summary court-martial of military offenses and sentenced to discharge from the service, the execution of which sentence has been suspended for a probationary period. Instead of such men being sent to disciplinary ships or barracks as heretofore, they are restored to duty in the service at large for a limited length of time. One-half of their pay is withheld each month, but is ultimately paid them if their conduct during the remainder of their enlistment entitles them to an honorable discharge. These men while on probation are in all respects, except for the withholding of half pay, in the same status as other enlisted men.

II.

OFFICERS' RECORDS.

Under this heading may be grouped the examination of all officers of the Navy and Marine Corps, preliminary to promotion and retirement, the examination of candidates for appointment as commissioned officers, the convening and dissolving of examining and retiring boards, the reviewing and filing of records of proceedings, and the conducting of all correspondence relating thereto.

In this connection, there has recently been assigned to this office the above-mentioned duties in regard to the examination of candidates for appointment as warrant officers as well as commissioned officers. Inasmuch as the act of August 29, 1916, established a National Naval Volunteer force, whose members may be called forth into the service of the United States in time of an emergency without further examination, it is recommended that the examinations for their admission to commissioned and warrant grades be handled in the same manner. It is believed that, by thus having the examination preliminary to appointment of all officers of the various branches and corps of the regular establishment, militia, reserve force, and volunteers under the supervision of one office, greater uniformity and efficiency will obtain and the department can be assured that the legal requirements are complied with.

Since 1912, this branch of the work has nearly doubled, and, due to the operation of recent legislation which provided for large increases in personnel, the creation of a Naval Flying Corps, officers for engineering duty only, reorganization of the Naval Dental Corps, and the Navy Dental Reserve Corps, Naval Reserve Force, and Marine Corps Reserve, the volume of this branch of the work will be constantly increasing, so much so that despite the recent additional force assigned to this branch of the work, a further increase in personnel and more space for the filing of officers' records where they will be readily available for reference will be necessary in a very short time. This additional work is all new but is necessary to efficient preparation and should therefore be welcomed as a direct evidence of progress, rather than shunned as unnecessary paper work.

The following tables show the operations of the office under this head during the fiscal year:

EXAMINING BOARDS.

Officers of the Navy:	
Records revised	339
Failed professionally	9
Failed professionally and morally	1
Failed physically	24
Action on cases suspended	10
Failed morally	2
Qualified for promotion	293
Paymaster's clerks and former paymaster's clerks examined for appointment as acting pay clerks, pay clerks, and chief pay clerks, under the act of March 3, 1915:	
Records revised	74
Failed professionally	2
Failed physically	6
Failed morally	2
Qualified for appointment	64
Officers of the Marine Corps:	
Records revised	56
Failed physically	3
Action on cases suspended	6
Qualified for promotion	47

RETIRING BOARDS.

Officers of the Navy:	
Records revised	62
Retired	44
Fit for duty	3
Incapacitated, but continued on active duty	3
Incapacitated, sick leave, and reexamination	9
Incapacitated, not incident to service	3
Officers of the Marine Corps:	
Records revised	4
Retired	2
Incapacitated, sick leave, and reexamination	2

EXAMINING BOARDS OF CANDIDATES FOR ADMISSION TO THE NAVY AND MARINE CORPS AS OFFICERS.

Line:	
Records revised	8
Failed professionally	1
Qualified for appointment	7
Civil Engineer Corps:	
Records revised	2
Qualified (ensigns examined for appointment as assistant civil engineers)	2
Construction Corps:	
Records revised	7
Qualified (ensigns examined for appointment as assistant naval constructors)	7
Medical Corps:	
Records revised	20
Failed professionally	6
Failed physically	1
Qualified for appointment	13
Pay Corps:	
Records revised	119
Failed professionally	64
Failed physically	23
Failed morally	1
Qualified for appointment	31
Dental Corps:	
Records revised	28
Failed professionally	2
Failed physically	7
Withdrew	2
Qualified for appointment	17

Chaplains:	
Records revised	16
Failed physically	6
Qualified for appointment	10
Medical Reserve Corps:	
Records revised	102
Failed professionally	33
Failed physically	34
Qualified for appointment	35

RECORDS REVISED.

Examinations for promotion, Navy and Marine Corps	459
Examinations for retirement, Navy and Marine Corps	66
Examinations for admission, Navy and Marine Corps	302
Grand total	827

III.

LEGISLATION.

The Navy Regulations require this office to conduct all correspondence for the Department with both Houses of Congress and with the President concerning proposed legislation relating to the personnel of the Navy and Marine Corps and to draft all proposed statutes on this subject.

The work under this head during the past fiscal year was more than double that of the previous fiscal year and, as anticipated in my last annual report, much difficulty was encountered in handling it expeditiously, this being accomplished only by daily work long after regular office hours.

In view of the fact that the interpretation of statutes relating to the personnel of the Navy and Marine Corps is part of the work of this office, the regulation assigning the drafting of legislation concerning such matters to this office is not only logical, but essential to efficiency, as otherwise confusion and unsatisfactory results as well as much extra work are to be expected.

The drafting of legislation in apt language so that intent and result may harmonize is a special art acquired only by long experience in drafting and interpreting laws. In order that the draft may accurately express the desired meaning and, at the same time, not repeal or undesirably affect existing law, it is essential that the draftsman possess a thorough knowledge of all existing statutes which might be affected by the proposed law, an intimate knowledge of the subject matter with which he is dealing, and be thoroughly familiar with the accepted canons of statutory interpretation. Otherwise the result will most probably be incomplete and inadequate legislation, not infrequently involving a conflict with or repeal of important laws which it was not desired to modify. The necessity for a knowledge of the fundamental principles of the rules of interpretation and construction of statutes on the part of one drafting a bill needs no argument; if the construction which the draftsman of a proposed law places upon it can not be sustained by the established canons of statutory interpretation, it is manifest that his bill, if enacted into law, will not only not accomplish the object which he intended, but may even accomplish something which is actually very undesirable. It is not understood by many who irresponsibly draft proposed laws, that statutes are interpreted not by what the draftsman intended to

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The following tables show the operations of the office under this heading and the status of various measures relating to the Navy:

Senate and House bills, joint resolutions, and proposed amendments referred to the department for recommendation.

Senate bills, etc.:	
Private—	
Favorable action recommended	3
Unfavorable action recommended	43
Answered, no recommendation made	3
Total	49
Public—	
Favorable action recommended	3
Favorable action recommended, with amendment	6
Unfavorable action recommended	6
Answered, no recommendation made	5
Total	20
Total Senate bills, etc., referred	69
House bills, etc.:	
Private—	
Favorable action recommended	1
Favorable action recommended, with amendment	1
Unfavorable action recommended	26
Answered, no recommendation made	3
Total	31
Public—	
Favorable action recommended	2
Favorable action recommended, with amendment	1
Unfavorable action recommended	2
Answered, no recommendation made	3
Total	8
Total House bills, etc., referred	39
Statutes, etc., drafted:	
Public bills or amendments thereto drafted and submitted to Congress	39

The following legislation, recommended or approved by the department, in addition to that enacted in the Naval Appropriation Act, has been enacted since June 30, 1915:

H. R. 9224. "An act providing for an increase in number of midshipmen at the United States Naval Academy." (Approved Feb. 15, 1916.)

H. R. 12835. "An act to authorize and empower officers and enlisted men of the Navy and Marine Corps to serve under the Government of the Republic of Haiti, and for other purposes." (Approved June 12, 1916.)

The naval appropriation act, approved August 29, 1916 (H. R. 15947), contains the following new legislation relating to the personnel:

Interned persons and prisoners of war; provides for their necessary expenses while under the jurisdiction of the Navy Department, and for the treatment of those who may become insane in the Government Hospital for the Insane.

Chief of naval operations; gives rank and title of admiral to officer so serving; prescribes his authority and pay; provides for the detail of officers to assist him in the performance of his duties, and for his rank on retirement.

Assistants, statutory, provided for the chiefs of the Bureaus of Yards and Docks and Construction and Repair, and for the Judge Advocate General.

Discharge, enlisted men; authorizes the discharge of enlisted men under certain circumstances after one year's service at sea.

Recruiting; authority to employ advertising agencies to obtain recruits authorized; and the President is authorized to utilize the services of postmasters in procuring the enlistment of recruits.

Detail of not exceeding four naval officers to the hydrographic office authorized.

Navy yards, etc.; authorizes the Presi
investigate and report as to the location
stations and submarine and aviation base
any of those now existing.

Gratuity, six months'; provides that
therefrom.

Gratuity, six months'; payment of auth
Mrs. Eliza Orr.

Hospital Corps, reorganization; provide
Hospital Corps; that officers and enlisted
serving with a body of marines detached
serving, be subject to the rules and artic

Dental Corps; reestablished and reorg
who shall have lost numbers on the Nav
upon examination for promotion shall b

Dental Reserve Corps; organization of

Authorized enlisted strength of the N
is authorized, in time of national emerg
apprentice seamen increased to 6,000; an
shall be exclusive of those sentenced by

Machinists; the President is authori
necessary.

Ratings, designations changed; that
and that of ordinary seaman to seaman

Printers; authorizes the establishme
chief printer, and the advancement of

Storekeeper; rating of, established in

Midshipmen; number of appointme
Navy increased to 15 and 25, respectiv

Filipinos, not exceeding four, ma
Naval Academy, provided that they
in the United States Navy by reason.

Personnel, commissioned; provid
and a proportionate distribution in
missioned officers of the active list
ances according to rank and lengt
made in the corps of professors o
warrant officers shall be increased
of commission, and that they sha
ensigns, and be allowed such
officers of the Navy.

Promotion by selection esta
captain, and rear admiral of
of those officers who fail on
1920, no captain, command
has had not less than two
age in each case; that
come ineligible for prom
their shore duty pay for
to 64 years.

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Telephone rentals; payment of, authorized in certain cases where they had been disallowed.

Accounts. The accounting officers are authorized to make certain credits in the accounts of the following named officers: Paymaster George R. Crapo, Passed Assistant Paymaster James C. Hilton, and Paymaster T. D. Harris, U. S. Navy.

Little, Harold H., Ensign, U. S. Navy; examination and promotion to lieutenant (junior grade) authorized.

Hodapp, John D. P., Assistant Paymaster, U. S. Navy; earlier date of appointment as assistant paymaster authorized.

Salaries; receipt of two from the Government prohibited, with certain exceptions.

Administration of justice; authority to convene general and summary courts-martial, deck courts, and courts of inquiry extended.

Disciplinary authority of officers of a force of marines embarked on a naval vessel as a separate organization defined and enlarged.

Naval Reserve Force; establishes a Naval Reserve Force to consist of six classes designated as follows: The Fleet Naval Reserve, the Naval Reserve, the Naval Auxiliary Reserve, the Naval Coast Defense Reserve, the Volunteer Naval Reserve, the Naval Reserve Flying Corps.

Marine Corps Reserve; establishment of, authorized.

Naval Militia, retainer pay for; provides retainer pay for the Naval Militia, and that Government department employees shall receive their regular pay in addition thereto when attending drills, etc.

National Naval Volunteers; the organization and service of a force to be known as the National Naval Volunteers is provided for.

Coast Guard; provides for the jurisdiction, discipline, expenses, etc., of the Coast Guard when operating as a part of the Navy in time of war.

Lighthouse Service; transfer of personnel and material to the jurisdiction and service of the Navy Department in time of national emergency provided for; that the Secretary of the Navy, the Secretary of War, and the Secretary of Commerce shall jointly prescribe regulations for that service in times of peace and war

Retired officers; transfer of, to the active list authorized under certain conditions.

Professors and instructors at the Naval Academy, number and pay of, left to the discretion of the Secretary of the Navy.

Board of Visitors to the Naval Academy, appointment of, provided for.

Marine Corps; provides for increases in the commissioned and enlisted strength, and a partial reorganization of that corps; for the eventual amalgamation of the line and staff; that the Major General Commandant shall be appointed from officers not below the rank of colonel; authorizes the President to reinstate certain former officers of the Marine Corps; establishes warrant grades of marine gunner and quartermaster clerk; makes certain provisions as to retirement of officers for age and length of service; authorizes the President to transfer to the active list certain retired officers; makes sections 1493 and 1494 of the Revised Statutes, relative to promotion, applicable to the Marine Corps; provides for loss of numbers in lieu of suspension from promotion in case of failure on professional examination; that the number of enlisted men in the Marine Corps shall be exclusive of those sentenced to discharge; for an increase in pay for the Marine Band, and prohibits competition of individuals of the Marine Band with civilian musicians.

Camps of instruction; establishment and conduct of, authorized.

Leave, thirty days' annual, with pay, granted to employees of navy yards, gun actories, etc.

The following bills relating to the personnel, which were referred to the department by Congress for comment, have been recommended by the department for favorable consideration, but did not become law during the last Congress.

S. 833. To provide that petty officers, noncommissioned officers, and enlisted men of the United States Navy and Marine Corps on the retired list who had creditable Civil War service shall receive the rank or rating and the pay of the next higher enlisted grade.

S. 1807. To reinstate Elwin Carlton Taylor as a passed assistant surgeon in the United States Navy.

S. 3020 and H. R. 9946. Waiving the age limit for admission to the Medical Corp of the United States Navy in the case of John B. Bostick.

S. 3421. To promote the efficiency of the Navy and, to such end, to secure due respect to the uniform thereof.

S. 6446 and H. R. 16558. To amend the Act of Congress approved February 1, 1890, entitled "An Act to provide certificate of honorable service to those who have served in the United States Navy or Marine Corps who have lost their certificate of discharge."

S. 6557. To establish an aerial coast-patrol system and for the education and training as aviators of the aviation section of the Naval Militia of the several States.

H. R. 8277. To reinstate Arthur Hubesty Turner as a second lieutenant in the United States Marine Corps.

The following proposed legislation which was initiated by the department but which has not been disposed of by Congress is still pending:

To prevent discrimination against the uniform.

To empower officers on foreign stations to order examining boards.

Institution of admiralty proceedings abroad, authorizing officers to employ counsel under certain circumstances.

Relief of enlisted men who lost money by reason of the defalcation of former Paymaster's Clerk T. N. Carter.

To prevent the disclosure of national defense secrets.

To prevent the having or selling of false discharge certificates.

To preclude the enlistment of men engaged in the manufacture of military supplies in any organized militia force.

To establish warrant grade of pay clerk in the Marine Corps.

To make petty officers eligible for appointment as second lieutenants in the Marine Corps.

To increase the rank of the Judge Advocate General.

IV.

LEGAL QUESTIONS, OPINIONS, AND DECISIONS.

The strictly legal work of this office, as stated in my last annual report, embraces a very wide field, including every question of law which arises with reference to the personnel of the Navy and Marine Corps, both in connection with internal administration and relation to the civil authorities. This branch of the work necessarily increases with the growth of the Navy and Marine Corps, and the establishment of reserve forces for use in time of war. As the various questions embraced by this branch of the work intimately concern the operations of the service in every field and frequently cause delay in official action pending the interpretation of the law by this office, every effort is made to prepare the necessary legal opinion in each case with the greatest possible expedition consistent with such complete thoroughness as the importance of the question presented and its value as a precedent for future guidance demand.

In this connection it is believed to be of no little significance that in only one case handled by this office during the year was it considered necessary by the department to request an opinion of the Attorney General upon the question involved, and in that case the Attorney General's opinion when rendered fully sustained the opinion previously expressed by this office.

It is perhaps needless to remark that this branch of the work is in a special manner greatly aided by the legal publications which have recently been completed or are in course of preparation by this office. The ready reference thus afforded to previous decisions facilitates to a marked degree the expeditious and accurate handling of current questions constantly presented for decision. Particularly has it been found that the work of compiling the "Laws Relating to the Navy, Annotated," which is being done by the senior law

clerk of this office gives him a grasp upon the statutes and decisions relating to the Navy which makes it possible for him to prepare for my action in the briefest time cases which would otherwise require extensive study and research. The advantage of this, not only to the office but to the service generally, is apparent.

V.

INTERNATIONAL LAW.

The beginning of the present European war gave rise to numerous international questions of vital interest to the Government, particularly to the Navy, and accentuated the fact that in the organization of the Navy Department the definite assignment of questions relating to international law had not been provided for. Realizing that such work would naturally fall to this office, last year I required seven officers on duty herein, including myself, to take a special course in international law at a local university. in connection with the regular law course or as post graduate work.

In view of the general character of the work in this office, its library facilities, and the above preparation, numerous questions of international law arising out of the present war were referred to this office prior to the establishment of the "Joint Neutrality Board." The research and study incident to answering these questions disclosed the fact that, despite the marked foresight that had been displayed by European countries in their preparations for war, many of them had neglected to prepare for matters involving international relations, both neutral and belligerent; with certain nations these were apparently the only matters that had been neglected. Aside from the broad subject of the education of the personnel in the laws of war and international obligations, it appeared that advance preparations to receive and properly care for prisoners of war had been generally neglected. From the very beginning of the conflict, serious complaints and protests were made by the several belligerents in regard to the unnecessary hardship and suffering among prisoners of war; this was undoubtedly due to the large numbers of prisoners captured early in the war and to the inadequate advance preparation for their detention. Charges and countercharges were made of cruel and brutal treatment and measures of retaliation were resorted to on both sides.

Finding, in the course of the above-mentioned study, that our own Navy Regulations were absolutely silent as to the responsibility for detaining prisoners of war, and realizing the seriousness of the subject and the amount of time necessary thoroughly to prepare regulations and instructions governing their treatment, as well as the considerable preparation in a material way necessary to provide for them, I suggested, in November last, that in order to prevent a situation in this country in the event of war similar to that which had been reported abroad, the subject of international law, including the treatment of prisoners of war, be definitely assigned by regulation. I pointed out the extensive nature of the work involved in the preparation of instructions and recommended that some plan be worked out in detail immediately and kept ready for use, so that in the event of war prison camps could be promptly established without confusion.

[illegible]

Naval Operations to the General Board for comment, which board returned same with the statement that they seemed to cover all phases and situations of the subject, and recommended that, with certain minor changes, they be approved and promulgated. The department has approved these regulations, which are now in press and will soon be issued.

NAVAL JURISDICTION OVER BELLIGERENT VESSELS IN UNITED STATES WATERS.

During the study of the subject of internment I became firmly of opinion that jurisdiction over belligerent vessels of war visiting waters under the jurisdiction of the United States properly belonged to the Navy Department, rather than to the Treasury Department, during the entire time of such visits, and recommendation was made accordingly. This question was referred to the Treasury Department, which department heartily approved of the procedure recommended. Under agreement with the Treasury Department the Navy Department now has exclusive charge of visiting belligerent vessels of war and of controlling their movements and activities while in the territorial waters of the United States, as well as supervision over them, their officers, and crews in case of internment. Instructions for the information and guidance of officers on this duty, framed in this office, have been approved by the department and are now being prepared for issue.

INTERNATIONAL QUESTIONS ARISING OUT OF THE PRESENT WAR.

Besides the work outlined above, many questions arising out of the present war, such as interference with United States mail, attempts by belligerents to board naval auxiliaries, the exercise of visit and search in the United States territorial waters, violations of radio neutrality, etc., have been referred to this office for comment and advice. The study of international law is now assigned by regulation to the Office of the Judge Advocate General, and the facilities of the office are constantly being improved with a view to giving the department the best information available on any question of international law that may arise.

In order that the knowledge and study of the officer assigned to this work may not be lost to the department by his detachment on the outbreak of war, I recently adopted, and recommend that it be continued, a policy that a retired officer be regularly assigned to the international law desk in this office, since he will most probably not be disturbed at that critical time when the department needs his knowledge and experience most. The establishment in the department of this desk devoted to the exclusive study of international law is believed to be of far-reaching importance, not only in affording it an expert adviser on such matters, but in aiding the development of international law along lines most favorable from a naval point of view. Its occupant should be of such experience that he can represent the Navy and the United States, if so desired, as a delegate at international conventions and conferences and speak with authority concerning naval matters.

The work already accomplished in regard to the subjects of internment and prisoners of war is of the highest importance and may be taken as indicative of the future usefulness of this desk.

VI.

MISCELLANEOUS.

LEGAL PUBLICATIONS.

Work upon the compilation of the various publications mentioned in my last report is rapidly approaching completion. The state of completion of each is shown in the following paragraphs:

(*a*) "Laws Relating to the Navy, Annotated": Work upon this most valuable compilation has been continued uninterruptedly by the senior law clerk of this office outside of office hours, pursuant to the Senate's resolution by which it was authorized. It had been hoped that it would be published by this date, but its completion has been delayed due to very many changes in laws which it was desirable to incorporate therein, and particularly to the fact that the scope of the work has been greatly extended beyond the original plans. The additional time thus required for the completion of the book will be more than justified by its increased value when finished, which can hardly be overestimated. Something more than 600 pages have been completed and are now in type or ready for the printer. It is fully expected that this very valuable work will be completed and published during the coming year.

(*b*) "Naval Courts and Boards:" The completion of this work, which was in galley proof in the early part of this year, has been purposely delayed in order to incorporate the various new enactments relating to discipline which I was confident would be enacted at the recent session of Congress. The work is now being completed and should be published to the service coincidently with or soon after this report.

(*c*) "Index-Digest": An Index-Digest for 1915 was published similar to that of 1914, and about 200 copies of the complete files of orders were bound and issued to the various ships, commanders in chief, permanent courts, marine barracks, etc. These index-digests have proved invaluable to naval courts, in affording them a ready reference to precedents upon difficult points of naval law, and have greatly reduced the number of errors in procedure and consequent complications in action upon court-martial records.

(*d*) "Naval Digest": The Naval Digest, which has been in the course of preparation for two years, covering selected opinions of this office, decisions of the department, and remarks upon court-martial records extending back to 1879, is now practically complete and will be issued to the service coincidently with the publication of this report. This digest will furnish in abridged form a comprehensive treatise on naval law, precedents, and decisions. This and the court-martial orders and annual index-digests have occupied the almost exclusive attention of one officer during the past two years. I regard the Naval Digest in its bearing upon naval law and procedure as one of the most valuable products of my incumbency.

(*e*) Revision of Prison Manual: Owing to the extensive changes in the system of naval penology, hereinbefore explained, a complete revision of the Prison Manual to make it conform to present practice and to embody all existing orders, etc., relating thereto, has recently been completed and issued to the service.

(*f*) General Order 110 and Article I–4893: As elsewhere mentioned, General Order 110 was revised by a board of officers after careful consideration of the recommendations received in reply to the Secretary's confidential letter to commanding officers requesting comment and criticism of General Order 110. As hereinbefore stated, this revision has recently been issued to the service. A similar revision of Article I–4893 of the Naval Instructions, bearing upon the same subject, has also been made for the sake of clarification and amplification of the former article.

CIVIL OFFENDERS.

General Order No. 121 of September 17, 1914, which prescribes the procedure for the delivery of persons in the naval service to the civil authorities, and which was discussed at some length in my last annual report, has, under further test, been found entirely satisfactory.

Our methods and requirements have met with general approval and cooperation on the part of the civil authorities. During the past year it has been particularly noted that the various civil authorities, as well as commanding officers and the service generally, have become more and more familiar with requirements of the general order mentioned, and a subject which heretofore caused much confusion and embarrassment both to the Navy Department and the civil authorities, is now handled with promptness and uniformity. Experience has demonstrated that whereas real offenders against civil laws are surrendered promptly, our requirements antecedent to surrender are such as to safeguard enlisted men against malicious and unfounded charges which unscrupulous persons in civil life not infrequently prefer against them.

During the past fiscal year the department authorized the delivery of persons in the naval service to the various civil authorities, as follows:

California	16
New York	11
Massachusetts	9
District of Columbia	8
Maryland	3
Florida, Illinois, New Jersey, New Hampshire, Tennessee, and Washington ..... each two	12
Kentucky, Pennsylvania, Rhode Island, Vermont, and Virginia ..... each one	5
Civil courts of United States	8
Civil courts of Philippine Islands	6
Hawaii	1
Total	79

DETAILS CONCERNING OFFICE OF THE JUDGE ADVOCATE GENERAL.

During the past year, in view of the fact that the duties of the Judge Advocate General are largely prescribed by statute and that no person was authorized by statute to perform those duties in his absence, Congress enacted a law providing that "an officer of the line of the Navy or Marine Corps may be detailed as assistant to the Judge Advocate General of the Navy," who shall perform the duties of the

Judge Advocate General in case of the latter's death, resignation, absence, or sickness, unless otherwise directed by the President as provided by section 179 of the Revised Statutes.

During the year officers on duty not graduates in law continued the post-graduate course out of office hours at one of the universities of the city. One officer on duty took the examinations for the District of Columbia bar and was admitted thereto, and another officer graduated and received his degree in law, but for reasons beyond his control has not yet taken the bar examinations.

Owing to the increases provided for the Navy, and the fact that the work of this office already overtaxed its personnel, it became necessary during the last session of Congress to request an increase of office force. Though the amount which I requested, and which was the minimum necessary, was not entirely allowed, the office force was increased by a chief law clerk at $2,000, and a law clerk at $1,600, and one messenger. The work of this office is assuming constantly increasing proportions, and legal matters of extreme importance are constantly being passed upon. A chief law clerk at $3,000 was requested, and such a position in this office is considered urgently necessary. The importance of the work performed by the senior law clerk in this office is perhaps scarcely appreciated. He personally handles or advises upon every important legal question concerning the naval personnel, and all suits in the Court of Claims involving the personnel of the Navy or Marine Corps, in all of which suits this office makes it a point to cooperate to the greatest possible degree with the Department of Justice, which is charged with conducting the Government's defense in court. The salary of the senior law clerk in this office at the present time, $2,200 per annum, is not sufficient to retain, or, in case of a vacancy, obtain, the class of man who should occupy that position.

The statistics of work accomplished during the past year do not, of course, show the increase of work which has already begun to fall upon this office in consequence of the recent legislation increasing the personnel. With this legislation an enormous increase will be felt during the present fiscal year. For instance, the tables show that general and summary courts-martial and deck courts reviewed constitute almost a fixed percentage of the men in the naval service; general courts-martial approximately 2 per cent, summary courts-martial approximately 12 per cent, and deck courts approximately 9 per cent. Therefore the authorized increase of 40 per cent in the enlisted force will increase the work of this division by approximately the same percentage.

The new legislation providing the Naval Reserve Force, the National Naval Volunteers, and further greatly increasing the authorized number of officers in the naval service, will lead, it is believed, to more than doubling the activities of the division handling officers' records. Similarly the very large amount of legislation enacted will for a long time throw an enormous increase of work upon this office in the interpretation of statutes. It is therefore certain that additional assistance will be required for the proper and expeditious handling of the work under the cognizance of this office.

During the past year, through the courtesy of the Paymaster General of the Navy, the Navy Mutual Aid Association, which had for many years occupied quarters in an anteroom to this office, was moved

to quarters assigned the Bureau of Supplies and Accounts in the Navy Annex, thus relieving to an appreciable extent the overcrowded condition of this office. However, the present quarters are still congested, and an urgent request has been laid before the commission provided by Congress to redistribute the rooms in this building, to assign Rooms 104 and 106 to this office. . This would extend the quarters to the middle door on the south side of the building and would be reasonably adequate for some years to come.

For several years the office has been endeavoring to install modern steel equipment for filing the records the custody of which is by law placed under the Judge Advocate General. These records are of great historical value, as well as of the most practical importance in the work of this office by reason of the mass of precedents and legal decisions which they contain. These records consist principally of courts of inquiry and trials by general courts-martial extending back to the creation of the Navy Department, and the examinations of officers of the Navy for appointment, promotion, and retirement, together with the complete record of every officer of the Navy and Marine Corps up to the date of his last promotion, retirement, or death.

In former years these valuable records were filed in open wooden cases and shelving, exposed to an accumulation of dust, and to the dangers of mutilation, theft, or destruction. During the administration of my predecessor work was begun to install modern filing equipment, and this has continued each year, until now a complete system of steel cases has been installed sufficient to contain all of these records now in the office and to allow a limited amount of space for expansion.

DATA RELATING TO THE ADMINISTRATION OF JUSTICE.

There are given below tables showing in detail the operations of office during the fiscal year in the various branches of work relating to the administration of justice:

GENERAL COURTS-MARTIAL.

Charges and specifications drawn up in this office during the fiscal year.

	Navy.	Marine Corps.	Total.
Officers	15	1	16
Enlisted men	1,081	162	1,243
Total trials ordered by the Secretary of the Navy	1,096	163	1,259
Charges withdrawn:			
On account of physical disability			3
Prisoners escaped			4
By order of department			4
Total trials not completed			11
Cases tried by order of the Secretary of the Navy			1,248
Corresponding trials fiscal year 1915			1,471
Corresponding trials fiscal year 1914			1,457

Trials held at each naval station.

Portsmouth, N. H	24
Boston, Mass	117
New York, N. Y	400
Philadelphia, Pa	227
Norfolk, Va	163
Mare Island, Cal	156
Puget Sound, Wash	42
Charleston, S. C	44
Special	75
Total	1,248

Trials by order of officers of the Navy authorized to convene general courts-martial.

	Navy.	Marine Corps.	Total.
Officers	10	1	11
Enlisted men	169	119	288
Total	179	120	299
Corresponding trials fiscal year 1915	159	63	222
Corresponding trials fiscal year 1914	218	79	297

Total trials.

	Navy.	Marine Corps.	Total.
Officers:			
By order of Secretary of the Navy	15	1	16
By order of officers of the Navy	10	1	11
Total	25	2	27
Enlisted men:			
By order of Secretary of the Navy	1,070	162	1,232
By order of officers of the Navy	169	119	288
Total	1,239	281	1,520
Grand total	1,264	283	1,547
Fiscal year 1915	1,420	273	1,693
Fiscal year 1914	1,378	376	1,754

Trials of officers.

Convicted	24
Acquitted	1
Disapproved	2
Total	27
Fiscal year 1915	38
Fiscal year 1914	41

Trials of enlisted men.

	Navy.	Marine Corps.	Total.
Convicted	1,217	267	1,484
Acquitted	21	12	33
Disapproved or set aside	1	2	3
Total	1,239	281	1,520
Fiscal year 1915	1,384	271	1,655
Fiscal year 1914	1,342	371	1,713

Schedule of principal offenses.

	Navy.	Marine Corps.	Total.
OFFICERS.			
Absence over leave	1	.....	1
Absence over leave; conduct to the prejudice of good order and discipline	1	.....	1
Absence without leave; conduct to the prejudice of good order and discipline	1	.....	1
Conduct to the prejudice of good order and discipline	3	.....	3
Conduct to the prejudice of good order and discipline; neglect of duty	1	.....	1
Conduct to the prejudice of good order and discipline; conduct unbecoming an officer and a gentleman	1	.....	1
Conduct to the prejudice of good order and discipline; disrespectful in language to his superior officer	1	.....	1
Conduct unbecoming an officer and a gentleman	3	.....	3
Conduct unbecoming an officer and a gentleman; scandalous conduct tending to the destruction of good morals; conduct to the prejudice of good order and discipline	1	.....	1
Conduct unbecoming an officer and a gentleman; disobedience of a lawful order of the Secretary of the Navy; drunkenness; scandalous conduct tending to the destruction of good morals	1	.....	1
Culpable negligence in the performance of duty	1	.....	1
Culpable negligence and inefficiency in the performance of duty	2	.....	2
Drunkenness	3	1	4
Drunkenness on duty	1	.....	1
Drunkenness; conduct to the prejudice of good order and discipline; scandalous conduct tending to the destruction of good morals	1	.....	1
Knowingly and willfully misappropriating and applying to his own use and benefit money of the United States intended for the naval service thereof	.....	1	1
Total	22	2	24
Acquitted	1	.....	1
Disapproved	2	.....	2
Total	25	2	27
ENLISTED MEN.			
Absence without or over leave	284	46	330
Absence without or over leave and breaking arrest	12	6	18
Absence without or over leave and fraudulent enlistment	1	2	3
Absence without or over leave; conduct to the prejudice of good order and discipline; scandalous conduct tending to the destruction of good morals	22	15	37
Assaulting and striking another person in the Navy	7	3	10
Assault with intent to kill	.....	1	1
Assaulting and striking superior officer or threatening to assault and strike superior officer	6	1	7
Assaulting with a deadly weapon another person in the Navy	6	2	8
Breaking arrest	6	.....	6
Conduct to the prejudice of good order and discipline	41	20	61
Culpable inefficiency in the performance of duty	3	1	4
Desertion	579	66	645
Desertion and fraudulent enlistment	18	2	20
Desertion and conduct to the prejudice of good order and discipline or scandalous conduct tending to the destruction of good morals	2	1	3
Disobeying a lawful order of his superior officer	6	4	10
Disrespectful in language and deportment	1	1	2
Drunkenness	4	19	23
Drunkenness on duty	11	15	26
Embezzlement	2	4	6
Falsehood	3	4	7
False swearing or perjury	1	.....	1
Fraudulent enlistment	81	4	85
Forgery	1	1	2
Leaving station or post before being regularly relieved	1	9	10
Malingering	.....	1	1
Neglect of duty	3	3	6
Refusing to obey a lawful order of his superior officer	1	5	6
Resisting arrest	4	1	5
Scandalous conduct tending to the destruction of good morals	47	6	53
Sleeping on watch or post	.....	11	11
Sodomy	3	.....	3
Theft	48	12	60
Theft and scandalous conduct tending to the destruction of good morals or conduct to the prejudice of good order and discipline	7	1	8
Using abusive, obscene, or threatening language toward another person in the service	6	.....	6
Total	1,217	267	1,484
Acquitted	21	12	33
Disapproved or set aside	1	2	3
Total	1,239	281	1,520

[illegible] were tried by general [illegible]

	[illegible]906	1916	[illegible]
	338	437	[illegible]
	58	[illegible]	[illegible]
	645	[illegible]	[illegible]
	[illegible]	46	[illegible]
	[illegible]	22	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]

[illegible] for the service [illegible]

	[illegible]	Total.	Per cent.
	[illegible]	[illegible]	
		[illegible]	[illegible]
		[illegible]	[illegible]
		[illegible]	[illegible]
		[illegible]	[illegible]
		[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]
		[illegible]	
		13	2.[illegible]
		15	2.[illegible]
		225	[illegible]

[illegible] men placed on [illegible] have success- [illegible] months (i. e., [illegible] months, [illegible] the time [illegible] percentage will [illegible] per cent [illegible] and be dis- [illegible] enlistments.

[illegible]

	Total.	Per cent.
	[illegible]	
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	[illegible]

From this table it will be observed that of the 1,224 men placed on probation under the provisions of General Order 110 during the period from September 27, 1914, to June 30, 1916, 724, or 59 per cent, are serving in an honorable or probationary status; of the total number placed on probation during the year 56 per cent Navy men and 83 per cent Marines have successfully completed an average probationary period of six months. The larger percentage of Marines successfully completing this period of probation is due, it is believed, to the fact that the average Marine probationer is about three years older than the average Navy probationer. Statistics elsewhere given show that this 59 per cent will decrease to about 35 per cent after a period of two years from date of conviction has passed.

Data concerning general court-martial prisoners and detentioners.

	1916			1915			1914		
	State prisons.	Naval prisons.	Disciplinary barracks.	State prisons.	Naval prisons.	Disciplinary barracks.	State prisons.	Naval prisons.	Disciplinary barracks.
Enlisted personnel, Navy and Marine Corps, in confinement June 30	104	463	55	109	547	210	151	746	390
Enlisted personnel, Navy and Marine Corps, who underwent confinement during the year	167	1,351	367	208	1,445	644	251	1,409	1,534
Percentage of enlisted personnel who underwent confinement	.19	1.56	.42	.25	1.71	.79	.31	1.74	1.90

Prisoners confined in State prisons during fiscal year ending June 30, 1916.

	Connecticut.			New Hampshire.			California.			Pennsylvania.			Grand total.	Corresponding totals.	
	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.		1915	1914
Prisoners in confinement June 30, 1915	9	3	12	34	9	43	36	11	47	5	2	7	109	151	.....
Prisoners received during fiscal year 1916	27	4	31	11	3	14	8	3	11	2	....	2	58	57	83
Prisoners confined during fiscal year 1916	36	7	43	45	12	57	44	14	58	7	2	9	167	208	251
Prisoners in confinement June 30, 1916	31	6	37	27	7	34	22	7	29	4	....	4	104	109	151
Transferred to naval prisons	....	....	....	....	....	....	....	....	....	....	....	....	....	5	2
Dishonorably discharged	4	1	5	18	5	23	22	7	29	3	2	5	62	94	96
Died	1	....	1	....	....	....	....	....	....	....	....	....	1	.....	.....

The above table shows that the total number of men received for confinement in State prisons in 1916 was practically the same as 1915, 58, as compared with 83 for 1914. These are all men who have committed crimes for which they would have been sentenced to imprisonment if in civil life. The most common offenses are those of theft and crimes of an immoral nature. This latter class of cases includes crimes against nature, which every effort is being made to eradicate from the naval service, and which during the past year were reduced to a comparatively negligible number.

Prisoners in confinement [illegible]											
Prisoners rece[illegible]											
Total [illegible] during [illegible]											
Transferred to											
Other [illegible]											
Di[illegible]											
Di[illegible]											
Di[illegible]											
Co[illegible]											
New [illegible]											
Ca[illegible]											
Insane [illegible]											
To N[illegible]											
Discharged											
Bad [illegible]											
Und[illegible]											
Dish[illegible] prisoners [illegible]											
Restored to duty											
Restored to duty [illegible]											
Restored to duty [illegible] at large											
Miscellaneous:											
Escaped											
Found unfit for [illegible] medical survey											
Died											
Disposition totals	492	112	604	367	90	457	24	17	41	114	72
Prisoners in confinement June 30, 1916	65	14	79	177	37	214	16	0	16	35	14
	557	126	683	544	127	671	40	17	57	149	86

Miscellaneous:																								
Dishonorably discharged after serving sentence in State prisons	18	5	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	7	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Returned to hard labor after period in detention	55	0	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
G. C. M. sentence disapproved while prisoner was in confinement	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....

[1] Not regular naval prison. Limited number of less serious offenders retained at the station to perform hard labor.

NOTE.—Men confined in naval prisons.—These are military offenders, men guilty merely of military offenses, such as desertion, disrespectful conduct, etc., as distinguished from criminals as commonly understood. These men wear a uniform of prison gray, perform hard labor, lose all pay that may become due them, and are under sentence of dishonorable discharge. Criminals are confined in State prisons, except that they stop at a naval prison en route thereto and their accounts are retained at such naval prisons. Inasmuch as all prisoners sent to Portsmouth prison are received first at the *Southery* and detained there three weeks, all prisoners appearing as having been received at Portsmouth also appear in the number received at the *Southery*.

[illegible] Philadelphia on Jan. 21, 1916, disciplinary [illegible] at Navy Yard on Oct. 28, 1918.

Data showing disposition of detentioners who have been restored to duty in the service at large from the disciplinary ship Southery, the disciplinary barracks Port Royal, S. C., the disciplinary barracks, Puget Sound, Wash., and from detention system at Mare Island, Cal.

[NOTE.—See page 26 of 1915 annual report. The small number of detentioners during this year render final percentages less conclusive as an index to the system than last year's report.]

	Disciplinary ship Southery.			Disciplinary barracks, Port Royal, S. C.			Disciplinary ship, Puget Sound, Wash.			Detention, Mare Island, Cal.			Grand total.
	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	
Number of detentioners received during fiscal year 1916	133	11	144	1	.....	1	5	2	7	5	.....	5	157
Detentioners unconditionally restored to duty in the service at large during fiscal year 1916	81	6	87	52	7	59	9	1	10	1	.....	1	157
Disposition:													
In good standing in the service at large June 30, 1916	46	5	51	16	3	19	6	1	7	.....	.....	.....	77
Honorable discharge	.....	1	1	.....	.....	.....	1	.....	1	.....	.....	.....	2
Ordinary discharge	1	.....	1	6	1	7	2	.....	2	.....	.....	.....	10
Discharge by purchase	1	.....	1	2	.....	2	.....	.....	.....	.....	.....	.....	3
Found unfit for service by board of medical survey	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	2
Total number successful	48	6	54	26	4	30	9	1	10	.....	.....	.....	94
Percentage of those restored successful	59.26	100	62.07	50.00	57.00	50.85	100	100	100	.....	.....	.....	59.87
Dishonorable discharge	2	.....	2	4	.....	4	.....	.....	.....	.....	.....	.....	6
Bad conduct discharge	29	.....	29	18	1	19	.....	.....	.....	.....	.....	.....	48
Deserted	2	.....	2	4	2	6	.....	.....	.....	1	.....	1	9
Total unsuccessful (because of misconduct)	33	.....	33	26	3	29	.....	.....	.....	1	.....	1	63
Percentage of those restored unsuccessful	40.74	.....	37.93	50.00	43.00	49.15	.....	.....	.....	100	.....	100	40.13

NOTE.—Remarks relative to detention system: The disciplinary barracks on the U. S. S. *Philadelphia*, and at Port Royal, S. C., were definitely abandoned on January 21, 1916, and October 28, 1915. Though the probation system (General Order 110) has largely replaced the detention system, still there are certain youthful cases not meriting probation in the service at large, but whose offenses demand a greater punishment than mere discharge. Also it is desirable to offer men imprisoned an opportunity to work out their restoration to duty in case they so desire. For the sake of these two classes of men the detention system is continued on a small scale on the *Southery*, on the east coast, and at Mare Island on the West. The vast majority of men formerly confined in disciplinary barracks are now continued in the service on probation and on one-half pay, with results elsewhere described. There are at present only about 60 men in detention. On abandonment of the disciplinary barracks on the *Philadelphia*, the system was started at Mare Island simply in order to encourage men to work out their own rehabilitation.

ng general court-martial detentioners on disciplinary ships Southery and Philadelphia, disciplinary barracks at Port Royal, S. C., and detention system at Mare Island, Cal.

Port Royal.[1]			Disciplinary ship Southery.			Disciplinary ship Philadelphia.[1]			Detentioners, Mare Island, Cal.[2]			Grand total.
[illegible]	Marine [illegible]	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	Navy.	Marine Corps.	Total.	
[illegible]	[illegible]	[illegible]	[illegible]	.....	103	18	5	23	.....	.....	.....	210
[illegible]	[illegible]	[illegible]	[illegible]	11	144	5	2	7	5	.....	5	157
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	7	30	5	.....	5	367
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	1	.....	1	157
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.....	.....	.....	2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.....	91
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5

and thereby [illegible] above table [illegible] 1915, but as some [illegible] of the fiscal [illegible] probationary [illegible] in this report [illegible] pleted and published [illegible]

Actual number of [illegible]

[illegible]	[illegible]		[illegible]		[illegible]	
	Navy	Marines	Navy	Marines	Navy	Marines
October	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
November	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
December	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
January	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
February	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
March	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
April	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
May	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

The above table is reproduced in part from my last annual report, additional data having been collected to show exactly the number of men who successfully completed their probationary period subsequent to conviction by summary court-martial. A discrepancy of 27 men in the total numbers is accounted for by the fact that certain records had not been received in the department prior to the publication of the above tables in the last annual report.

From the above it will be seen that during the fiscal year 1915 there were a total of 3,969 men (Navy and marines) placed on probation pursuant to conviction by summary court-martial. Of this total number a total of 2,454, or approximately 62 per cent, successfully completed the probationary period and effected their rehabilitation in the naval service in an honorable status. The unsuccessful probationers number 1,515, or approximately 38 per cent of the total number. Thus it will be observed that practically two-thirds of the men placed on probation pursuant to sentences of summary courts-martial conduct themselves in such a manner as to effect their unconditional restoration to duty in an honorable status. It is believed that with a return of normal conditions in the demand for labor that the number of successful probationers will be larger, as men will not find employment so easily and so much more remunerative than the naval service, and will not be tempted to commit themselves in order to be summarily discharged with a bad-conduct discharge.

[illegible]	[illegible]	[illegible]	1,088
[illegible]	[illegible]	[illegible]	898
[illegible]	[illegible]	[illegible]	772
[illegible]	[illegible]	186	786
[illegible]	[illegible]	132	732
[illegible]	[illegible]	180	866
[illegible]	[illegible]	167	[illegible]
[illegible]	[illegible]	124	[illegible]
[illegible]	[illegible]	155	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	1,[illegible]
[illegible]	[illegible]	[illegible]	1,136
[illegible]	[illegible]	[illegible]	[illegible]

	Total.	Average for 5 previous years.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

... has been a steady ... ing the fiscal year ... the fiscal year ... during the fiscal ... 11 per cent, ... approximately ... number of trials by

... by court-martial.

		1914	
	[illegible]	Navy.	Marine Corps.
	[illegible]	46,[illegible]	9,777
	[illegible]	18,947	2,[illegible]
	[illegible]	47,616	12,[illegible]
	[illegible]	[illegible]	371
	[illegible]	2.00	2.71
	[illegible]	7,54[illegible]	2,[illegible]
	[illegible]	11.25	[illegible]
	[illegible]	5,6[illegible]	2,[illegible]
	[illegible]	8.36	[illegible]

... by court-martial—general, summary, and deck— ... throughout the service.

[illegible]

Data for [illegible]

	[illegible]	[illegible]
[illegible]		
Followed by [illegible]	[illegible]	[illegible]
Followed by [illegible]	[illegible]	[illegible]
No further action [illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]
[illegible]		
Received and [illegible]	[illegible]	[illegible]
[illegible]		
Received and [illegible]	[illegible]	[illegible]
Grand total	[illegible]	[illegible]

[illegible]

Requests for [illegible]	[illegible]	[illegible]
Granted	[illegible]	[illegible]
Not granted	[illegible]	[illegible]
Requests for [illegible]	[illegible]	[illegible]
Inquiries as to whether [illegible]	[illegible]	[illegible]
Requests for [illegible]	[illegible]	[illegible]

[illegible]

Requests for [illegible]		[illegible]
Granted		[illegible]
Not granted		[illegible]
Requests for [illegible]		[illegible]

[illegible]

Requests for [illegible]		[illegible]
Referred to [illegible]	[illegible]	[illegible]
Answered by the [illegible]	[illegible]	[illegible]

[illegible]

REPORT OF THE CHIEF OF THE BUREAU OF YARDS AND DOCKS.

DEPARTMENT OF THE NAVY,
BUREAU OF YARDS AND DOCKS,
Washington, D. C., October 12, 1916.

From: Bureau of Yards and Docks.
To: Secretary of the Navy.
Subject: Report of the Bureau of Yards and Docks for the fiscal year 1916.

The cost of work performed during the fiscal year 1916 from appropriations under the cognizance of the bureau aggregated $6,098,802.55, divided as follows: Public works, $3,113,219.21; maintenance of yards and stations, $1,590,953.71; repairs and preservation, $1,113,170; contingent, $48,543.65; depots for coal, $232,915.98.

The expenditure of funds under the cognizance of other bureaus and the Marine Corps, but supervised by this bureau, were approximately as follows: "Equipment of vessels, 1914," $15,600; "Engineering," $55,000; "High-power radio stations," $335,000; "Coal and transportation, 1914," $1,695.48; "Aeronautics," $56,000; "Increase of the Navy," $53,000; "Marine Corps," $35,000; "Bureau of Medicine and Surgery," $60,000.

The total value of the work performed under the cognizance or supervision of the bureau during the fiscal year amounted to $6,710,098.03. Seventy-nine contracts were executed during the fiscal year, involving obligations amounting to approximately $1,840,000.

SHORE ESTABLISHMENTS.

The development of the shore establishments has not kept pace with the development of the fleet. Adequate provision has not been made to take care of the vessels already authorized and in prospect. The development of our navy yards and stations is just as vital as the increase of the fleet. Unless such development keeps pace with the fleet the Navy will be without adequate facilities at the yards and stations for the repair and upkeep of the vessels. Immediate steps should be taken to develop the main yards to provide the facilities that will be needed at the time the vessels now authorized are commissioned.

The work of major importance that should be undertaken immediately is the development of Norfolk as one of the main naval bases, which includes not only the development of the yard itself,

but the acquisition of a site or sites in the vicinity, bordering on Hampton Roads, for training station, submarine and aviation bases, fuel-oil storage, and transfer depot for supplies.

At the New York Navy Yard additional facilities in the shape of structural shops and extension of machine shop should be provided, so that the building of vessels and repair work may be prosecuted economically and expeditiously. The question of the extension of the New York yard or provision for an auxiliary yard in the vicinity of New York should be carefully studied and decided upon.

The Philadelphia yard should be devoted primarily to shipbuilding and to the reserve fleet. The development of the reserve basin should be completed and adequate shops and building ways should be provided for the construction of naval vessels.

Puget Sound should be improved and the berthing and shop facilities increased to provide an equipment adequate for this important station.

A dockyard should be established on San Francisco Bay as an adjunct to the existing navy yard at Mare Island. With the increase in draft for the projected naval vessels, it will become impossible to utilize Mare Island for their accommodation. A site should be secured on deep water and developed to provide for taking care of those ships which can not be sent to Mare Island.

Extensive studies are being made of the needs of each station with a view to the adoption of a comprehensive scheme for their development.

DRY DOCKS.

The recent naval act authorized the construction of two dry docks capable of taking the largest vessel that can pass through the Panama Canal locks. The plans and specifications for both dry docks are practically completed and bids are shortly to be opened on the one at Norfolk and inception of the construction of the other one at Philadelphia will shortly follow. It is expected that these two docks will be completed and ready to dock ships by the early part of 1920.

The work on the dry dock under construction by the State of Massachusetts at Boston is well in hand and continuing. The site for the dock has been excavated, with the exception of the rock excavation, and a cofferdam constructed inclosing it. When an attempt was made to unwater the site in July this year this cofferdam gave way and failed, and work upon repairing and replacing it and other work on the dock was suspended for a time but has again been resumed. The bureau sees no reason to anticipate that this dock will not be completed in 1919.

The large graving dock constructed at Balboa, Canal Zone, has been completed and is ready for dry docking vessels, so that on the Atlantic coast and at Panama provision has been made for four graving docks capable of taking the largest vessel and which docks would be available for docking the battle cruisers.

In the Pacific, progress on the dry dock at Pearl Harbor, H. T., has been fully up to expectations. The first section has been sunk to place, and the second of the 16 sections composing the dock is well advanced and at this writing ready to be sunk to place. Under authority granted by Congress a contract has been made with the

Union Iron Works for the use of a dry dock of the maximum size, and this company has just made arrangements to begin work. It is expected that this dock will be completed in two years, so that at the expiration of this period this dock in San Francisco Bay and the Pearl Harbor dock should be available for docking battle cruisers. When the Pearl Harbor dry dock was redesigned it was not anticipated that battle cruisers of the dimensions now provided for would be built by the United States, so that the Pearl Harbor dry dock, while capable of affording docking facilities to such vessels, will only receive them at normal draft as the depth of water provided will not permit of docking them when over normal draft.

It is believed that the provisions that have been made for dry docking vessels for the Navy still fall short of what is required for naval needs on completion of the present naval program. Any shortcomings would be a source of weakness in case of war. Immediate provision should be made for the construction of a dry dock of maximum size in the vicinity of New York. The dry dock most recently completed at the New York Navy Yard, while large enough for battleships is too short for battle cruisers. Careful investigation has been made of the practicability of constructing a large dry dock in the New York Navy Yard, and while it is possible to do this by rearrangement of some of the structures existing at the present time, or by rebuilding one of the older docks, the bureau does not feel that this would be the best solution of this important problem.

It is believed the construction of a graving dock should be immediately authorized in the vicinity of New York, the definite location of which would be left open to permit of the investigation of sites other than the New York Navy Yard; such sites existing generally on the north shore of Long Island Sound, in the lower reaches of the Hudson River, and in New York Harbor on the Jersey side.

At the Charleston Navy Yard there is at the present time a dry dock capable of taking vessels of the *Florida* class. While ample in width and of just sufficient depth for dry docking large vessels, it is insufficient in length. The foundation conditions are unusually satisfactory and would permit of the lengthening of this dock at comparatively low cost. The approaches to the harbor and the river approaches to the yard, when improved by the dredging contract now underway, will permit of taking battle cruisers to this yard for emergency docking. In view of the fact that there are now no naval docks on the Atlantic coast capable of receiving such battle cruisers, and that probably the naval docks provided for at Philadelphia, Norfolk, and the State dry dock at Boston will not be completed until 1920, there will be no dry docks on the Atlantic coast until that time capable of docking the battle cruisers should they be completed before then, and even then no dry dock south of Norfolk except at Panama. The dry dock at Charleston can be lengthened at a cost of approximately one-third of the cost of a new dry dock and within about half the time so that its lengthening is well warranted.

The dry dock recently completed at Puget Sound is too short to dock the battle cruisers authorized. This dock can readily be lengthened to receive the battle cruisers or vessels 1,000 feet in length. An appropriation should be made immediately for this purpose.

MAINTENANCE OF DREDGED DEPTHS AT NAVY YARDS.

The following table shows the expenditures for dredging at the main yards and stations for the past year and the average annual expenditures during the preceding five years.

Station.	Fiscal year 1916.	Average 5 preceding years.
Portsmouth	None.	None.
Boston	$2,746.46	$5,620.00
New York	24,999.91	67,137.20
Philadelphia	294.76	62,639.43
Washington	None.	53.71
Norfolk	73,191.52	5,102.86
Charleston	19,588.87	5,725.00
Mare Island	11,015.92	57,029.02
Puget Sound	13,470.00	10,831.00

At the navy yard, New York, N. Y., extensive study was initiated in 1914, to determine the probable extent of the periodic deposit which might be expected. This work has been continued and as a result of these investigations it has been shown that to maintain a dredged depth of 35 feet at the piers and throughout the basin there will be required an annual expenditure of approximately $40,000. It is quite probable that with the removal of Corlears Hook in the East River directly opposite the navy yard the siltage will decrease.

The table is unforunately not a true indication of the annual maintenance charge for dredging at the various yards and it is impossible to segregate the amount expended for maintenance dredging from that involved in new or deeper dredging work.

It must be appreciated that nearly all navy yards or naval stations and, in fact, all harbors on rivers or estuaries into which large rivers flow, are subject to normal silting up involving a periodic cost for dredging in order that the requisite depth of water may be maintained. This is not an abnormal condition, but one to be expected and provided for. The New York Navy Yard is, therefore, only a normal example of what is to be expected. As a matter of fact the siltage in the New York Harbor is not considered great. In many other important harbors the siltage and consequent maintenance cost is much greater. The condition in this navy yard is only the same as is found in the entire harbor where a considerable expense must be incurred by the municipalities and private owners for annual dredging to maintain dredging berths at piers and wharves.

FORM OF CONTRACTS FOR PUBLIC WORKS.

Notable improvements have recently been made in the general clauses of contracts for public works which will tend to eliminate the uncertainty and risk heretofore attending the preparation of bids for extensive projects of construction, and which, therefore, will operate to secure more favorable prices for such work. The new contract form has also the effect of emphasizing the important element of time of completion and will be the means of expediting construction as well as avoiding the difficulties formerly experienced in determining damages for delay.

Briefly stated, the new form of contract will involve unit prices instead of a lump-sum price, these unit prices being based on quantities estimated by the Government instead of by the bidder, the Government reserving the right to increase or decrease the quantities during construction as may prove desirable, provided the sum total of the contract is not increased or decreased thereby more than 25 per cent. This feature guarantees to the contractor a definite and fair payment for work actualy performed and the Government secures the advantage of being free to make changes in the contract during construction without incurring the usual difficulties of price adjustment.

It has heretofore been the bureau's practice to specify a definite time for completion and to assess as damages for delay the actual damage suffered by the Government provided such damage could be ascertained. Under the new provisions each bidder states his own time for completion, and the bids are evaluated on the basis of the lowest time named and the agreed penalty per day as damages for delay. For the purpose of comparison the bid naming the shortest time is taken as the standard, and to each other bid is added the amount of the liquidated damages provided in the specification for each day of additional time required by each other bidder. In order that this method may work no injustice the clause relative to damages for delay is an unqualified liquidated damage provision, and its assessment is mandatory regardless of whether the Government incurs actual damage on account of the delay. This uniformly assessed damage will greatly facilitate the final settlement of all contracts and will insure the expeditious completion of all work. The provision permitting the bidder to name his own time for completion allows the Government to take advantage of special plant equipment or other facilities which may be offered to expedite the work and encourages energetic and resourceful contractors to put forth their best efforts for the benefit of the Government.

The mandatory damage clause has made it necessary to give more careful attention than formerly to causes beyond the control of the contractor which may warrant extensions of time. A provision has therefore been adopted which requires the contractor to submit any claim for extension of time within 30 days after the date of the occurrence upon which his claim is based. As a further incentive to close attention to the time feature and to serve as a guide during the progress of the work, the contractor is required to submit a schedule of anticipated progress showing the dates upon which each principal division of the work will probably be begun and completed.

Another important provision, which has been adopted and which has the effect of obviating the difficulties heretofore frequently experienced in the adjustment of claims for extras, is the clause which provides that in every case in which the contractor is of the opinion that he is being required to furnish any labor or material not called for by the contract, he shall make a written itemized claim within 60 days from the date such material or labor is ordered. This provision also has the important effect of protecting the Government against the bringing of suits in the Court of Claims by contractors, based upon conditions not thoroughly considered at the time of the occurrence upon which the claim is based.

CORPS OF CIVIL ENGINEERS.

The personnel provision in the naval appropriation bill for the present fiscal year has provided the needed relief recommended for several years for officers of the corps and the increase in numbers necessary to carry out the work of the bureau. When the strength of the line has reached the maximum now allowed the strength of the Civil Engineer Corps will be 60 officers, exclusive of the two additional officers. The authorized strength at the present time is 44, while but 38 officers are commissioned. Two additional officers have been detailed for transfer to the corps and are now under instruction at the Rensselaer Polytechnic Institute, Troy, N. Y., and several other officers have been recommended for transfer. Owing to the period required, two years, for postgraduate work it will be impossible for the bureau to fill the vacancies which will exist at that time, estimated at 48, unless additional designations are immediately made. Owing to the increased opportunities for advancement which have been provided for the line, and especially for the Construction Corps, it is exceedingly difficult to secure satisfactory candidates for transfer. The work of the officers of the Corps of Civil Engineers is, generally speaking, of a nature similar to that required of naval constructors in that it is largely technical, and for officers to make good in such profession they must be well grounded in their technical studies and stand well toward the top of their respective classes. It is to be expected that graduates of the Naval Academy who are desirous of following a technical profession will select the corps offering the best opportunities for advancement. The fact that the present law provides for 8½ per cent captains as compared with 5½ per cent in the Civil Engineer Corps gives a material advantage to the Construction Corps in securing candidates for transfer. The bureau recommends that the number of captains in the Civil Engineer Corps be made 8½ per cent as now provided for the Construction Corps. The proportion in the other ranks in the two corps is the same.

ASSISTANT TO CHIEF OF BUREAU.

The naval appropriation act of August 29, 1916, provided for the detail of a civil engineer as assistant to the chief of bureau and acting chief in his absence, but without an increase in rank or pay. This officer is the principal assistant of the chief of bureau and is responsible for the conduct of the bureau during his absence. It is essential that he should have rank superior or equal to the other officers who may be detailed to the bureau for duty, and a corresponding increase in pay. It is recommended that the officer detailed as assistant to the chief of bureau be given the rank, pay, and allowances of a captain in the Navy while so detailed.

DEPUTY CHIEF OF BUREAU.

Under the personnel provisions of the naval act of August 29, 1916, provision is made for one officer of the Corps of Civil Engineers with rank of rear admiral. The duties of this bureau, in connection with the design and construction of all public works of the

Navy, and maintenance and repair of public works and utilities at the navy yards, is of such broad scope and has increased so much in importance and covers such a great number of yards and stations, in many instances widely separated geographically, that it is believed better and more expeditious results could be in many instances obtained by establishing an office of deputy chief of bureau in the vicinity of San Francisco, Cal. This officer would make regular inspections of public works of the Navy on the Pacific coast, Alaska, and insular stations, and at the same time would be given the necessary authority to approve plans and projects in this territory for work that had been authorized or of such character as conformed with the general policy of the department.

This would enable the bureau in the Navy Department to keep in closer touch with the progress of construction in the area in question by reason of more frequent inspection and a comparative study of results obtained at different stations. Stations in this general area are so remote from Washington that it is impracticable for the chief of bureau to inspect some of the work at all the stations and only possibly rarely to inspect one or more of the more important projects at periods of a year or more apart.

CLERICAL FORCE.

The estimates submitted for fiscal year 1918 for clerical force at the Bureau of Yards and Docks are as follows:

Civilian assistant	$2,500
2 clerks, at $1,800	3,600
2 clerks, at $1,600	3,200
2 clerks, at $1,400	2,800
1 clerk, at $1,300	1,300
3 clerks, at $1,200	3,600
3 clerks, at $1,100	3,300
3 clerks, at $1,000	3,000
1 clerk, at $900	900
1 assistant messenger, at $720	720
4 messenger boys, at $600	2,400
1 messenger boy, at $480	480
3 laborers, at $660	1,980
Total	31,480
Amount appropriated for fiscal year 1917	25,970

The increase recommended includes two additional clerks, one messenger boy, one laborer, and a readjustment of number of clerks in the various classes to provide for a more suitable proportion in the various grades.

At the present time seven clerks are provided at a compensation of $1,000 per annum. While this amount is sufficient to pay the young and inexperienced clerks in the bureau, it is necessary in order that best results and efficiency be obtained that provision be made for the clerks' advancement in pay as they become expert in the work of the bureau. Consequently, there are too many $1,000 positions provided and too few positions of somewhat higher rating to permit of an even flow of promotion and the consequent encouragement to clerks who show the necessary capacity and diligence to merit advancement. The redistribution of pay contemplates three positions at $1,000 and a redistribution of the four remaining positions at

The carrying out of this increased amount of work will necessitate increasing the technical force at the yards and stations and at the bureau requiring an additional expenditure of $200,000.

In the last few years the activities of the navy yards and naval stations have been steadily increasing with the prospect that for the fiscal year 1918, they will be greatly expanded. Additional work at the navy yards and stations involves additional charges against maintenance for care and cleaning of yards, increased transportation facilities, station lighting, shop expenses of public works shops, and general office expenses of public works departments, commandant's office, etc.

As has been repeatedly represented in the annual reports the amounts provided under the bureau's general appropriations during recent years have proved inadequate to meet the many urgent demands growing out of the logical needs of the Navy ashore for maintenance and repair funds. The growth of the Navy afloat is immediately reflected in the need for additional repair facilities ashore and heavy burdens are brought to bear upon the appropriations which are designed to cover maintenance and repair requirements. The reopening of the naval stations at Pensacola, New Orleans, and New London has also served to throw a heavy load on the bureau's general appropriations.

OPERATIONS DURING FISCAL YEAR 1916.

A brief description of the work in progress or completed during the fiscal year ending June 30, 1916, is as follows:

DRY DOCKS.

Work on the Pearl Harbor dry dock was actively prosecuted during the fiscal year under the plan of construction provided for in the supplemental agreement executed November 19, 1914. It is expected that this dock will be finished by June 30, 1918, the contract date of completion as extended by the agreement.

POWER PLANTS.

The extension of the boiler plant at the naval powder factory, at Indianhead, Md., was nearly completed at the close of the fiscal year. Aside from the installation of mechanical stokers and accessories in the central power plant at the New York Navy Yard, this was the only work of importance carried on during the year.

BUILDING SLIPS.

The building slips at the navy yards, Boston and Philadelphia, were completed during the fiscal year, the greater part of the work at each place having been performed during the preceding fiscal year.

Work on the building slips and equipment at the navy yards, Norfolk and Charleston, for constructing small craft, and for which $50,000 was provided for each place by the act of March 3, 1915, was nearing completion at the close of the fiscal year.

At the navy yard, Puget Sound, the building slip for submarines, authorized by the act of March 3, 1915, at a cost of $20,000, was nearing completion, the work remaining to be performed consisting chiefly of connections for water, power, etc.

Work was vigorously prosecuted upon the preparation of the Mare Island Navy Yard for the construction of capital ships, under the authorization of $500,000 from appropriation "Increase of the Navy, construction and machinery," covered by joint resolution approved February 15, 1916. Equipment such as shipbuilding cranes and locomotive cranes was contracted for, and other work was carried on by yard labor.

FLOATING CRANES.

The only floating crane which was under construction during the fiscal year was the 150-ton floating revolving crane for the navy yard, Norfolk. The pontoon for this crane was delivered at the navy yard April 23, 1916, but progress on the machinery and superstructure was slow, due to the difficulty of the contractor in securing materials. On June 30 it was estimated that the entire project was about 45 per cent completed.

RADIO STATIONS.

The fiscal year 1916 witnessed great activity in the bureau's operations in connection with radio station improvements. Towers, buildings, and other facilities were contracted for and work prosecuted at the high-power radio stations at Cavite, Pearl Harbor, and San Diego. Work on the 600-foot towers, as well as on the buildings, at Pearl Harbor and San Diego was well advanced at the close of the fiscal year. Progress at Cavite was not so favorable, due to the great distance from the United States and the consequent difficulty in securing prompt delivery of materials.

A contract was let for two 400-foot steel towers for the high-power station at Guam, but progress on this work was confined to fabrication of material in the United States. The material is to be transported, when ready, by Government collier.

Towers, buildings, and other facilities were completed at the radio station, Point Isabel, Tex.

Contracts for towers and buildings at Cordova, Alaska, Keyport, Wash., North Head, Wash., Marshfield, Oreg., and Fire Island, N. Y., were awarded near the close of the fiscal year, with the expectation that work would start on these projects early in the fiscal year 1917.

PIERS.

After a delay of over 10 months the torpedo-boat berths at the navy yard, Charleston, S. C., were completed at a cost of $261,643.55. The delay in completing this work was due to the fact that the contractor encountered unexpected foundation difficulties, and the work was only able to go forward after exhaustive investigations of the whole matter had been made. Pier C, at the navy yard, New York, was completed near the close of the fiscal year at a cost of $148,925.

Several smaller jobs, in connection with water-front developments, were completed during the year.

DREDGING.

A contract was in progress covering dredging at the navy yard, Norfolk, Va., at an estimated cost of $100,000. The work consists of widening the channel and dredging various areas at the navy yard and at the naval magazine. Dredging to the extent of $25,000 was performed at the navy yard, New York. Dredging for torpedo-boat slips and the marine railway at the naval station, Pearl Harbor, was performed at a cost of $40,149.49. Other jobs, of lesser importance, were performed both by contract and by Government labor.

AERONAUTICS.

A building for testing aeroplane motors was constructed at the navy yard, Washington, D. C., at a cost of $7,057.74. At the aeronautic station, Pensacola, Fla., three hangars were contracted for and the work started. The construction of three aeroplane piers was started, a timber bulkhead was completed, and many other items of improvement were either completed or well advanced at the close of the fiscal year.

FUEL-OIL AND GASOLINE STORAGE PLANTS.

During the past fiscal year an automatic fire-protection system was designed for the oil storage at Key West, and this work is now under contract. Plans and specifications have been prepared and work is about to be advertised for fuel-oil storage at Guantanamo. The design includes a new underground tank, boiler plant, and heating system, both for the new underground storage and for the present steel tanks, foam fire protection systems, for both new and old storage, and additional distributing mains, whereby it will be possible to empty one container and pump into any other. The entire system was designed for the storage of the heaviest Mexican oil, which oil is viscous at ordinary temperatures. Plans and specifications are in preparation in various stages of completion for systems similar to that at Guantanamo, to be installed at Pearl Harbor, Puget Sound, San Diego, and Melville, R. I. Due to the fact that the present stage of the development of the Norfolk Navy Yard does not leave a site available for fuel-oil storage, nothing can be done at present toward the expenditure of the appropriation available for this navy yard.

PUBLIC WORKS FOR THE BUREAU OF MEDICINE AND SURGERY.

The work coming under this head during the past fiscal year was chiefly in the nature of minor improvements and repairs at naval hospitals. However, at the naval hospital, New York, three buildings were constructed for use as contagious-disease units, and at the naval hospital, Washington, D. C., improvements were made in the heat-distributing system at considerable cost. The total expenditures from funds under the cognizance of the Bureau of Medicine and Surgery amounted to only about $60,000, as against $243,977.35 for the previous fiscal year.

PUBLIC WORKS FOR THE MARINE CORPS.

The act of March 3, 1915, provided for the construction of marine barracks at the navy yards, Mare Island and Norfolk, $200,000 being appropriated for each place. Contracts were awarded in October, 1915, and at the close of the fiscal year the barracks at Mare Island were somewhat over half completed, while the Norfolk Barracks were about one-quarter completed. Aside from these projects the work performed for the Marine Corps consisted chiefly of minor improvements and repairs.

PUBLIC WORKS FOR THE BUREAU OF ORDNANCE.

Work was continued on the extension of the powder factory at Indianhead, Md., under the $500,000 appropriation for this purpose. Extensive additions have been made to the boiler plant, numerous buildings have been constructed, the water supply has been increased, and much machinery has been installed.

The assembly shop, torpedo storehouse, and machine shop at the torpedo station, Newport, R. I., were practically completed about the middle of the fiscal year. The construction of these buildings involves appropriations amounting to $260,000.

The construction of a torpedo storehouse and installation of water and sewer systems were effected at the torpedo station, Keyport, Wash. Of the sum of $145,000, which was appropriated for the establishment of the Pacific coast torpedo station, a balance of $31,349 remains, which will be applied to a contract covering power-plant equipment.

At the naval magazine, Fort Mifflin, Pa., the construction of a shell house, a fixed ammunition storehouse, a magazine building, and an extension to the re-forming plant was nearing completion. The construction of one shell house and two magazine buildings at the naval magazine, Puget Sound, Wash., was also nearing completion.

OPERATIONS IN DETAIL.

The construction work of major importance coming under the cognizance or supervision of the Bureau of Yards and Docks, completed or under way at the close of the fiscal year 1916, is covered in the following detailed report:

Boston, Mass.—Paving by yard force was completed at a cost of $20,805.96. Extension of the electrical system was also completed by yard labor at a cost of $9,162.52. Contract for shipbuilding ways, exclusive of equipment, was completed at a cost of $70,439.89. Miscellaneous Government work in connection with the construction of shipbuilding ways cost $32,340. Excavation, embankment, etc., for fuel-oil tank was completed by yard labor at a cost of $31,063.11. A locomotive crane was purchased for work around shipways at a cost of $5,632. Steelwork for pattern-shop floor was completed by contract at a cost of $7,375. Additional fuel-oil outlets were installed by yard labor at a cost of $9,500.

The improvement of the sanitation system of the yard, providing lockers, washrooms, etc., undertaken by yard force at an estimated cost of $12,000, was about 93 per cent completed at the close of the fiscal year. The installation under contract of a hot-air heating system in the foundry, building No. 42, to cost $5,616, was progressing

slowly, and, although completion of the work was required by the terms of the contract at the close of the fiscal year, no work had at that time actually been performed at site. The extension of the electrical distributing system, involving additional work to that reported above as having been completed, was progressing under yard force, and was about half completed. The contract for a coaling tower and making of certain alterations to and improvements in the coaling plant, under contract at a cost of $41,870, was still uncompleted in the case of a few minor items.

Cavite.—The three 600-foot steel towers for the high-power radio station, under contract at an estimated cost of $100,000, were about 40 per cent completed at the close of the fiscal year. The contract for power house, operating building, quarters for commanding officer, and quarters for bachelor operators, to cost $46,987.08, was about 32 per cent completed. Typhoons during October and December, 1915, created extensive damage at the station and at the coaling plant at Sangley Point, necessitating additional allotments from annual appropriations for purposes of repair.

Charleston.—The torpedo-boat berths were completed by contract at a cost of $291,643.55 toward the close of the fiscal year. Shipbuilding ways, exclusive of equipment, and roadway leading thereto, were completed by contract at a cost of $19,073. Considerable work was performed around piers, at entrance to dry dock, etc., with the yard dredge.

The only work of importance remaining uncompleted at this navy yard at the close of the fiscal year was the installation of two shipbuilding cranes. Although this contract was required to be completed June 20, 1916, at the close of the fiscal year no material had been delivered at the yard. The price for this work is $23,490.

Chelsea.—Kitchen equipment was installed at a cost of $5,304.52. The extension of the central heating plant into the old hospital building and surgeons' quarters by navy yard force, and certain paving, cost $6,525. Repair of old hospital building for use as nurses quarters cost $7,585.51.

Cordova.—Contracts were awarded late in the fiscal year for two 300-foot steel radio towers, to cost $31,350, and for three radio buildings, to cost $19,607.50, but no work had been performed at site on June 30.

Fort Mifflin.—At this magazine a contract amounting to $54,403.47 and covering the construction of a shell house, fixed-ammunition storehouse, magazine, and an extension to the re-forming plant was advancing toward completion, although much overdue.

Guantanamo.—The ceiling of quarters, dispensary, and administration building by station force cost $5,686.59. The hauling engine for the marine railway was installed by local force at a cost, including purchase price of the engine, of $9,280.87.

Four sets of civilian quarters, estimated to cost $8,000, were something over half completed. Recreation building for enlisted men being erected by station force at an estimated cost of $30,000 was nearing completion. Construction of marine barracks at an estimated cost of $10,000 was just started.

Indianhead.—Two cotton storehouses were completed by contract at a cost of $3,843. Machinery for the pulping and poaching house

was purchased and installed for $7,600. Seven dry houses for smokeless powder were erected by contract at a cost of $36,863. Cotton dry house No. 2 was constructed at a cost of $10,000. Extension of solvent recovery house No. 1 was completed at a cost of $6,225.32. One cotton storehouse was erected at a contract cost of $3,157. Purchase and installation of machinery for mixing house cost $5,983. Extension to pulping and poaching house cost $7,992.41. Extension to building No. 106 was effected at a cost of $1,408. Additional water supply was secured by drilling of additional wells under contract at a cost of $26,878.

At the close of the fiscal year the following work was uncompleted: Extension of ether house, estimated to cost $6,700, nearing completion; extension to pulping and poaching house, estimated to cost $10,400, nearly completed; purchase and installation of machinery for ether house, at an estimated cost of $12,000, well advanced; purchase and installation of machinery for press house, at an estimated cost of $6,000, well under way; extension of boiler plant by contract, at a cost of $154,343.52, nearing completion; erection of magazine building under contract, at $7,015, nearing completion; alterations to building No. 172, at a contract cost of $24,152, about half completed; construction of a storehouse, at a contract cost of $13,590, about 35 per cent completed; installation of a high-pressure fire system, work not started; extension to building No. 102, at a contract price of $5,322, not started; extension of steam lines, at an estimated cost of $8,000, about 18 per cent completed.

Keyport, Wash.—A torpedo storehouse was completed by contract, at a cost of $34,983.50. A water-supply system was installed, also by contract, at a cost of $5,959.73.

Contracts were awarded late in the fiscal year for two 400-foot steel radio towers, estimated to cost $38,000, and for three buildings to cost $7,338, but no actual work had been performed at site on June 30.

Key West.—Two officers' quarters were completed at a contract cost of $14,350.

No work of very great importance remained uncompleted at the close of the fiscal year. A small amount of dredging in front of Piers A and B, total cost estimated at $3,500, was nearly completed. Replacing sea wall, construction of sidewalk, installation of sewers, etc., at the marine hospital, work being performed under funds of the Treasury Department at an estimated cost of $8,500, was well under way.

Mare Island.—Modernizing of the electric-power and light-distributing systems was completed at a cost of $30,000, the work being performed by yard labor. Two bungalows for marine officers were completed by contract, at a cost of $6,975. Refrigerating plant for the marine barracks was installed under contract, at a cost of $3,734.28. Two fuel-oil tanks were erected under contract, at a cost of $27,446. Improvement of the heat-distribution system, effected by yard labor, cost $10,675. A fuel-oil wharf was constructed by yard force at a cost of $12,746.16. Railway extensions were constructed by yard labor at a cost of $10,000.

The excavation for the fuel-oil tanks was completed during the fiscal year, but the excavation for the pipe line remained uncompleted,

awaiting award of contract for laying of pipe. The entire excavation work will amount to approximately $9,000. Dredging by yard force, at an estimated cost of $12,500, along quay wall at entrance to dry docks, etc., was well advanced. The following important work in connection with fitting up the yard for building capital ships was in progress at the close of the fiscal year: Purchase of 20-ton locomotive crane—contract price, $10,600—not delivered; purchase of one 15-ton magnet crane and one 15-ton grab-bucket crane—contract price, $16,077—not delivered at close of the fiscal year; erection of two shipbuilding cranes—contract price, $40,374—fabrication progressing in contractor's shops; purchase of railroad cars at cost of $11,220, delivered but inspection not passed; piling and timber work for building slip—estimated cost, $18,167—work just started by yard force; platform at head of building slip, estimated to cost $13,500, work awaiting completion of plans; cantilever crane extension, estimated to cost $15,785, work just started by yard force; extension of mold loft, building No. 53, under performance by yard force at an estimated cost of $14,900, well advanced; purchase of two 3-ton electric cranes for building No. 53, at an estimated cost of $6,000, work progressing in contractor's shops; construction by yard force of carfloat ferry slip, at an estimated cost of $8,690, was just started.

The new marine barracks, under contract at a price of $143,442.20, was slightly over half completed. Service connections to the new barracks building, being installed by yard labor at an estimated cost of $12,706, were about half completed.

New Orleans.—Repairs to buildings for occupation by marines were effected by contract, at a cost of $29,013. Radio quarters and a dormitory were constructed by contract, at a cost of $6,709.

Contract was executed in May for a motor-generator set, to cost $3,278 and to be delivered December 14, 1916.

Newport, R. I.—Water-front improvements were completed at the Government landing, at a cost of $9,754.95, the work having been completed by station labor. Hot-water piping system was installed at the naval hospital at a contract cost of $4,324. An assembly shop, a torpedo storehouse, and a machine shop at the torpedo station were completed by yard labor.

New York.—Railroad tracks were installed on the extension to Pier D, at a cost of $5,343.15, by yard force. Three buildings for use as contagious-disease units were completed at the naval hospital by contract, at a cost of $14,901.60. Completion of Pier D (except paving) was effected by yard labor, at a cost of $20,067.89. Dredging was performed, at a contract cost of $24,999.91. Pier C was constructed by contract, at a cost of $148,925.

At the close of the fiscal year the erection of a roundhouse, turntables, etc., for the yard railroad system, at an estimated cost of $12,450, was nearing completion.

Norfolk.—Wharf and approaches at the naval magazine, constructed by yard labor, cost $30,229.67. Paving back of sea wall was effected by local force, at a cost of $10,993.14. Two shipbuilding cranes were purchased and installed, at a cost of $20,106.35. Repairs to Richmond's dock were effected by yard labor, at a cost of $9,524.26. Three fuel-oil-storage tanks were erected, at a cost of $37,360. Ex-

tension of the yard railroad system cost $22,700. A shell house was erected at the naval magazine, at a contract cost of $19,263.28.

Dredging by contract, estimated to cost $100,000, was 80 per cent completed. The erection of light receiving barracks at St. Helena, at an estimated cost of $18,500, was nearly completed. The 150-ton floating revolving crane, under contract at a cost of $357,794, was about 44 per cent completed. Sewer installation for dry dock No. 3, undertaken by yard labor at an estimated cost of $5,707.15, was almost completed. Building for school, under contract at $45,412.73, was about three-quarters completed. A contract for a disinfecting plant, to cost $12,200, was about 8 per cent completed. Borings on the site of new dry dock, estimated to cost $5,000, were being secured by contract, and the work was well advanced. The construction of marine barracks by contract, at a cost of $188,868.20, was about 30 per cent completed.

Pearl Harbor.—The work completed during the fiscal year at this place may be sumarized as follows:

Work.	Cost.
15-ton locomotive cranes (2)	$14,001.94
Flat and box cars	6,869.50
Pneumatic system	5,020.00
Erection of coaling-plant steelwork	55,271.65
Erection of 5 industrial buildings	66,311.90
Foundations for radio towers	9,212.07
Completion of Moanalua water system	6,596.20
Three electric traveling cranes for storehouses	9,653.00
Ice-making and cold-storage plant	23,635.59
Water connections to coaling-plant wharf	6,091.23
Two coal-hoisting towers	78,009.71
Fresh-water system, Kuahua	9,553.77
Construction of temporary submarine base at Kuahua	6,201.05
Floor in shipfitters' and boiler shop	10,018.94
Dredging for torpedo-boat slips and marine railway	40,149.49
Electric passenger elevator for naval hospital	4,670.00
Installation of first floor in woodworking shop	7,922.14
Floor in machine shop	9,806.70

The following work remained uncompleted June 30:

Work.	Obligation.	Per cent completed June 30, 1916.
Electric installation in machine shop	$9,806.15	15
Yard railroad improvement	6,000.00	95
Road construction	16,000.00	26
Grading	19,420.00	21
Hydropneumatic elevators for foundry and pattern shop	4,876.00	4
Electric installation in combined shipfitters' and boiler shop	7,000.00	13
Dry dock	4,442,115.43	35
Dry-dock pumping machinery	147,819.13	.....
Street paving	20,450.00	92
Transformers, including installation	5,000.00	88
Latrines	10,000.00	4
Reinforced concrete wharf	155,900.00	1
Electric transmission system, etc	30,000.00	88
Installation of yard telephone system	10,000.00	57
Electric service to radio station and hospital reservation	9,450.00	21
Roads, walks, and grading, at hospital reservation	15,000.00	81
Four officers' quarters	19,980.09	99
Reinforced concrete torpedo-boat piers	85,600.00	1
Basin and wharf, coaling plant	491,477.40	77
Three 600-foot steel radio towers	92,700.00	89
Three radio station buildings	28,187.26	60
Electric power installation at naval magazine	5,800.00	29

Pensacola.—Remodeling of building No. 52 to fit it as dispensary and sick quarters was effected under contract at a cost of $13,771. A timber bulkhead was constructed by station force at a cost of $7,680.10.

Three hangars, under contract at $39,914.59, remained uncompleted at the close of the fiscal year. Concrete paving was being laid by contract at a cost of $9,489. Three aeroplane piers, estimated to cost $6,900, were well advanced at the close of the fiscal year.

Philadelphia.—Paving Pier D, east side, and at head of slip between Piers C and D was completed by yard labor at a cost of $9,995.68. Piles and pile driving for the building ways cost $17,127.29. Construction of outboard end of building ways by yard labor cost $8,979.35. Two 200-kilowatt generator sets were purchased at a cost of $7,534. Two rotary converter sets were purchased for $10,891. Construction of about 500 feet of sea wall by yard labor cost $31,451.88. Temporary toilet building and installation of distributing systems for the building slip were effected by yard labor at a cost of $29,371.36.

The work of removing the 100-kilowatt motor generator set from substation, installing a 200-kilowatt motor generator set in its place, making switchboard changes, and completing installation of rotary converters in building No. 22, estimated to cost $6,167.16, was about 98 per cent completed. A contract was let for a switching locomotive, to cost $5,600, but at the close of the year fabrication was still in progress in the contractor's shops. The extension of railroad tracks, estimated to cost $10,000, was well under way. The extension of pavement on Porter Avenue, Fourth Street, east, and Delaware front, estimated to cost $10,000, was about three-fourths completed. The contract for borings, executed near the end of the fiscal year at an estimated cost of $3,705 was progressing slowly.

Port Royal.—A guardhouse, stable, six double quarters, brick wall, sleeping porches, and garbage incinerator were constructed by contract at a cost of $36,185.94. Flooring in building No. 18 cost $7,000.

Buildings for mess rooms and toilet facilities, estimated to cost $9,000, were just started at the close of the fiscal year. Power plant and pumping-station machinery, estimated cost $7,300, was under way prior to the close of the fiscal year.

Portsmouth.—The Kittery approach to the new railway and highway bridge was completed by yard labor at a cost of $17,127.29.

The extension of railroad track along quay wall and building No. 89, around building No. 53, and from building No. 92 to building No. 53, estimated to cost $7,400, was about three-fourths completed at the close of the fiscal year. The installation of a hot-water piping system at the naval hospital, under contract to cost $3,158.10, was nearing completion.

Puget Sound.—Two 15-ton locomotive cranes were completed as to erection and tests after arrival at the yard at a contract cost of $17,655.98. Two fuel-oil storage tanks were erected under contract at a cost of $28,377.43. Contract for air compressor, accessories, and piping was completed at a cost of $40,140. Concrete pavements and sidewalks were laid by yard labor at a cost of $15,107.24. Air, fresh-water, and electric conduits were installed on Pier No. 4 at a

cost of $5,388.21. Excavation, concrete, clearing, etc., for fuel-oil storage tanks were effected by yard labor at a cost of $14,148.59. Extension of Pier No. 1 for fuel-oil purposes cost $14,174.70. A sewer was constructed by yard labor from the shipfitters' shop to the water front at a cost of $9,210.77. Dredging around piers by contract cost $13,470. Electric lighting system in shipfitters' shop cost $14,589.07.

Railway system extensions, estimated to cost $25,000, were about 45 per cent completed at the close of the fiscal year. The construction of building slip for submarines, estimated cost $20,000, was about 92 per cent completed. Magazine buildings under contract at a price of $41,187.88 were nearly completed.

San Diego.—A fuel-oil storage tank was erected under contract at a cost of $14,364.59. Foundations for radio towers were completed by contract at a cost of $8,073.88. Sewer and water systems were installed for the radio station under contract at a cost of $12,964.93. Seven radio buildings were erected by contract at a cost of $39,962.36. A coal-hoisting tower, under contract at $37,284.38, was completed with the exception of final tests.

At the close of the fiscal year the three 600-foot steel radio towers under contract at an estimated cost of $87,300 were nearing completion.

Washington, D. C.—Renewal of floors in gun shops was completed by yard labor at a cost of $24,999.02. An electric traveling crane was installed in the new storehouse at a cost of $4,214.92. The new fireproof general storehouse was completed at a cost of $197,795.19.

The installation of larger power circuits to gun shops was completed by yard labor at a cost of $9,999.81. Storage racks and bins were installed in the new storehouse at a cost of $12,499.58. Waterfront improvements were completed by yard labor at a cost of $19,461.69.

Remodeling conduit, piping, and heating system at the naval hospital at a contract price of $13,666.55 was nearing completion. The installation of an electric distributing system at the naval hospital at a contract price of $4,480 was well under way.

F. R. HARRIS.

REPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION.

NAVY DEPARTMENT,
BUREAU OF NAVIGATION,
Washington, D. C., October 10, 1916.

From: Chief of Bureau of Navigation.
To: The Secretary of the Navy.
Subject: Annual report for fiscal year 1916, with additions to October 1, 1916.

Appreciation of the immediate needs of the service has been shown to be nation wide, and in the recent naval appropriation bill Congress carried out the wishes of the people by enacting legislation of far-reaching importance. This includes a provision for an immediate "authorized enlisted strength" of 68,700 men and 6,000 apprentice seamen, a total of 74,700. Preparation for the future was not neglected and the same bill authorized the President, in emergency, to increase the "authorized enlisted strength" to 87,000. It is evident that Congress considered the present needs of the naval service in deciding on this number at this time, as the usual additional allowance of apprentice seamen, 6,000, would provide for an actual enlisted strength of the regular Navy of 93,000.

It is interesting to note that the above figure closely approximates the bureau's preliminary estimate of 93,957, which provides for the number of enlisted men (including average sick allowance) necessary to fill the billets in 1921, the year of completion of almost all of the present program. From 5 to 10 per cent should be added to this for increased complements and working surplus, and the "authorized enlisted strength" should be increased to this number in time for the necessary recruiting and training.

In addition, Congress considered it necessary to have a large number of reserves at comparatively small expense during peace time, and provided the machinery for enrolling and instructing this force. Its value can not be overestimated as there are thousands of important billets on reserve ships, on merchant vessels to be taken over, and in connection with naval activities afloat and ashore, which require additional trained personnel in war time. The preliminary estimate for 1921 for enlisted reserves of all classes, including retired personnel and a considerable force of naval militia, is 43,978, and steps have been taken to enroll this force.

In order to fix a reference date the bureau has made its computations as of July 1 of that year, allowing for the required number

of vessels with reserve complements on that date, but has not allowed for any vessels which may be authorized after August 29, 1916.

The material increase provided in the bill doubles the strength of the Navy's fighting force and the provisions of the law are such that we may expect the entire program to be completed in 1921, with the possible exception of one or two vessels. It is therefore the duty of this bureau to take such steps as are now necessary to provide for and educate the officers and men needed to man these additional vessels, and to perform such other naval duties as the department requires for an efficient organization of the naval forces.

In the last annual report it was estimated that 7,500 men would be required by July 1, 1917, and that 4,329 additional would be required by July 1, 1918, for ships authorized prior to the large increase provided in the recent bill. The bureau then called attention to the great shortage of officers necessary for ships already authorized, and Congress responded immediately by increasing the appointments to the Naval Academy. At that time, however, the large material increase had not been considered by Congress and the estimate was not based on the comprehensive program adopted on August 29, 1916. For this reason, further action is now necessary to make the completed program a live one.

Due to the foresight of Congress a continuing program has been provided, and it is necessary to make an estimate of the commissioned personnel needs for the probable date of completion of that program. It is the first time in the history of the Navy that such a step has been possible, as programs have been made only from year to year.

The preliminary estimate shows that there will be needed on July 1, 1921, 4,487 commissioned line officers on the active list to man the ships and a small number of important shore stations, and, if emergency arises, the complements of reserve ships, coast defense vessels, harbor patrols, mining vessels, censorship stations, etc., will require, in addition, the services of reserve officers to the number of about 2,378.

The above estimates, based on the present authorized building program, show that the percentage of officers to men would be about 4.8 (.0477+), and the result of careful consideration of the numbers in grade required to perform the duties is as follows:

	Flag.	Captains.	Commanders.	Lieutenant commanders.	Lieutenants.	Junior lieutenants and ensigns.	Total for all grades.
Estimate of number of officers required in each grade	46	166	341	731	1,430	1,773	4,487
Distribution of estimated total number, if assigned to grades in accordance with present law	45 (1%)	179 (4%)	314 (7%)	628 (14%)	1,458 (32½%)	1,863 (41½%)	4,487

If the policy to fill up the construction corps, civil engineer corps, and Marine Corps from the line is continued (which is recommended), additional officers will be required for these assignments. A further allowance should be made for aviation, transfers, increased com-

plements, and for filling such vacancies as may arise due to age in grade retirement, a total of from 5 to 10 per cent.

Every naval activity is directly dependent on the numbers of the trained commissioned personnel. Ships must be manned, men must be recruited and trained, officers must be trained, and the inspection and preparation of valuable Government material must be made. From the last Naval Academy class of 177 graduates, and from officers advanced from warrant rank to ensign, there was a net gain to the line of the Navy of but 103, due to retirements, resignations, details to the various corps, etc. It is estimated that, from now until July 1, 1921, there will be a net gain of about 986 officers added to the service from the Naval Academy, about 45 advanced from warrant officers, and not more than 60 additional officers from those trained for engineering duty only. The present number in service is 2,086, exclusive of 34 extra numbers. The number on July 1, 1921, will be about 3,177, leaving the Navy short about 1,310 officers on that date (exclusive of those mentioned in the preceding paragraph) provided no further action is taken now.

The value of the material for which Congress has appropriated is so great that its operation, care and upkeep must be in the hands of skillful officers, and this is the first opportunity since the building program was decided on, to outline the steps necessary to obtain them. The output of the Naval Academy should be doubled for a limited period, returning to normal conditions when the shortage of officers has been made up. In order to accommodate additional midshipmen the superintendent has submitted estimates for temporary buildings which can be rapidly constructed and which will accord with the present style of architecture.

The bureau recommends that the appointments allowed each Senator and each Member of the House of Representatives be increased, that the course at the Naval Academy be reduced to three years until the shortage is made up, and that the present first class be graduated on February 1, 1917. This step is of primary importance in order to properly meet the wishes of Congress to provide an efficient first arm of defense, as expressed in the large program provided in the recent bill.

ADMIRAL AND VICE ADMIRAL.

It is recommended that these officers when retired retain the rank and title they held while discharging the important duties for which the department selected them in recognition of their exceptional ability.

NAVAL DISTRICTS.

The department has recently authorized the establishment of naval districts to control naval activities along the coast. This is one of the many important steps in organization, and when the estimates of the personnel necessary to operate these districts are made, the bureau will make assignments to take up the detailed work of organization.

PERSONNEL LEGISLATION.

The recent appropriation bill contains personnel legislation of far-reaching importance. It refers its computations for all corps to the

number of commissioned officers of the line (exclusive of commissioned warrant officers), and fixes this number at 4 per cent of the authorized enlisted personnel, or 2,988. The above officers of the line are further apportioned in the various grades on a percentage basis, with a provision that junior lieutenants must have three years service in grade before being eligible for promotion. The principle of selection for promotion of captains, commanders, and lieutenant commanders to the next higher grade is applied to line officers who have had four years' service, and a board of nine rear admirals is provided to make the selections during the month of December of each year. On and after June 30, 1920, an officer to be eligible for selection must have had two years actual sea service on seagoing ships in the grade from which he is to be selected, and must not be more than 45 years of age if a lieutenant commander, 50 years of age if a commander, and 56 years of age if a captain. This latter provision will operate to provide rear-admirals with at least eight years in grade, and when the law has been in operation for a considerable period the average service in grade of captains and commanders will be six and five years, respectively. The retiring age is increased to 64 years.

The numbers of the Staff Corps are percentages of the line of the Navy, and they are further assigned within the corps with certain proportionate numbers in each grade. The principle of selection was not applied to the Staff Corps.

The corps of professor of mathematics will cease to exist upon the death, resignation or dismissal of officers now carried on the lists of that corps.

There is provision for one chaplain for each 1,250 persons in the Navy and one dental surgeon for each 1,000 authorized enlisted men in the Navy and Marine Corps.

A Dental Reserve Corps was also authorized.

Legislation favorable to the warrant officers was also enacted, together with heat and light allowances and leave with full pay.

Provision was made for the assignment to engineering duty only of certain officers not below the grade of lieutenant, and the Secretary was also authorized to appoint annually for a period of 10 years 30 acting ensigns for engineering duty only, selected by competitive examination from technical schools and colleges of high standing and given a probationary period of three years in which to qualify. The date for the first examination has been fixed, and the Civil Service Commission has been requested to hold the examination under the same rules as now obtain for candidates for the Naval Academy.

A Naval Flying Corps was provided for and the bureau has taken steps toward its organization.

One of the most important items in the bill was the establishment of a Naval Reserve Force, and the retainer pay was made sufficient to attract a large number of men to the reserve. The force will consist of a fleet naval reserve, composed of honorably discharged enlisted men and of former officers of the Navy; a naval reserve selected from the seagoing profession; an auxiliary reserve from those employed on American vessels of the merchant marine of suitable type; and a coast-defense reserve. There is also a volunteer reserve composed of members who volunteer to serve in time of peace

without retainer pay. The organization of this force is well under way and officers have been assigned to duties in connection with the new work that will be undertaken by the bureau to enroll, train, and assign this force.

A Reserve Flying Corps was also provided and is to be composed of officers and men transferred from the Naval Flying Corps.

The rating of coal passer was changed to fireman third class and ordinary seaman to seaman second class. Printers received advancement in rating, the rating of storekeeper was established, and Hospital Corps men have been given ratings similar to those of the seaman branch.

Presidential appointments to the Naval Academy were increased from 10 to 15 and the appointments of enlisted men by the Secretary increased from 15 to 25.

The bill provides that any person who may hereafter enlist in the Navy for the first time shall, if he so desires, receive discharge during the months of June or December, respectively, following the completion of one year's service at sea. The granting of indefinite leave takes the place of discharge by purchase.

Employment of retired officers.—In order that the bureau may take advantage of the service of a few able retired officers, especially during periods of shortage of personnel, it is recommended that the department be authorized to employ retired officers, without restriction, and when so employed on active service that they be given the pay and allowances of their grade.

POSTGRADUATE COURSES.

The bureau has continued the postgraduate courses, which include the course at War College, courses in engineering, ordnance, civil engineering, naval construction, and law, and a torpedo course on the *Montana*. There is also an aeronautic school at Pensacola and a submarine school at New London.

Officers of the active list of the Navy, Sept. 1, 1916.

[Line officers includes all extra numbers and officers restricted by law to the performance of engineering duty only.]

	Line.	Warrant.	Medical.	Acting assistant surgeons.	Medical Reserve.	Pay.	Civil Engineers.	Dental.	Naval Constructors.	Professors of mathematics.	Chaplains.
1. Sea duty	[1] 1,463	519	136	....	....	111	....	10	2	....	22
2. Shore duty beyond seas, including attachés	33	30	41	....	....	15	8	5	2	....	....
3. Training station, Naval Academy, War College Staff, receiving ships	130	44	30	....	....	16	1	5	....	8	9
4. War College, post-graduate courses	[2] 97	....	....	....	....	....	1	....	5	....	....
5. Sick and waiting orders	38	16	13	....	....	7	1	1	....	....	....
6. Shore duty other than 3 and 4	[3] 361	250	120	25	39	79	29	10	71	8	9
Total	2,122	859	330	25	39	228	40	31	80	16	40
Percentage actually at sea	69	64	41	....	....	49	....	30	1	....	55

[1] Includes line officers afloat under instructions in aviation, submarines, and torpedoes.
[2] Includes line officers under instruction for Construction Corps.
[3] Includes line officers ashore under instruction in aviation and duty in connection with radio.

NAVAL ACADEMY.

The seventy-second academic year of the Naval Academy opened on October 1, 1916, with 1,230 midshipmen—by far the largest number in the history of the academy. The new fourth class has 625 members. By reassignment of rooms in Bancroft Hall and building several new rooms therein, accommodations have been arranged for 1,240 midshipmen, the maximum number that could be accommodated. It was necessary to increase the recitation rooms, commissary department, laundry, and certain laboratory equipment in order to meet the increased demands; but all of this work was accomplished during the summer months.

Owing to the fact that no additional officers were available for assignment to the academy, it became necessary to employ about 43 additional civilian instructors for the departments of mathematics, English, and modern languages, this having been authorized by the naval appropriation bill approved August 29, 1916.

While the three upper classes were at sea on the practice cruise, the new fourth classmen were given extensive drills, setting up, rifle practice, and practical work in the machine shops, so that they were in fine condition for joining the regiment and beginning their academic work.

ENLISTED FORCE.

During the fiscal year ending June 30, 1916, the complement of enlisted men was maintained at the strength allowed by law.

Unusual demands were made upon the enlisted personnel, owing to the completion of new vessels, viz, 3 superdreadnaughts—the *Oklahoma*, *Nevada*, and *Pennsylvania*—10 destroyers, and 3 submarines, and the increase of the complement of the vessels of the reserve force to 40 per cent of their active complement.

The department has adhered to the policy of refusing to take back men who have been discharged as undesirable, for bad conduct, or with dishonorable discharges. This policy raises the standard of the enlisted force and has had a beneficial effect upon the men themselves, who appreciate the fact that the Navy is not a refuge for men of bad character or men who deliberately violate the discipline of the ship

The transfer of a considerable number of chief petty officers to the fleet naval reserve after 16 to 20 years' service will create vacancies which, together with the increase in the personnel allowed by law, will greatly increase promotions for the men in lower ratings.

SERVICE TRADE SCHOOLS.

Labor conditions throughout the country have produced an extraordinary demand for skilled artisans. For this reason, few enlistments comparatively were made in the artificer ratings. This condition resulted in the necessity for increasing the number of men detailed to the various service trade schools. The figures show that during the fiscal year 3,500 men were under instruction at the various trade schools as compared with 2,278 of the previous fiscal year. Of these, 1,564 completed their courses and were detailed to active duty as against 1,302 the year before. There were, on June 30, 1916, 1,420 men under instruction at the several schools. All the schools previously main-

tained were continued and in addition the following schools were established: A school for deep-sea diving at Newport (eight-months' course); a class at the machinists mates' school at Charleston for the instruction of men in the care and operation of gas engines (a three-months' course).

A school for the instruction of enlisted men in aeronautics was established at the naval aeronautic station, Pensacola, the first class being assembled January 1, 1916; the classes consist of 16 enlisted men of the Navy and are organized every three months. The course of instruction is 18 months.

Steps have also been taken for the reestablishment of the seamen gunners' school at the navy yard, Washington, D. C. This school, which will be underway about January 1, 1917, will have a course of six months and will instruct men in ordnance mechanism, electricity, etc.

Schools have also been established on board repair ships and tenders of the Atlantic Fleet for the instruction of machinists and other men of artificer ratings. This instruction is in addition to the courses in the trade schools ashore.

TRAINING STATIONS.

The following letter from Mr. John E. Harrington, No. 91 Walter Street, Bangor, Me., addressed to the commanding officer, naval training station, Newport, R. I., under date of September 26, 1916, is one of many received at San Francisco, Great Lakes, Newport, and Norfolk.

My son, Edmund J. Harrington, arrived home this forenoon on furlough after completing his course at naval station, and I wish to express to you and all other officers my sincere thanks for the splendid rudiments of manhood which you have taught him. I consider him improved 100 per cent from the day he left me two months ago, in every way—physically, mentally, and especially in discipline—and I wish that many more parents might know the advantages derived both for themselves and their, boys, and I feel if such could be we would have a great many more enthusiastic, patriotic citizens in America to-day, and in closing will say if encouragement from me is all my boy needs to make good I am sure he will succeed.

Once again thanking you, I am, respectfully, yours,

JOHN E. HARRINGTON.

P. S.—I would gladly have you use this letter to encourage anyone in doubt about the service.

J. E. H.

RECRUITING.

The conditions for recruiting are unfavorable at present, and unusual steps are necessary to enlist the quota of men. The labor market, due to the European war, offers extraordinary wages for unskilled labor. These prices will, of course, be discontinued shortly after the conclusion of peace, and the men will be laid off, but for the present the high wages are alluring to the possible recruit.

A recommendation of vital importance in connection with recruiting has already been sent to the department through the Office of Naval Operations. It has to do with the contentment of the enlisted men and the fulfillment of their wish to see something of other ports outside the United States. It is recommended that a cruise be made by the fleet to neutral West Indian ports, to the Panama Canal, and to United States Gulf ports annually until such

time as international conditions will make more extended cruises desirable.

There is at present a shortage of officers in recruiting stations, but it is proposed to increase the number of officers and stations and to use low-priced automobiles to spread the knowledge of the advantages of the service to the districts remote from railway lines and to bring in recruits.

It is urgently recommended that the use of motor-propelled passenger-carrying vehicles be authorized at each recruiting station for this official use only.

NAVAL AUXILIARY SERVICE.

At the end of the fiscal year June 30, 1916, 19 vessels of the Naval Auxiliary Service, including the hospital ship *Solace*, were manned exclusively by merchant complements. The personnel of this service consists of approximately 212 officers and 1,034 men. All the officers are American citizens, and it is gratifying to state that, in spite of the difficulty of obtaining men in the merchant service, the order issued about two years ago with a view of Americanizing the crews of the vessels of the Naval Auxiliary Service has produced good results, and the percentage of American citizens in the enlisted personnel has materially increased. It is expected that when the Naval Auxiliary Reserve, created by the act of August 29, 1916, is put into operation the entire enlisted personnel will be American citizens.

During the fiscal year the vessels of the Naval Auxiliary Service manned by merchant complements steamed a total of 400,144 miles, delivered 474,954 tons of coal, 605,378 barrels of oil, 393,974 gallons of gasoline, 88,220,185 pounds of miscellaneous cargo, and transported 3,374 passengers to the various vessels and naval stations all over the world.

The value of this service to the Navy was fully demonstrated during the past year when, owing to the abnormal conditions existing in merchant shipping and the almost exorbitant freight rates demanded for transportation of cargo, the vessels of the Navy and naval stations in all parts of the world were kept fully supplied with fuel and stores at a reasonable cost to the Government, thus effecting a great saving in money, as well as maintaining the efficiency of the Naval Establishment, which would have been sorely crippled without this essential and efficient arm of the service.

Great difficulty has been experienced during the past year in keeping experienced and efficient officers and men in this service, and almost daily resignations were requested by officers of the deck and engineering departments, as well as from the men, in order to enable them to accept employment elsewhere in the merchant marine at much higher rates of pay, with the consequent result that there has been an almost incessant change in the personnel of officers. This condition was brought about by the passage of the seamen's bill and also, in a large measure, by the great number of vessels of the merchant marine that have been placed in service since the European war.

In order to remedy this condition, the department was compelled to increase the pay of every officer and man employed in the Naval Auxiliary Service (with the exception of the masters), resulting in

an additional expense of $119,460 per annum, this increase being placed into effect on July 1, 1916.

While this increase is still below the maximum scale of wages paid elsewhere in the merchant marine, it is believed the additional retainer pay allowed the officers and men for enrollment in the Naval Auxiliary Reserve will bring sufficient personnel to the service.

NAVAL MILITIA.

The Naval Militia has made notable progress during the past year. On July 1 the Organized Militia of the several States numbered 636 officers and 9,170 men. This is an increase of about 10 per cent in the year.

The department was enabled to detail nine battleships and cruisers in reserve to take militiamen for a two weeks' cruise. The reports of the commanding officers of these ships indicate clearly that the Naval Militia is a most valuable asset to the Navy, forming as it does the source from which a large part of the necessary reserve for expansion in time of emergency or threatened war may be obtained. The personnel of the Naval Militia is composed of volunteers who devote a large part of their leisure to fit themselves for use to their country in time of need. Naturally men of such impulses are zealous, intelligent, and patriotic.

A drawback to the training of the Naval Militia in the past has been due to a shortage of officers available for the duties of inspection and instruction. This is gradually being overcome by utilizing ships in reserve and retired officers of the Navy for such training and inspection. There are at present nine ships in reserve detailed for duty in connection with training the Naval Militia, and this number will be increased as more vessels become available. Thirteen officers are detailed as inspectors and instructors with no other duties; in addition there are 42 officers who have additional duty with the Naval Militia.

NATIONAL NAVAL VOLUNTEERS.

The naval act of August 29, 1916, provided for a force, to be at the disposition of the President, for use in addition to the regular Navy, in any emergency and actual war. The National Naval Volunteers will be a force of volunteers, qualified physically and professionally as the department may prescribe, immediately available for expansion of the Navy in time of emergency or threatened war. The Congress provided liberal retainer pay for the National Naval Volunteers and the department has every reason to believe that within a reasonable time the entire Naval Militia will volunteer and be incorporated in the National Naval Volunteers.

The continued generous support of the Naval Militia and the National Naval Volunteers by the Government is amply justified by the attendant results in the increasing efficiency of the Naval Militia.

NAVAL RESERVE FORCE.

Among other important and progressive features of the naval act approved August 29, 1916, was the creation of the Naval Reserve Force. A well-trained, efficient, and large reserve for the Navy has

MOTOR BOATS FOR NAVAL DISTRICTS.

The organization of motor boats conforms to the organization of the naval districts. For the purpose of inspection and classification of motor boats a permanent board of two officers was appointed in certain naval districts under the direct supervision of the respective commandants and with additional duties under the Board of Inspection and Survey. No boat was permitted to participate in the last week of the cruise unless it had previously been inspected by the board, and 54 boats reported for mobilization: Nine at Cape May, 18 at Boston, 12 at Newport, and 15 at New York. These boats were exercised at maneuvering, signalling, searching for submarines, guarding battleships against submarine and destroyer attacks, and given instructions in the defense of their respective naval districts.

HYDROGRAPHIC OFFICE.

The Hydrographic Office during the last fiscal year provided the Navy and merchant marine with accurate charts and sailing directions covering the seas of the entire world and rendered these services independent of foreign sources. Four surveying vessels are engaged in executing important surveys of the Caribbean Sea under the supervision of the Hydrographic Office, and four less extensive surveys are being pursued in other waters.

In addition to its chief purpose of conducting marine surveys and preparing navigator's charts and nautical books, the Hydrographic Office is conducting a very extended service of gathering marine data from all the oceans and disseminating information of the highest value to navigators. The agencies employed for this purpose consist of its branch offices, of which there are 16 located at the chief harbors on the seaboard and the Great Lakes, voluntary contributions from shipmasters of all maritime nations, reports from American consular officers, and official data furnished by our own and foreign governmental agencies.

Thus there flows into the department a large stream of nautical information for the refreshment of the charts and books and for dissemination at once by means of suitable periodicals or by radio if urgent. The periodicals consist of a daily memorandum, a weekly bulletin, a weekly notice to mariners, four monthly and two quarterly pilot charts. These cover all the oceans and their circulation for the year amounted to a total of more than a million copies (1,101,464). Shipping has been notified from day to day of the location of icebergs and other damages to navigation.

No less activity was displayed in the preparation of charts and books for the use of the Navy, other public services, and the mercantile marine, as the statute directs; in fact, the year has been a record making one in that respect. This is the more gratifying when it is remembered that it has been accomplished without increase of appropriations. The condition that has to be met is this: All the great maritime nations of Europe have either stopped or greatly restricted the sale of their official charts and nautical books, and this has greatly increased the demand on the United States Hydrographic Office. Thus, after supplying official demands, which also are grow-

ing from year to year, the sales since the opening of the European war have been as follows:

Year.	Books.	Charts.
1914	3,436	22,955
1915	5,259	39,997
1916	7,203	52,666
Present rate	13,000	60,000

Although the personnel has not been increased for several years, the office has produced during the year 197 new charts, of which 9 were engraved and 188 were photozincographed. Nineteen new copper-plate chart engravings were finished during the year; 41 chart copper plates were extensively improved by the incorporation of new surveys and other important data, and 788 copper plates received minor amendments. The number of navigational charts printed during the year and delivered for sale and distribution was 172,104. Pilot charts were also printed and delivered as follows: 80,573 of the North Atlantic, 41,988 of the North Pacific, 25,910 of the Indian Ocean, 48,566 of the Central American waters, 10,665 of the South Atlantic, and 9,445 of the South Pacific Ocean.

NAVAL OBSERVATORY.

With increased and increasing speed of our warships, increased fighting ranges, and the continuing development of submarines and aircraft has come the necessity for new and more rapid methods of navigation and plotting, which the Naval Observatory has met by encouraging suggestions, aiding in the development of methods and instruments, making trial of all such as give promise of usefulness and furnishing to the service those that have proved of value.

The usefulness to navigation and to the country in general of the daily time service has been added to by the installation of two up-to-date transmitting clocks and arrangements for checking the actual emission of the radio time signals which are now received throughout the country and the contiguous oceans for several thousand miles.

The routine astronomical work of the observatory for keeping track of the heavenly bodies has been kept up, a photographic zenith tube telescope for determining the variation of latitude added to the plant, and the photographic work extended.

The 1916 Nautical Almanac contains improvements and additions over previous issues, and tables have been gotten out to add the times of sunrise and sunset and moonrise and moonset in future editions.

NAVAL HOME.

There are at present 123 beneficiaries in the United States Naval Home. Applications for admission to the home are more numerous than formerly owing to the fact that 20 years' service in the Navy or Marine Corps is no longer required by the regulations. Enlisted men may now be admitted to its benefits under the following classification:

(*a*) Discharged enlisted men of the Navy or Marine Corps who have served in the Mexican War, the Civil War, the War with Spain, the Philippine insurrection, or any other service where the armed forces of the United States have been employed, and their lives hazarded in military operations, and who are, by reason of wounds, sickness, old age, or other disability, unable to support themselves by manual labor.

(*b*) Discharged enlisted men of the Navy or Marine Corps who have become disqualified for further service by wounds, or injuries received, or by disease contracted in the service in the line of duty and who are unable to support themselves by manual labor.

(*c*) Retired enlisted men of the Navy or Marine Corps unable to support themselves by manual labor.

In accordance with the act approved June 30, 1914, pensioners in the Naval Home are permitted to receive their pensions. This new feature has contributed much to the comfort and happiness of the aged sailors.

Supernumeraries in the naval hospital, Las Animas, Colo., who have been honorably discharged by reason of disability incurred in line of duty, are given nominal admissions to the home, enabling them to share in the clothing allowance of about $50 per year and pocket money of $3 per month.

BUREAU'S WORKING FORCE.

The officers, clerks and other employees of the bureau have been working overtime to handle the immense amount of work placed on their shoulders because of the shortage in clerks. They are deserving of the highest praise for their untiring efforts, but relief should not be longer delayed. It is most urgently recommended that the very moderate increase in clerks and salaries be allowed at this time.

INSANITARY AND CONGESTED CONDITION OF OFFICES.

Last, but by no means least, the subject of the insanitary and congested condition of the offices of this bureau is again brought to the department's attention with the recommendation that the available machinery of the Government be enlisted to provide proper office space so that the health of the clerks may not be jeopardized. It is understood that various boards have reported on the insanitary and crowded condition of the offices of this bureau, but these conditions still exist and are daily becoming worse.

The Secretary's office is flooded with daily inquiries in regard to officers and men, and the principal personal work of the department is with Members of Congress who call to make inquiries on the subject of personnel. For this reason, and because of the intimate relation of this bureau to the office of the Secretary and to all bureaus and activities of the service requiring personal and immediate action, all the offices and live records of this bureau should be kept close together, and close to the office of the Secretary.

LEIGH C. PALMER,
Chief of Bureau.

APPENDIXES.

No. 1. Report of Hydrographer.
No. 2. Report of Superintendent of Naval Observatory.

TABLES.

Comparison of enlistments, extensions, discharges, deaths, retirements, and desertions for the fiscal years 1915 and 1916.

	1915	1916	Increase.	Decrease.
Total men enlisted	17,704	20,324	2,620	.....
Total extended enlistments	1,149	750	.....	399
Total discharged	16,877	17,278	401	.....
Died	245	204	.....	41
Retired	45	65	20	.....
Deserted	1,730	1,648	.....	82
Total	.....	.....	3,041	522
Net increase	.....	.....	2,519	.....

Comparative strength of enlisted personnel on June 30 of the fiscal years 1915 and 1916.

Total men in service June 30, 1915	52,561
Total men in service June 30, 1916	54,234
Increase	1,673

Enlistments, fiscal year 1916.

Applicants for enlistment and extension			89,812
Applicants accepted:			
First enlistments	13,169		
Reenlistments	7,155		
Total enlistments		20,324	
Extensions effective fiscal year		896	
Total enlistments and extensions		21,220	
Applicants accepted who failed to enlist		8,425	
Applicants rejected for physical disability	51,522		
Applicants rejected for other causes	8,645		
		60,167	
			89,812

Of the number rejected (60,167) the disqualifications of 706 were waived and they were enlisted in the number 20,324.

Summary of enlistments.

Number of enlistments at recruiting stations in the United States	14,264
Number of enlistments at naval stations in the United States	722
Number of enlistments in insular possessions	485
Number of enlistments on board receiving ships	1,488
Number of enlistments on board cruising vessels	3,365
Total	20,324

Enlistments.

	1914	1915	1916
First enlistments	13,780	11,413	13,169
First reenlistments over 4 months from date of discharge	978	987	640
First reenlistments within 4 months from date of honorable discharge	2,114	2,807	2,576
First reenlistments within 4 months from date of ordinary discharge	54	86	43
First reenlistments within 4 months from date of ordinary discharge; no benefits	39	18	21
Other reenlistments over 4 months from date of discharge	172	128	130
Other reenlistments within 4 months from date of honorable discharge	206	261	259
Other reenlistments within 4 months from date of ordinary discharge	6	17	16
Other reenlistments within 4 months from date of ordinary discharge; no benefits	13	16	15
Reenlistments within 4 months from date of discharge under honorable continuous service certificates	1,559	1,939	3,413
Reenlistments within 4 months from date of discharge under ordinary continuous service certificate	26	82	42
Total	18,947	17,704	20,324

Enlistments, by States.

City or town.	Applicants for enlistment.	Applicants rejected.		Applicants rejected whose disqualifications were waived.	Applicants accepted who failed to enlist.	Applicants enlisted.
		Physical defects.	Other causes.			
Alabama:						
Birmingham	456	306	79			71
Montgomery	16	12	2			2
Arkansas:						
Fort Smith	86	38	33	1		15
Little Rock	262	179	36			47
California:						
Los Angeles	932	560	2	35	111	259
Sacramento	281	76	131	1	5	69
San Diego	360	181	6	4	40	133
San Francisco—						
Recruiting station	1,363	271	285	5	16	791
Receiving ship	13					13
Training station	8					8
Colorado:						
Colorado Springs	55	44	3			8
Denver	636	366	111	16	16	143
Pueblo	180	131	23	1	1	25
Sterling	12	10				2
Connecticut:						
Bridgeport	356	173	27		110	46
Danbury	43	26	1		12	4
Hartford	559	278	21	3	152	108
New Haven	962	613	80	1	147	122
New London	160	70	16		50	24
Waterbury	309	193	24	1	73	19
District of Columbia: Washington	502	256	10	44	5	231
Georgia:						
Americus	26	18	7			1
Atlanta	962	547	170		2	263
Savannah	466	379	29			58
Illinois:						
Belleville	1	1				
Cairo	7	6			1	
Chicago—						
Recruiting station	2,105	1,314	281		50	460
Training station	49	1			1	47
Moline	86	42		3	21	23
Peoria	9	7	1			1
Quincy	8	6				2
Springfield	5	4	1			
Indiana:						
Evansville	372	227	89	2		56
Fort Wayne	193	102	57	1	2	32
Indianapolis	743	412	153	35		170
South Bend	128	94	11		5	18
Terre Haute	300	186	58	5	1	55
Iowa:						
Burlington	192	136	1	5	23	32
Cedar Rapids	131	79		1	26	26
Davenport	192	160	1		17	14

Enlistments, by States—Continued.

City or town.	Applicants for enlistment.	Applicants rejected.		Applicants rejected whose disqualifications were waived.	Applicants accepted who failed to enlist.	Applicants enlisted.
		Physical defects.	Other causes.			
Iowa—Continued.						
Des Moines	381	219	6	8	51	185
Dubuque	1	1				
Fort Dodge	104	63	3		19	19
Keokuk	7	5	1			1
Sioux City	166	97	45		4	20
Waterloo	172	108		2	26	38
Kansas:						
Topeka	150	115	3		13	19
Wichita	354	228	10	5	40	76
Kentucky:						
Louisville	548	303	15		92	138
Paducah	3	3				
Louisiana:						
New Orleans	1,347	1,034	14		112	187
Maine:						
Bangor	470	292	2	16	67	109
Lewiston	169	108		9	7	54
Portland	595	368	26	24	47	154
Maryland:						
Baltimore	1,717	706	24	22	508	479
Massachusetts:						
Boston—						
Recruiting station	3,498	2,540	6	65	378	574
Receiving ship	257	2		2		255
Fall River	80	62			18	
Holyoke	173	105	1		38	29
Lowell	581	426	38	6	60	57
Pittsfield	278	61	105	4	79	33
Springfield	216	140	6		12	58
Worcester	598	342	57	2	108	91
Michigan:						
Detroit	944	740	3	1	108	92
Grand Rapids	144	119	1		11	13
Kalamazoo	154	103	3		36	12
Saginaw	109	86	1		15	7
Minnesota:						
Austin	33	14	14		2	3
Duluth	316	184	68	1	9	55
Minneapolis	1,112	536	266	30	16	294
Virginia	70	39	21		2	8
Missouri:						
Joplin	342	268	2	3	9	63
Kansas City	1,012	568	11	27	132	301
Sedalia	1					1
Springfield	8	5			1	2
St. Joseph	106	79	1	1	8	18
St. Louis	1,159	797	147	4	11	204
Montana:						
Butte	229	188	4		13	24
Nebraska:						
Lincoln	109	72	19			18
Omaha	549	378	68		7	96
New Hampshire:						
Dover	98	56	1	2	11	30
New Jersey:						
Camden	33	22			4	7
East Orange	11	8	1		2	
Elizabeth	255	137	8	2	84	26
Hackensack	4	2			2	
Hoboken	124	86	1		31	6
Newark	2,219	1,414	212	10	321	272
Patterson	769	472	49	2	169	79
Trenton	68	42		1	16	10
New York:						
Albany	768	383	196	7	54	135
Binghamton	281	142	83		4	52
Brooklyn	4,548	2,928	410	3	617	593
Buffalo	1,236	946	37	22	67	186
Elmira	662	329	300			33
Jamestown	4					4
Long Island City	96	56	21		9	10
New York—						
Recruiting station	8,857	6,619	182	10	1,066	990
Receiving ship	611	170			8	433

Enlistments, by States—Continued.

City or town.	Applicants for enlistment.	Applicants rejected.		Applicants rejected whose disqualifications were waived.	Applicants accepted who failed to enlist.	Applicants enlisted.
		Physical defects.	Other causes.			
New York—Continued						
Rochester	1,069	516	477	1	11	65
Schenectady	286	126	68	.....	16	76
Syracuse	594	319	190	2	3	82
Troy	276	135	94	1	16	31
North Carolina:						
Charlotte	516	339	34	.....	68	75
Raleigh	427	258	27	.....	74	68
Winston-Salem	238	185	6	.....	31	16
North Dakota:						
Fargo	164	95	38	.....	1	30
Ohio:						
Akron	368	203	2	4	97	66
Cleveland	930	565	2	34	188	175
Cincinnati	1,064	527	5	3	216	316
Columbus	416	205	10	.....	66	135
Dayton	321	198	17	.....	36	70
Toledo	200	151	4	.....	28	17
Youngstown	133	45	14	.....	55	19
Oklahoma:						
Muskogee	355	158	94	2	3	100
Oklahoma City	601	328	140	2	13	120
Oregon:						
Eugene	51	39	6	.....	.....	6
Portland	495	216	59	.....	.....	220
Pennsylvania:						
Allentown	303	123	7	.....	104	69
Erie	45	23	15	.....	.....	7
Harrisburg	52	38	.....	.....	8	6
Johnstown	237	113	27	2	65	32
Philadelphia—						
Recruiting station	2,392	1,304	.....	26	570	518
Receiving ship	299	20	.....	3	.....	279
Pittsburgh	1,167	645	45	33	229	248
Reading	53	32	.....	.....	10	11
Scranton	535	318	12	4	86	119
Wilkes-Barre	144	79	7	.....	22	36
Rhode Island:						
Newport—						
Training station, recruits	433	264	7	.....	40	122
Training station, crew	145	.....	.....	.....	.....	145
Providence	1,186	741	283	.....	57	105
Woonsocket	190	157	.....	.....	9	24
South Carolina:						
Charleston	329	188	36	8	14	91
South Dakota:						
Sioux Falls	76	42	23	.....	.....	11
Tennessee:						
Chattanooga	455	297	89	.....	.....	69
Knoxville	354	271	49	.....	1	33
Memphis	353	252	59	.....	.....	42
Texas:						
Abilene	262	125	80	.....	5	52
Austin	169	88	3	1	43	35
Beaumont	157	99	14	3	12	32
Dallas	1,045	531	240	12	10	264
Denison	383	176	127	3	10	70
El Paso	778	491	36	3	53	198
Fort Worth	555	309	165	.....	3	78
Galveston	424	315	38	6	19	52
Houston	510	278	78	17	46	106
San Antonio	533	319	110	8	16	88
Texarkana	405	231	84	2	6	84
Tyler	230	137	58	.....	.....	35
Waco	626	317	189	5	11	109
Wichita Falls	420	182	99	5	28	116
Utah:						
Ogden	148	113	6	.....	12	17
Salt Lake City	630	270	55	2	109	196
Virginia:						
Danville	195	114	18	1	31	32
Fredericksburg	1	.....	.....	.....	.....	1
Norfolk (receiving ship)	985	489	37	4	106	348
Richmond	701	409	103	3	77	112
Roanoke	281	241	6	1	9	25

Enlistments, by States—Continued.

City or town.	Applicants for enlistment.	Applicants rejected.		Applicants rejected whose disqualifications were waived.	Applicants accepted who failed to enlist.	Applicants enlisted.
		Physical defects.	Other causes.			
Washington:						
Aberdeen	45	24	7	.....	.....	14
Puget Sound (receiving ship)	306	130	20	.....	1	155
Seattle	955	777	66	.....	4	108
Spokane	297	212	28	.....	2	55
Wisconsin:						
La Crosse	11	3	6	.....	.....	2
Madison	87	41	24	.....	17	5
Marinette	53	17	6	.....	16	14
Milwaukee	805	449	108	6	103	145
Oshkosh	131	79	8	.....	16	28
Racine	62	40	14	2	5	3
Wausau	96	41	12	.....	22	21
Wyoming:						
Cheyenne	109	69	22	.....	1	17
Total enlisted at recruiting stations	82,099	49,451	8,054	664	8,344	16,250
On vessels, and at naval stations	6,817	2,071	591	42	81	4,074
Grand total	88,916	51,522	8,645	706	8,425	20,324

Enlistments extended since Aug. 12, 1912.

	1913	1914	1915	1916	Total.
For 1 year	304	208	573	387	1,472
For 2 years	32	11	92	83	218
For 3 years	11	81	195	145	432
For 4 years	306	281	289	138	1,014
Total	653	581	1,149	753	3,136

Men serving under extension of enlistment.

Extension for 1 year	422
Extension for 2 years	112
Extension for 3 years	96
Extension for 4 years	1,297
Total	1,927

Discharges.

	1914	1915	1916
With honorable discharge, expiration of enlistment	7,411	8,254	9,901
With ordinary discharge, expiration of enlistment	528	460	383
With ordinary discharge, expiration of enlistment, not recommended for reenlistment	70	83	30
With dishonorable discharge	665	1,033	1,000
With bad-conduct discharge	1,361	2,728	2,296
For physical disability	1,014	900	860
For unfitness	1	.....	.....
For inaptitude	164	112	95
As undesirable	877	880	631
For miscellaneous reasons	332	99	100
By purchase	451	2,303	1,967
Enlistment canceled	52	15	15
Total	12,926	16,867	17,278
Died	227	245	204
Applicants for retirement	60	45	65

Desertions for fiscal year ending June 30.

	1913	1914	1915	1916
Absentees during year	3,237	2,728	2,320	2,064
Absentees voluntarily returning to service	434	488	480	384
Absentees apprehended and delivered	531	561	438	296
Total surrendered and apprehended	965	1,049	918	680
Absentees at large June 30	2,272	1,679	1,402	1,384
Apprehended and surrendered; convicted of desertion	251	286	328	297
Total	2,523	1,965	1,730	1,681
Number at large June 30, who have subsequently had mark of desertion removed	.....	.....	.....	33
Total desertions for fiscal year	2,523	1,965	1,730	1,648
Total number of enlisted men in service during fiscal year	66,702	68,041	71,107	73,265
Percentage of desertion based upon total number in service	3.77	2.89	2.43	2.24
Decrease of percentage for 1916	.....	.....	.....	.19

Citizenship, year ending June 30, 1916.

	Native born.	Naturalized.	Aliens declared intentions.	Aliens resident in the United States.	Aliens nonresident in the United States.	Porto Rico.	Guam.	Samoa.	Philippines.	Total.
Petty officers	17,868	1,758	13	4	5	10	9	8	147	19,822
Other rates	31,384	802	20	93	222	31	108	76	1,676	34,412
Total	49,252	2,560	33	97	227	41	117	84	1,823	54,234

Number and percentage of citizenship.

	1911	1912	1913	1914	1915	1916
Petty officers ..... number	15,479	15,598	17,204	18,556	19,590	19,822
Native born ..... per cent	84.95	85.75	87.04	88.33	89.25	90.14
Naturalized ..... do	13.49	12.93	11.70	10.42	9.80	8.87
Declared intentions ..... do	.57	.40	.31	.19	.09	.07
Aliens resident in the United States ..... do	.12	.07	.07	.09	.08	.02
Aliens nonresident in the United States ..... do	.17	.08	.09	.07	.07	.02
Natives of colonial possessions ..... do	.70	.77	.79	.89	.71	.88
Citizens of the United States ..... do	98.44	98.68	98.75	98.78	99.05	99.01
Enlisted men other than petty officers ..... number	32,133	31,557	30,864	34,110	32,971	34,412
Native born ..... per cent	92.13	92.46	92.00	92.49	91.50	91.20
Naturalized ..... do	2.99	2.57	2.68	1.86	1.87	2.33
Declared intentions ..... do	.32	.21	.21	.13	.09	.06
Aliens resident in the United States ..... do	.47	.47	.34	.34	.35	.27
Aliens nonresident in the United States ..... do	.57	.48	.85	.70	.70	.64
Natives of colonial possessions ..... do	3.52	3.81	3.92	4.48	5.51	5.50
Citizens of the United States ..... do	95.12	95.03	94.67	94.34	93.34	93.54
Citizenship of the total enlisted force ..... number	47,612	47,515	48,068	52,667	52,561	54,234
Native born ..... per cent	89.79	90.20	92.22	91.02	90.68	91.81
Naturalized ..... do	6.41	6.05	5.91	4.88	4.80	4.51
Citizens of the United States ..... do	96.20	96.25	96.13	95.90	95.47	95.54

Nativity and residence of the enlisted force, by States.

State.	Born.	Residence.	State.	Born.	Residence.
Unknown	12	....	Nebraska	[illegible]	[illegible]
Alabama	72	82	Nevada	[illegible]	[illegible]
Alaska	[illegible]	[illegible]	New Hampshire	[illegible]	[illegible]
Arizona	28	9	New Jersey	1,[illegible]	1,[illegible]
Arkansas	43	46	New Mexico	47	[illegible]
California	[illegible]	1,[illegible]	New York	[illegible]	[illegible]
Colorado	[illegible]	46	North Carolina	[illegible]	[illegible]
Connecticut	95	49	North Dakota	[illegible]	[illegible]
Delaware	73	[illegible]	Ohio	1,[illegible]	1,[illegible]
District of Columbia	[illegible]	[illegible]	Oklahoma	[illegible]	[illegible]
Florida	13	[illegible]	Oregon	[illegible]	[illegible]
Georgia	[illegible]	[illegible]	Pennsylvania	[illegible]	[illegible]
Idaho	41	[illegible]	Rhode Island	[illegible]	[illegible]
Illinois	1,[illegible]	1,[illegible]	South Carolina	[illegible]	[illegible]
Indiana	[illegible]	[illegible]	South Dakota	[illegible]	13
Iowa	[illegible]	[illegible]	Tennessee	[illegible]	[illegible]
Kansas	[illegible]	[illegible]	Texas	1,[illegible]	1,[illegible]
Kentucky	45	73	Utah	[illegible]	[illegible]
Louisiana	52	43	Vermont	[illegible]	19
Maine	[illegible]	[illegible]	Virginia	[illegible]	1,[illegible]
Maryland	[illegible]	[illegible]	Washington	15	[illegible]
Massachusetts	41	[illegible]	West Virginia	[illegible]	[illegible]
Michigan	[illegible]	[illegible]	Wisconsin	[illegible]	[illegible]
Minnesota	[illegible]	[illegible]	Wyoming	[illegible]	[illegible]
Mississippi	53	[illegible]	[illegible]	..	12
Missouri	[illegible]	[illegible]			
Montana	[illegible]	[illegible]	Total	[illegible]	[illegible]

Nativity and residence of the enlisted force, by other countries.

Country.	Born.	Residence.	Country.	Born.	Residence.
[illegible]	4		[illegible]	[illegible]	...
[illegible]			[illegible]	73	
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	4		[illegible]		...
[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]		[illegible]	[illegible]	1	[illegible]
[illegible]			[illegible]	[illegible]	...
[illegible]	[illegible]		[illegible]	[illegible]	...
[illegible]			[illegible]	[illegible]	2
[illegible]	[illegible]		[illegible]		....
[illegible]			[illegible]	[illegible]	....
[illegible]			[illegible]	16	1
[illegible]			[illegible]	[illegible]	1
[illegible]	27	3	[illegible]	[illegible]	....
[illegible]			[illegible]	[illegible]	
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	97	10	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	4	[illegible]
[illegible]	..		[illegible]	[illegible]	3
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	....
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	....
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	....
[illegible]	[illegible]		[illegible]	[illegible]	....
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	......
[illegible]	[illegible]	11	[illegible]	[illegible]	[illegible]
[illegible]			[illegible]	[illegible]	[illegible]
[illegible]	3	4	[illegible]		....
[illegible]			[illegible]	[illegible]	....
[illegible]	2				
[illegible]	..		Total	[illegible]	[illegible]

Summary of native and foreign born.

	1915	1916	Increase.	Decrease.
Native born	47,505	49,252	1,747	.....
Foreign born	5,056	4,982	.....	74
Total	52,561	54,234	1,747	.....
Net increase	.....	.....	1,673	.....

States furnishing the greatest number of native born.

New York	6,895	Maryland	1,501
Pennsylvania	4,799	Virginia	1,352
Massachusetts	3,441	California	1,269
Illinois	2,571	Wisconsin	1,102
Ohio	2,178	Georgia	1,089
New Jersey	2,118	Michigan	1,083
Texas	2,040	North Carolina	1,032
Indiana	1,672		
Missouri	1,599	Total	35,741

Sixteen States furnished 65 per cent of the enlisted force.

Greatest number of foreign born, by countries.

	1915	1916	Increase.	Decrease.
Philippines	1,737	1,826	89	.....
Germany	540	486	.....	54
Ireland	372	341	.....	31
Sweden	251	235	.....	16
China	208	197	.....	11
Japan	167	142	.....	25
England	181	175	.....	6
Norway	165	144	.....	21
Italy	157	174	17	.....
Canada	139	137	.....	2
Russia	130	119	.....	11
Total	4,047	3,976	106	177
Net decrease	.....	.....	.....	71

Color.

White	50,496
Negro	1,262
Chinese	228
Japanese	143
Filipino	1,823
Samoan	84
Chamorro	117
Hawaiian	20
American Indian	20
Porto Rican	41
Total	54,234

APPENDIX No. 1.

REPORT OF THE HYDROGRAPHIC OFFICE.

HYDROGRAPHIC OFFICE,
Washington, D. C., September 27, 1916.

To: Bureau of Navigation.
Subject: Report of the Hydrographer for the fiscal year ending June 30, 1916.

1. I respectfully submit the following report of the operations of the Hydrographic Office for the past fiscal year.

2. Capt. Thomas Washington, United States Navy, was Hydrographer until June 23, 1916, when he was relieved by me.

3. This office is charged by law with "the improvement of the means for navigating safely the vessels of the Navy and of the mercantile marine, by providing, under the authority of the Secretary of the Navy, accurate and cheap nautical charts, sailing directions, navigators, and manuals of instructions for the use of all vessels of the United States, and for the use of navigators generally."

4. It is believed that during the past year the office has carried out its function conscientiously, earnestly, and faithfully.

5. In pursuance of the organic law cited in paragraph 3, the office has continued its effort to, in time, cover the entire world by its charts and sailing directions, in order to make our naval and mercantile vessels independent of foreign sources for such vital material, which in time of war would be closed to our citizens. This work is going on very satisfactorily and the benefit of it is very apparent during the present European war. Attention is invited to the necessity of a continuance of this policy. As a strategic measure, the United States can not afford to be dependent upon any foreign country for the means required to send its vesssels to any part of the world.

6. The office is from time to time in receipt of valuable information from foreign official and commercial sources sent in return for nautical information and news supplied them by this office. This policy of reciprocity is pursued and encouraged by the office, as it makes available for our own naval and merchant vessels information of great value, especially data as to ocean currents, dangers to navigation, etc.

7. Under section 432 of the Revised Statutes, "the Secretary of the Navy is authorized to cause to be prepared at the Hydrographic Office attached to the Bureau of Navigation in the Navy Department maps, charts, and nautical books relating to and required in navigation, and to publish and furnish them to navigators at the cost of printing and paper," etc. There is no authority vested in the Hydrographer or the Secretary of the Navy to supply publications of

this office except for official use or by sale at cost. This is unfortunate as occasional requests are made by Senators and Representatives in Congress to be supplied with certain charts for their own information or that of their constituents. Within limits these requests should be complied with, and it is earnestly recommended that authority be sought to permit this, as refusal reacts to the detriment of the Hydrographic Office, and such authority has been given to a coordinate chart-making bureau, the Coast and Geodetic Survey.

ICE PATROL.

8. This service, so important to the safety of vessels passing over the trans-Atlantic steamship lanes, has been continued by the Coast Guard ships *Seneca* and *Tampa*, and this office desires to express its appreciation of the efficiency and hearty cooperation in which this public duty has been carried out. The patrol vessels were engaged on this duty from February 26 to July 3, 1916, and maintained constant communication by radio with passing vessels and with the Branch Hydrographic Office at New York, transmitting information as to all ice seen, together with its location and drift. These data were immediately published by this office in the Daily Memorandum and the Weekly Hydrographic Bulletin and sent broadcast to all vessels at sea by the Naval Radio Station at Radio, Va. Ice reports have also been sent by request to the London Board of Trade. This office greatly appreciates the cooperation in this service of the various merchant vessels in promptly transmitting reports for the warning of ships navigating within the ice limits. In view of the success of the patrol in giving warning to vessels using the trans-Atlantic lanes, no effort has seemed necessary to attempt to change the authorized trans-Atlantic lanes.

Table showing details of work of Hydrographic Office for the fiscal year 1916.

		Appropriated.	Expended.
Main office:			
Salaries		$128,660.00	$122,494.78
Contingent and miscellaneous expenses	$26,000.00		
Received from sales	13,307.70		
		39,307.70	[1] 38,635.34
Contingent expenses, Navy Department (allotted)		150.00	115.39
Public printing and binding (allotment)		25,000.00	23,245.67
Branch hydrographic offices:			
Contingent expenses		10,000.00	[1] 9,999.43
Services, necessary employees		17,960.00	17,888.00
Total		216,077.70	212,368.06

[1] Estimated.

Vouchers and requisitions handled:
1,035 sets of vouchers (estimated).
340 sets of requisitions.

Correspondence:
Received, 20,060 letters (estimated).
Received, 705 books and pamphlets.
Sent, 5,000 letters (estimated).

RESTRICTED OFFICE CONDITIONS.

9. The space at present assigned to this institution is inadequate and is daily becoming more so. It is requested that additional space be provided for the expansion of the office, as the space now available is too crowded for health or safety. A good economic and efficient

policy would contemplate the housing of the Navy Department, all its bureaus and accessory offices, in a building specially built for the purpose, or else the scientific offices should be combined in a special building designed for the purpose.

EMPLOYEES.

10. The work of the office has increased greatly during recent years, and much complaint is made from time to time that the office is slow or negligent in filling orders from agents for the supply of charts for sale to the merchant service, while the fact is that the present force can not fully meet the work demanded, and an increase of personnel is urgent to handle this business. For several years past this office has asked for a moderate increase of its force, but has been unable to obtain it, although the evident necessity has been acknowledged by superior authorities. The work has now increased to such an extent that it can not properly be executed by the available force, and it proceeds in a more or less spasmodic way by the increased effort of the personnel. It is earnestly requested that every effort be made to obtain the necessary increase of force in order to efficiently pursue the work. There is urgently requested in the main office one additional clerk, class three; the division of chart construction needs an increase of three draftsmen, one plate printer, and one assistant lithographic transferer; the division of chart supply needs three additional draftsmen and two laborers; the division of sailing directions needs two additional nautical experts; and the division of pilot charts and branch offices needs one additional nautical expert, one clerk, and one helper. The attention of the department is invited to the pay of the lower grades of draftsmen and laborers, which causes continuous transfers from this office to other offices and departments of the public service whose scale of pay is higher. The most pressing need of this office is an increase in pay of these lower grades, in order that the office may retain its employees and not be embarrassed by the frequent loss of men, which interferes with the efficiency of its service.

11. Attention is invited to the discrimination now existing against the employees of this office in regard to pay, and the good offices of the department are requested to ask the Congress to remove this injustice. Employees of this office receive from $216 to $400 less pay than that received by employees of similar bureaus doing the same work. A comparison may justly be made with the pay of the employees of the Coast and Geodetic Survey, and of the Geological Survey, where practically identical work is done. Computers in this office average $216 less per annum, engravers $270, draftsmen about $400, while assistants and nautical experts are still more underpaid. The clerical force also averages less pay here by about $84. It is deemed most necessary that this discrepancy should be rectified as its existence causes constant changes and withdrawals in the office, which handicaps the work and efficiency.

SURVEYS.

12. There are now in the field under the direction and supervision of this office surveying parties, consisting of the U. S. S. *Hannibal*, employed in a survey of the coast of Nicaragua in the vicinity of Cape Gracias a Dios, a locality of great danger to the merchant marine; the U. S. S. *Leonidas* is at present continuing the survey of the east

coast of Panama from the canal to the Panaman limits; this locality is and will be much frequented by our merchant marine as well as by our naval vessels; the U. S. S. *Paducah* is continuing the survey of the south coast of Cuba, opening up enormous bays and channels of great value to our merchant marine and of important use to our Navy as drill grounds for the winter target and torpedo practices, etc.; the U. S. S. *Eagle* is continuing the survey of the west coast of Haiti, a locality constantly visited by our naval vessels as well as by our merchant fleet; there are, besides the above, surveys being made at Guam, American Samoa, and in the vicinity of the Guantanamo Naval Station. All of these surveys are being pursued under the appropriation "Ocean and Lake surveys." Attention is invited to the valuable work being done by these vessels, and it is earnestly requested that the appropriation specified be increased to enable the office to continue and augment this work so important to seafaring people. From time to time the office is asked to survey certain localities in the interest of commercial parties, and, while desirable, it can not be done because of the lack of funds. Where these surveys are necessary in the interests of much commerce, the office should be in a position to comply.

Further details of surveying work covered by these and other naval vessels are as follows:

Cape Cruz-Casilda survey.—On the south shore of the island of Cuba, the U. S. S. *Paducah* has rounded out the Cape Cruz-Casilda survey proper, the past season having been spent in going over the whole field of this survey investigating doubtful areas, erecting beacons, placing buoys, dragging channels, etc. In addition, the *Paducah* resurveyed the banks stretching from the bordering reef of this survey to the Isle of Pines region and made a reconnaissance of the entry into the latter region. Plans for the incorporation of these surveys into finished charts have been made and all drawings have been prepared except the "Approaches to Tunas de Zaza."

Nicaraguan survey.—The past season's work was among the reefs and shoals bordering Morrison and Mosquito cays. This survey is to continue down the coast and will consume several years. The results of this survey up to and including the season of 1914–15 have all been incorporated in new drawings.

Panama survey.—The past season's work was immediately eastward of the Gulf of San Blas. There are about two more years' work required to complete the north coast of Panama, and, while in this region with the whole scheme intact, it appears that this should be done. The smooth sheet, covering the seasons of 1914–15, is now being prepared in this office.

Haiti.—The U. S. S. *Eagle* continued the work of previous years on the coast of the island of Haiti, completing the surveys of Acul Bay and approaches and of Cayemites Bay; connected the triangulation of Gonaives with that of the approaches to Port au Prince; made astronomical observations for latitude, longitude, and azimuth at Cayemites Bay; and made a reconnaissance of the coast between Henne Bay and Mole St. Nicolas. In addition to work on the coast of Haiti, the *Eagle* established ranges for fleet anchorages at Guantanamo Bay and completed the triangulation incident thereto. All data received as a result of the season's work, 1914–15, has been incorporated in new and old charts.

Samoan survey.—This survey was completed with the exception of the hydrography in the harbor at Pago Pago, and this is to be completed as soon as weather and other conditions will permit.

Guam survey.—Specifications, boat sheets, and other data were prepared in the Hydrographic Office for this survey and the *Supply* equipped for that purpose. No reports from it have been received to date.

Guantanamo survey.—The topographic survey in the vicinity of Guantanamo has been extended over an area of approximately 10 square miles. A known distance for the adjustment of range finders at Guantanamo was computed and marked by this survey party.

13. Several United States naval vessels not engaged in hydrographic surveying have furnished this office with extensive hydrographic information. The following table gives a list of these vessels, together with the nature of the information furnished.

Work of this kind is of great value to the service in advancing and improving our charts and sailing directions, and is highly appreciated by this office. The thanks of the office are particularly due to the commander in chief of our naval force on the Asiatic Station for a large amount of valuable hydrographic information regarding those coasts.

Ship.	Commanding officer.	Locality.	Remarks.
Fanning	Lieut. C. A. Richards	South coast of Haiti	Reconnoissance.
Glacier	Lieut. Commander A. Kautz	San Bartolome, Mexico	Soundings.
Jarvis	Lieut. A. S. Kibbee	Haiti	Reconnoissance of coast.
McDougal	Lieut. Commander A. P. Fairfield.	Santo Domingo and Haiti	Do.
Marietta	Commander W. P. Scott	do	In search of rock off Point Gravois.
New Orleans	Commander N. E. Irwin	Gulf of Lower California	Examination of shoals off San Ignacio.
North Carolina	Lieut. Commander J. J. Hyland.	Beirut, Turkey	Tracing of Beirut, giving soundings in Inner Basin.
Perry	Lieut. H. A. McClure	West coast of Lower California.	Search for pinnacle rock off Point Tosca.
Prairie	Commander W. S. Crosley	Haiti	Survey data, Cape Haitien harbor and approaches.
Raleigh	Commander C. D. Stearns	West coast of Mexico	Extensive hydrographic information, including tracing of Topolobampo Entrance; also running survey of Penas Entrance, Mexico.
San Diego	Capt. A. H. Robinson	Topolobampo, Mexico	Tracings showing soundings of Topolobampo, Mexico.
Memphis	Capt. B. C. Decker	Chesapeake Bay	Soundings in entrance.
Walke	Lieut. R. A. Theobald	Santo Domingo	Magnetic observations.
Wheeling	Commander E. H. Watson	East coast Mexico	General hydrographic data.
Birmingham	Commander D. F. Sellers	Porto Rico	Reconnoissance of harbor.
Baltimore	Commander F. H. Clark	Cape Henry	Sounding southwest of Cape Henry.
Cassin	Lieut. Commander W. N. Vernou	Santo Domingo	Reconnoissance of harbors south and east coasts of Santo Domingo.
Jenkins	Lieut. A. W. Sears	Haiti	Reconnoissance of certain harbors.
Cummings	Lieut. Commander G. F. Neal	do	Do.
Patterson	Lieut. J. H. Newton	do	Do.

CHART CONSTRUCTION.

14. One hundred and ninety-seven new charts were published, 9 of which were engraved and 188 were photozincographed.

15. Nineteen new copper plate chart engravings were finished during the year. Forty-one copper plate charts have been extensively improved by the incorporation of new surveys and other important data and 788 copper plates received minor amendments. The meteorological data (wind roses) for the pilot chart of the Central American waters have been engraved in copper for the months of September, October, November, and December. The copper plates of the special coast charts Nos. 447a, 621, 1216, 1302, 1442, 2124, and plan charts Nos. 1335 and 2178, on which the engraved work had become worn from frequent printing, were partly or wholly recut. New electrotype basso plates of charts Nos. 21, 1007, 1188, 1231, 1408, 1411, 1412, 2283, 2600, and 2601 were made, which required very extensive corrections. As the charts come up for new editions the old compass diagrams are being replaced by the new standard, marginal projections are being placed on plan charts, seals are being changed, and the chart number and price are being engraved in two places on each plate.

16. One hundred and eighty-eight new charts were reproduced by photozincography during the fiscal year. Seventy-nine charts, the previous editions of which have been printed from stone or zinc, were reconstructed and carried through the entire process of zincography; of these 28 were extensively improved by the incorporation of new surveys and other important data and 51 received minor amendments. Forty charts were reprinted from existing zinc plates, which require only minor corrections before printing.

17. The upkeep of the rapidly increasing stock of engraved and zinc chart plates, and the publication of the 4 monthly and 2 quarterly pilot charts, together with a considerable amount of work not chargeable to navigational charts, absorbed a large part of the energies of the employees.

18. In connection with the care of the engraved plates, 64 charts have been electrotyped in the electrotyping laboratory of the office; these comprise 54 altos and 10 bassos. The plant was inoperative for a month, owing to some difficulty experienced with the acid solutions; the Bureau of Standards, after testing the solutions, furnished a new formula, which has proved very satisfactory.

19. The number of navigational charts printed during the year and delivered for sale and distribution was 172,104. Pilot charts were also printed and delivered as follows: 80,573 of the North Atlantic, 41,988 of the North Pacific, 25,910 of the Indian Ocean, 48,566 of the Central American waters, 10,665 of the South Atlantic, and 9,445 of the South Pacific.

20. On June 30, 1915, editions of 322 charts, consisting of 276 engraved and 46 lithographic charts, for which requisition had been made by the division of chart supply, remained unprinted; on June 30, 1916, editions of 170 charts, of which 136 were engraved and 34 lithographed charts, remained unprinted. The perceptible reduction in the number of charts unprinted at the end of the past fiscal year is due to an arrangement made with the Geological Survey by means of which editions of 162 large charts were printed. Without this

timely aid the Hydrographic Office, with its present equipment, would have been further in arrears with its unprinted list of charts than was the case on June 30, 1915.

21. All the important Hydrographic Office charts covering the American waters are engraved on copper plates, and they have been printed on the power presses directly from the plates. The coasting charts of the Atlantic coast, Central American, and West Indian waters, Nos. 941, 942, 943, 944, 948, 1007, 1290, 1411, and 1412, etc., for which the demand is great, are consequently printed several times a year, and, since the plates for these charts are large and the editions requested are usually heavy, a good part of the time of the plate printers is consumed in printing a comparatively small number of charts. In order to relieve as much of the pressure of work on the copper plate printing section as possible, it is the intention to transfer these most important charts to zinc plates; charts Nos. 948, 1290, and 1411 are already on zinc, and Nos. 1007 and 1412 will be so shortly.

22. The computing section has completed the chart for the variation of the compass for the epoch of 1915. Determinations of the annual variation and rate of change for the latest epoch have been placed on all the new charts in addition to those brought up for correction. New variation lines have been placed on the general charts and also variation lines and annual rate lines on all the pilot charts. Magnetic data from all available sources have been collected and indexed.

23. Distances by the shortest navigable routes, together with numerous radio distances, have been computed and nautical inquiries investigated. A revision of Hydrographic Office publication No. 117 was completed. The measurement of the coast line of various countries, and the determination of latitudes and longitudes of various radio stations have been determined. Computation of projections for plans and charts and triangulation computations and deduction of tidal elements from the field records of surveys in progress have been made.

24. In the tabulated tables at the end of this report an attempt has been made to show the variety and number of regular and odd items of work which must be performed by the drafting sections.

25. In addition to the construction of new and the upkeep of old navigational charts and the preparation of British Admiralty charts for reproduction, there have been a large number of miscellaneous items undertaken which have meant a great deal of work. The more important of these items are briefly touched on in the following:

A series of 28 index charts showing the charts, sailing directions, and light lists issued by the Hydrographic Office was completed and published. The work required for each of these charts was fully as much as that required for the reproduction of one British Admiralty chart.

Twenty-four index charts for new or revised editions of Hydrographic Office publications were printed. All of them had to go through the entire process of photozincography, and on some of them considerable work was necessary in preparing the original.

There were prepared, mounted, and assembled on mounting cloth a series of charts showing on a large scale certain distinctive areas of the world, such as the Atlantic, Pacific, and Indian Oceans, the

Caribbean and Mediterranean Seas, and numerous others, amounting in all to 35.

A series of 13 photographic black prints were prepared for the commander in chief, Atlantic Fleet.

A series of twelve strategic plotting charts for the Naval War College is now being prepared. Three of them have already been printed on zinc and the original for the fourth is well advanced.

Lieut. John C. Soley, in charge of the branch hydrographic office at New Orleans, prepared the rough drafting for a current chart showing the currents in the North Atlantic for the month of May. A smooth drafting was made in this office which became the original for the photozincographic process, the finished product appearing as a supplement to the North Atlantic Pilot Chart for the month of May.

NOTICE TO MARINERS.

26. This important current publication requires the services of one nautical expert as editor, and two nautical experts as assistants, who compile, analyze, and prepare the data weekly, from world-wide sources, for its publication. Its importance is self-evident, inasmuch as it constitutes the basis for the correction of charts, sailing directions, light lists, and other publications issued by the Hydrographic Office.

27. As heretofore reported, the edition is constantly increasing in size, and the demand for it becomes greater from year to year. During the fiscal year ending June 30, 1916, there were published 52 numbers, 295,950 whole Notices and 258,200 Extracts (Section X). The number of paragraphs published was 3,963, an increase of 131 over the previous year. The information published therein was limited entirely to such items for the correction of charts and sailing directions as are absolutely necessary and essential to safe navigation, such as changes in lights, buoys, beacons, wrecks, and shoals. Information regarding ports and harbors, and similar hydrographic information, formerly published was omitted, in order to keep down the cost of printing, although the publication of such would still be a desirable feature, were the available appropriation not limited and sufficient to permit its resumption.

SAILING DIRECTIONS.

28. The preparation of numerous volumes of sailing directions has engaged the attention exclusively of two nautical experts. In addition to the above, one nautical expert, employed in the preparation of the Weekly Notice to Mariners, has devoted all spare time to this work also, and the services of all officers attached to the Hydrographic Office have likewise been utilized; in consequence of which, the work has progressed most favorably.

29. These publications are of great, in fact, vital importance to the Navy and commercial marine, and a valuable asset. In order to carry the work to completion and to keep the publications up to date, an addition of two nautical experts is necessary.

CHART SUPPLY.

30. During the past year the amount of hand correction required to keep charts up to date has greatly increased over any previous

year, owing largely to the continued reproduction of British Admiralty charts. The number of draftsmen employed for this purpose remains the same as heretofore, and at times it was impossible to keep the work up to date; sometimes it was necessary to issue charts which had not been corrected for the three previous Notices to Mariners. In order not to allow this condition to prevail draftsmen were borrowed from the division of chart construction, and the work pulled up, but as soon as these temporary services were lost, it has been found almost impossible to keep level with the Notices.

31. The introduction of instruments wherewith to correct charts has greatly facilitated this work during the last part of this year. A variety of characters, such as buoys, beacons, light vessels, etc., was obtained in the form of steel stamps; and two fonts of printing type, 8-point and 6-point, were also purchased, with appropriate type holders, and by their use the time of making such corrections as can be made with these instruments is considerably shortened. The addition of a motor-driven eraser has also been of great assistance.

32. The above pertains to the Hydrographic Office chart section. The Coast Survey section has not experienced much increase in correction work; in fact, by the reproduction of British Admiralty charts on our own plates, the correction work of that branch has been reduced.

33. As can be seen by the statistical reports attached, compared with those of previous years, the issues and sales have increased enormously and it is only by constant applications for assistance from other divisions that this part of the work has been kept up. The number of packages sent out in response to individual requests is over 2,000 greater than last year.

34. The remaining portfolios of the station catalogues have been printed, thus completing the work which was started last year. Every portfolio issued, covering the entire world, is now available in loose-leaf form.

PUBLICATIONS.

35. *Daily Memorandum.*—From among the various marine data reports coming in each day those affecting safe navigation, such as the presence of icebergs, derelicts, dangerous wreckage, and other news of immediate interest to mariners, were published at once on this sheet by means of the mimeograph and sent to the several branch hydrographic offices and to the Atlantic Fleet. The number of copies thus circulated was 344 each day.

36. In connection with this work reports of dangers off our coast were furnished to the Naval Communication Service and broadcasted; also telephoned to the head office of the Coast Guard, and, in case of buoys, to the Bureau of Lighthouses. Similar action was taken by the branch hydrographic offices with original reports affecting their respective districts. Thus there has been effective cooperation among the several bureaus concerned with drifting buoys and dangers to navigation—Naval Communication Service, Lighthouse Bureau, and this office and its branches.

37. *Hydrographic Bulletin.*—This has appeared weekly in editions averaging a little over 5,000 copies. Its contents comprise all the more important items that have appeared in the Daily Memorandum,

besides others of interest to navigators. The total number of paragraphs for the year was 2,086.

38. Among the articles appearing in the Bulletin were the following:

New charts issued.

Port facilities.

International ice observation and ice patrol service, 1916.

Modifications of time signal by radio.

Reports of dangers to navigation disseminated by radio.

Oil spots.

Bottle paper drifts.

Current in the Gulf of California.

Preventing fog with oil.

Temporary torpedo ranges.

Questions and answers.

Radio direction finder.

Currents experienced in the Pacific.

Special signals for surveying vessels of the United States employed in hydrographic surveying.

Use of oil to calm the seas.

Reports of whales.

39. *Reprint of hydrographic information.*—A new pamphlet in this series was compiled, being No. 25, questions and answers No. 4. An edition of 5,000 was received, of which about one-half has been distributed, partly through the addresses in this office and partly through the branch hydrographic offices.

40. *Pilot Charts.*—These appeared as usual, quarterly for the South Atlantic and South Pacific and monthly for the other three oceans and for the Central American waters.

41. Shipmasters who cooperate with the Government by furnishing marine data of various kinds, including weather reports, obtain the Pilot Charts in return for their courtesy.

42. Owing to the small force of nautical experts employed here and their almost complete absorption in other important lines of work it has not been practicable to prepare articles for each issue of the Pilot Charts, and this is not to be wondered at when we consider that there are now two quarterly and four monthly issues to be made ready, a total of 56 new charts annually, with no one person to give them his undivided time. Some of the more important items that appeared during the past 12 months were:

North Atlantic (only):

International ice observations and ice patrol service, 1916.

Zona's protractor.

Time signals, hydrographic and meteorological information by radio.

Navigational books and charts published and sold by the Hydrographic Office.

The circulation in the North and South Atlantic Oceans (Supplement).

The circulation in the North Atlantic Ocean for the month of May (Supplement).

List of ratio stations shown on the chart.

South Atlantic (only): List of radio stations shown on the chart.

North Pacific (only): List of radio stations shown on the chart.

South Pacific (only): List of radio stations shown on the chart.

Indian (only): List of radio stations shown on the chart.

Central American waters (only):

List of radio stations shown on the chart.

The currents and navigational details in the waters of the Gulf of Mexico, the Caribbean Sea, and the west coast of Central America.

North Atlantic, South Pacific, and South Atlantic: Preventing fog with oil.

North Atlantic and North Pacific: Questions and answers.

North Pacific and Indian: Storm signals at Indian ports in the Arabian Sea and Bay of Bengal.

43. The limits of the North Pacific Pilot Chart, beginning with the February issue, were extended from the equator to 5° S. and from latitude 70° to 73° N., and the type matter was rearranged so that the chart now presents a much better appearance than formerly.

PRINTING, MAILING, AND SUPPLIES.

44. The uniform size in which the Pilot Charts now appear, and the fact that they are folded by machinery, enables us to handle them in better time than was the case when each Pilot Chart had a size of its own. Despite this advantage and the fact that nearly all the addresses can now be handled by means of an addressing machine, it is still necessary for the clerk who looks after this branch of work to pitch in and help out the laborers. The increased sales of books, which has trebled in the last few years, and the additional Pilot Chart which we started eighteen months ago, together with the fact that we are frequently called upon to assist in mailing charts sold, makes it necessary that an additional laborer be assigned here.

45. The following table is a guide to the mailing lists and size of editions (remembering that we retain about 100 copies of each publication to answer subsequent demands):

Name of publication.	Number of addresses.		Number of copies.	
	Each edition.	Annual.	Each edition.	Annual.
Notice to Mariners (weekly)	1,511	78,572	5,574	289,848
Extracts, Notice to Mariners (weekly)	8	412	4,360	226,720
Hydrographic Bulletin (weekly)	1,559	81,068	4,909	255,268
Corrections to List of Lights (weekly)	372	19,344	372	19,344
North Atlantic Pilot Chart (monthly)	1,933	23,196	6,366	76,392
North Pacific Pilot Chart (monthly)	1,297	15,564	3,225	38,700
Indian Ocean Pilot Chart (monthly)	933	11,196	1,682	20,184
Central American Waters Pilot Chart (monthly)	2,156	25,872	3,675	44,100
South Atlantic Pilot Chart (quarterly)	979	3,916	2,163	8,652
South Pacific Pilot Chart (quarterly)	953	3,812	1,953	7,812
Total	11,701	262,952	34,279	987,020

46. It will be seen from the above that the total number of pieces mailed out was 262,952 and that the number of publications was 987,020. These figures are slightly larger than those of the preceding year.

47. This division has continued to write all printing requisitions for the blank forms, books, and other publications of the office, excepting only the Notice to Mariners. It also has kept up the stock of supplies and stationery in common use here and at the branch offices, receiving, storing, and issuing them.

SALES.

48. Charts and books were sold as follows:

Charts:	
Sold (52,666)	$11,449.30
Returned (4,071)	723.07
Net (48,595)	10,726.03
Books:	
Sold (7,203)	5,405.75
Returned (166)	77.22
Net (7,037)	5,328.53

Sale of Hydrographic Office charts, by years.

Year.	Copies sold.	Returned by agents.	Total of copies handled.
1909	15,766	2,350	18,116
1910	18,374	1,331	19,705
1911	21,187	4,901	26,088
1912	23,018	1,682	24,700
1913	27,986	2,411	30,397
1914	22,955	2,338	25,293
1915	39,997	3,163	43,160
1916	52,666	4,071	56,737

Sale of Hydrographic Office books, by years.

Year.	Copies sold.	Returned by agents.	Total of copies handled.
1909	2,220	59	2,279
1910	3,550	161	3,711
1911	3,447	167	3,614
1912	3,198	75	3,273
1913	3,488	89	3,577
1914	3,436	67	3,503
1915	5,259	127	5,386
1916	7,203	166	7,369

The receipt and expenditure of Hydrographic Office books for the year is given in the appendix.

BRANCH HYDROGRAPHIC OFFICES.

49. These offices have continued to fulfill their general duty of collecting marine data of the kind required by the office for the betterment of its publications, and disseminating the latest information of interest to safe navigation of the seas. The personal contact which they have with navigators and the shipping public has rendered them of great service both to the public and to this department. Their reference outfit of charts and books, office facilities, and personnel ought to be kept up and supported and in some cases increased, while the pay table of the civilian personnel ought in all fairness to be revised, for it is sadly behind other field services.

50. Excellent educational work in the elementary theory and general practice of navigation has been done by most of the branch offices both for the Naval Militia and the merchant marine, notably at the four larger offices on the Great Lakes.

51. Certain lines of additional duty required by the department have been performed by each branch to which an officer is detailed.

NATIONAL SAFETY-FIRST EXPOSITION.

52. A remarkable display of devices and work by the various departments of the Government was held February 21 to 27 at the National Museum.

53. Although the Hydrographic Office received permission too late to figure in the printed program, a creditable exhibit was prepared and shown, including specimen charts of each scale, representative books, and periodical publications. The exhibit and the duties of the office were explained to the public by members of the office.

54. Tables are appended showing in detail certain parts of the work of the office for the past fiscal year.

THOMAS SNOWDEN.

Receipts and expenditures of Hydrographic Office charts for year ending June 30, 1916.

Received from—	
Division of chart construction (engraved)	90,710
Division of chart construction (lithograph)	74,635
Division of pilot charts (for sales)	1,061
Total	166,406
Issued to—	
United States vessels	43,237
Agents and sales	52,666
Archives	981
Official use	58,875
Branch offices	11,335
Foreign hydrographers	4,077
Total	118,171
Number of charts condemned	2,776
Total	120,947
Number of charts published	197
Number of charts canceled	42
Number of Hydrographic Office charts on hand June 30, 1916	277,002

There are 2,436 Hydrographic Office charts on issue, of which 1,243 are engraved and 1,193 are lithographs.

List of Sailing Directions and "Lists of Lights" published during the year; also a list of those in press and under preparation at the end of the year.

PUBLISHED.

H. O. No. 99. Nova Scotia Pilot. (Revision.)
H. O. No. 130. Central America and Mexico Pilot. (New.)
H. O. No. 136. Norway Pilot, 1915. (New.)
H. O. No. 141. Scandinavia Pilot. Vol. II. (New.)
H. O. No. 151. Mediterranean Pilot, Vol. I. (New.)
H. O. No. 164. East Indies Pilot, Vol. II. (New.)
H. O. No. 165. Pacific Islands Pilot, Vol. I. (New.)
H. O. No. 166. Pacific Islands Pilot, Vol. II. (New.)
H. O. No. 172. South America Pilot, Vol. I. (New.)
H. O. No. 173. South America Pilot, Vol. II. (New.)
H. O. No. 174. South America Pilot, Vol. III. (New.)
H. O. No. 175. British Columbia Pilot, Vol. I. (New.)
H. O. No. 176. British Columbia Pilot, Vol. II. (New.)
H. O. No. 30. List of Lights, Vol. I. The West Indies, Pacific Islands, Coasts of North and South America, excepting the United States, 1916. (Revision.)
H. O. No. 32. List of Lights, Vol. III. West Coast of Africa, Europe and the Mediterranean Sea, including the Adriatic and Black Seas, and the Sea of Azov, 1916. (Revision.)

IN PRESS.

H. O. No. 105. Africa Pilot, Vol. I. (New.)
H. O. No. 134. East Atlantic Pilot. (New.)
H. O. No. 154. Mediterranean Pilot, Vol. IV. (New.)
H. O. No. 156. Africa Pilot, Vol. II. (Reprint.)
H. O. No. 163. East Indies Pilot, Vol. I. (New.)
H. O. No. 31. List of Lights, Vol. II. South and East Coasts of Asia and Africa, and the East Indies, Australia, Tasmania, and New Zealand, 1916. (Revision.)

IN PREPARATION.

H. O. No. 142. Baltic Pilot, Vol. I. (New.)
H. O. No. 152. Mediterranean Pilot, Vol. II. (New.)
H. O. No. 157. Red Sea and Gulf of Aden Pilot. (Reprint.)
H. O. No. 159. West Coast of India Pilot. (New.)
H. O. No. 160. Bay of Bengal Pilot. (New.)
H. O. No. 161. South Indian Ocean Pilot. (Reprint.)
H. O. No. 162. Asiatic Pilot, Vol. VI. (New.)

During the fiscal year ending June 30, 1916, there have been received, complimentary or by requisition, 2,496 charts. There have been transferred from old to new copies of charts about 19,500 correction marks. There have been handled by requisition or for plotting and reference about 9,750 charts. Twenty sets of index charts and catalogues have been kept corrected to date, as well as one accession and three date books.

Foreign and domestic charts received	2,496
Hydrographic Office numericals retired	829
Total received	3,325
Charts condemned and retired	2,085
Total increase	1,240

Charts received.

Foreign—Complimentary and request:	
Austria	1
British	309
Canada	29
Chile	1
Denmark	4
France	47
Italy	6
Japan	56
Netherlands	4
Norway	4
Russia	18
Sweden	25
Miscellaneous	10
Total	514
Domestic—Complimentary and request:	
United States Coast Survey	853
United States Engineer	18
Hydrographic Office Charts	981
United States Geological	132
Total	1,984

APPENDIX.

Table showing the receipt and expenditure of Hydrographic Office books during the fiscal year ending June 30, 1916.

Book No.	On hand June 30, 1915.	Received.	Service expenditure.	Sold.	On hand June 30, 1916.
9	2,226	0	133	1,421	672
9–11	45	1,002	52	579	416
30	928	1,000	404	472	1,052
31	230	7	20	105	112
32	139	853	76	244	657
71	503	1,515	72	644	1,302
73	100	1	20	39	42
84	1,232	9	38	241	962
87	127	1,510	143	441	1,053
99	342	1,250	278	111	1,203
100	62	77	20	52	67
102	283	3	20	29	185
103	16	0	0	8	8
105	372	3	10	33	332
107	52	0	0	6	46
114	54	0	0	7	47
117	0	2,045	438	374	1,233
120	228	0	50	96	82
122	228	1	10	58	193
124	255	1	20	51	195
125	1,499	20	18	57	1,444
126	0	1,281	98	45	1,138
127	273	4	40	85	152
128	924	8	68	366	498
130	0	1,500	268	93	1,139
131	465	6	0	13	458
132	0	1,011	128	33	850
133	0	1,250	28	32	1,190
135	0	1,258	78	41	1,139
136	0	1,000	118	8	874
140	0	1,000	118	19	863
141	0	900	22	6	872
144	0	1,258	128	39	1,091
149	0	1,256	178	59	1,019
150	0	905	128	48	739
151	0	1,250	30	8	1,212
164	0	900	60	4	836
165	0	903	103	24	776
166	0	481	88	21	372
171	0	1,500	440	392	668
172	0	1,515	278	99	1,138
173	0	1,000	350	20	630
174	0	1,500	90	4	1,406
175	0	1,000	90	42	868
176	0	1,000	118	34	848
Catalogue	0	1,201	10	139	1,052
129	1,170	11	48	245	888
123	260	1	10	58	193

Statement of work done by the branch hydrographic offices during the fiscal year ending June 30, 1916.

Character of work.	Atlantic and Gulf coasts.								Pacific coast.			Great Lakes.					Total.
	Boston.	New York.	Philadelphia.	Baltimore.	Norfolk.	Savannah.	New Orleans.	Galveston.	San Francisco.	Portland.	Seattle.	Duluth.	Sault Ste. Marie.[1]	Chicago.	Cleveland.	Buffalo.	
PUBLICATIONS DISTRIBUTED.																	
Bulletin, Hydrographic	17,243	22,811	13,610	3,628	8,786	15,358	4,991	3,337	3,430	4,663	8,340	2,440	700	2,250	2,512	988	120,087
Daily Memorandum	11,409	22,612	8,530	2,580	5,475	3,312	4,370	4,324	160	2,002	1,579	434	372	228	41	.....	67,428
Notice to Mariners (H. O.)	21,129	39,679	18,673	2,124	6,879	12,460	6,705	4,950	20,152	5,286	8,311	48,439	10,900	62,070	70,413	47,394	385,564
Pilot Charts	6,271	28,972	5,053	2,469	3,832	3,042	6,238	3,944	9,743	3,166	4,964	1,232	272	923	1,229	98	81,448
Reprints of Hydrographic Information	2	406	344	248	837	317	3,184	33	172	545	13	113	11	50	125	42	6,442
Pamphlets (not Hydrographic Office)	516	151	168	764	600	382	87	34	287	182	704	228	28	400	15	81	4,637
REPORTS FORWARDED.																	
Aids of Navigation	28	80	50	6	105	17	.....	5	16	4	3	47	.....	.....	40	3	404
Chart reports	.....	6	8	1	1	.....	.....	.....	1	9	11	.....	.....	.....	.....	.....	37
Current reports	105	1,718	230	176	1,375	48	664	151	439	49	136	.....	.....	.....	.....	.....	4,991
Ice reports	26	150	15	10	27	1	2	2	7	1	6	.....	.....	.....	1	.....	248
Intention to observe	4	50	1	.....	819	58	.....	3	79	3	47	.....	.....	.....	.....	.....	1,064
Oil, use of, to calm the sea	1	3	3	.....	3	.....	.....	.....	3	1	2	.....	.....	.....	.....	.....	16
Port facilities	.....	3	4	.....	9	.....	112	.....	11	9	4	.....	.....	.....	.....	.....	157
Reports of soundings	2	9	1	.....	11	.....	.....	.....	1	17	35	3	.....	.....	19	.....	98
Rocks or shoals	1	14	.....	1	.....	.....	.....	.....	7	3	4	5	.....	3	3	.....	41
Route reports	.....	12	26	4	24	6	.....	1	4	25	8	.....	.....	.....	.....	.....	110
Wrecks, derelicts, etc	73	732	112	104	314	11	137	64	62	7	22	6	.....	.....	3	.....	1,647
Unclassified reports	.....	89	.....	.....	110	.....	231	2	155	130	14	.....	.....	.....	10	.....	791
OTHER WORK.																	
Acknowledgments (Form 24)	264	[2] 981	.....	211	.....	6	438	199	473	51	141	60	.....	.....	.....	1	2,825
Circular letters sent out	82	163	929	3	462	370	1,073	356	5,546	158	631	689	.....	500	1,484	967	13,408
Letters written (not circular)	69	211	453	9	1,821	182	363	94	421	351	583	555	63	129	291	410	6,005
Time ball dropped	296	([3])	298	302	302	298	([3])	301	305	300	([3])	296	142	202	([3])	303	3,345
Vessels visited	61	2,297	265	.....	41	163	.....	6	467	58	49	62	.....	1	25	769	4,264
Visitors received	701	2,451	4,940	3,443	4,939	2,800	1,681	560	1,776	972	408	5,788	285	6,086	2,268	1,661	40,754
Telephone calls received	288	1,645	627	985	1,323	1,945	756	519	1,330	1,011	277	3,164	116	7,958	3,602	6,175	31,716

[1] 3 months. [2] Written. [3] No time ball.

Charts engraved on copper in the Division of Chart Construction, Hydrographic Office, and finished during fiscal year ended June 30, 1916.

General locality.	Catalogue No.	Title.
North America	1350	United States and Canada: St. Lawrence River, Lake St. Francis or Cornwall to McKies Point.
Do	2765	Canada, Lake Ontario: Presqu'ile to Port Darlington.
Do	2764	Canada, Lake Huron: Little Current.
Do	2763	Canada, Lake Superior: Jackfish Bay.
Do	2606	Mexico, east coast: Approaches to Vera Cruz and Anton Lizardo Anchorage.
Do	2273	Mexico, east coast: Port of Vera Cruz.
Central America	5002	Canal Zone and Panama: Approaches to the Panama Canal.
West Indies	948	Island of Haiti with Windward and Mona Passages.
Do	2608	Island of Haiti, south coast of Haiti: Aux Cayes Bay.
Do	2609	Island of Haiti, south coast of Haiti: Aux Cayes to Aquin Bay.
Do	2757	Island of Haiti, west coast of Haiti: Gonaives Bay.
Do	2772	Island of Haiti, Dominican Republic: Romana River and Entrance. Enlarged plan of Romana River.
Do	2774	Island of Haiti, west coast of Haiti: Grand Pierre Bay.
Do	2318	The West India Islands: Haiti to St. Lucia.
South America	1521	Argentina: San Blas Harbor.
Do	1578	Chile: Conchali Bay and Los Vilos Road.
Africa	2346	West coast: Sinu Bay to San Pedro River.
Do	2352	West coast: Forcados River to Opobo River.
Asia	3279	French Indo-China, Gulf of Siam: Pulo Dama Group.
Japan	1933	Kiushu, west coast: Ushibuka Harbor and Approaches.
Do	1401	Pilot Chart of the North Pacific Ocean.
Do	2603	Pilot Chart of the Indian Ocean.

Charts photozincographed in the Division of Chart Construction, Hydrographic Office, and published during the fiscal year ended June 30, 1916.

General locality.	Catalogue No.	Title.
North America	2773	Newfoundland, east coast, Hare Bay: Ariege Bay and Approaches.
Do	2764	Canada, Lake Huron: Little Current.
Do	2273	Mexico, east coast: Port of Vera Cruz.
Do	2606	Mexico, east coast: Approaches to Vera Cruz and Anton Lizardo Anchorage.
Central America	5002	Canal Zone and Panama: Approaches to the Panama Canal.
West Indies	2613	Cuba, south coast: Cape Cruz to Santa Cruz del Sur, including Gulf of Guacanayabo.
Do	2614	Cuba, south coast: Santa Cruz del Sur to Jucaro. Plans of Pingue Channel and Caballones Channel.
Do	2772	Island of Haiti, Dominican Republic: Romana River and Entrance. Enlarged plan of Romana River.
Do	2774	Island of Haiti, west coast of Haiti: Grand Pierre Bay.
South America	1521	Argentina: San Blas Harbor.
North America	2825	British Columbia and Alaska: Dixon Entrance.
Do	2828	British Columbia: Edye Passage to Portland Inlet.
Europe	4484	England, east coast: River Thames, Sea Reach.
Do	4486	England, east coast: River Medway, Sheerness Bar to Bishops Ness. Plan of Victoria Pier.
Do	4487	England, east coast: River Medway, Bishops Ness to Rochester.
Do	4446	England, south coast: Owers to Dungeness.
Do	4447	England, south coast: Portland to Owers.
Do	4448	England, south coast: Eddystone to Portland.
Do	4449	England, south coast: Lizard Head to Start Point.
Do	4450	England, south and west coasts: Trevose Head to Dodman Point including the Scilly Isles.
Do	4451	England, west coast: Trevose Head to Bull Point. Plan of Morte Bay.
Do	4495	England, south coast: Owers to Beachy Head.
Do	4496	England, south coast: Owers to Christchurch, with Spithead and the Isle of Wight.
Do	4497	England, south coast: Portland to Christchurch.
Do	4498	England, south coast: Straight Point to Portland.
Do	4499	England, south coast: Bigbury Bay to Exmouth, showing Approaches to Salcombe, Dartmouth, and Tor Bay.
Do	4500	England, south coast: Approaches to Plymouth.
Do	4501	England, south and west coasts: St. Agnes Head to Gerrans Bay, including the Approaches to Falmouth, Penzance, and St. Ives.

Charts photozincographed in the Division of Chart Construction, Hydrographic Office, and published during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
Europe	4505	England, south coast: Approaches to Spithead.
Do	4506	England, south coast: Spithead.
Do	4507	England, south coast: Portsmouth Harbor.
Do	4509	England, south coast: Southampton Water.
Do	4510	England, south coast: The Solent, including the Needles Channel.
Do	4512	England, south coast: Needles Channel with Christchurch Bay.
Do	4524	England, south coast: Plymouth Sound and Hamoaze.
Do	4525	England, south coast: Plymouth Sound.
Do	4535	England, west coast: The Scilly Isles.
Do	4454	England, west coast, Wales: New Quay to Holyhead.
Do	4560	England, west coast. Holyhead to Great Ormes Head. Plan of Bull Bay and Amlwch Harbor.
Do	4438	The Irish Channel, Southern Sheet.
Do	4439	The Irish Channel, Northern Sheet.
Do	4724	Ireland, north coast: Larne to Bloody Foreland. Plan of The Maidens.
Do	4798	Ireland, east coast. Belfast Lough.
Do	4715	Ireland, south coast: Kinsale to Wexford.
Do	4716	Ireland, south coast: Valentia to Cork.
Do	4687	Scotland, east coast: Firth of Forth, St. Abbs Head to Edinburgh.
Do	4469	Scotland, east coast: St. Abbs Head to Aberdeen.
Do	4682	Scotland, east coast: Aberdeen Harbor.
Do	4461	Scotland, west coast: Hebrides or Western Isles, Barra Head to Scarpa Island.
Do	5010	Norway, southwest coast: The Naze to Karmo. Plan of Stavanger.
Do	5005	Norway, west coast: The Naze to the North Cape.
Do	4911	Denmark, west coast: Graa Dyb (Graa Deep). Plan of Esbjerg Harbor.
Do	4850	North Sea, Denmark: Esbjerg to Hanstholm.
Do	4910	North Sea, Germany: Lister Tief (Lister Deep).
Do	4906	North Sea, Germany: Jade River, Wilhelmshaven.
Do	4865	North Sea, Denmark: Lim Fiord, including Mariager and Randers Fiords. Plans of— Nykjobing. Logstor. Lim Fiord, Eastern Entrance. Hadsund. Hobro. Thisted. Lemvig. Struer. Glyngore. Skive. Mariager Fiord Entrance. Randers Fiord Entrance. Randers. Aalborg.
Do	4864	North Sea, Denmark and Germany: Esbjerg Approaches, including Knude Dyb (Deep) and Horns Rev (Reef).
Do	4863	North Sea, Germany and Denmark, west coast: Vortrapp Tief (Vortrapp Deep) to Knude Dyb (Knude Deep).
Do	4862	North Sea, Germany: Norder Piep (Channel) to Vortrapp Tief (Deep), including Helgoland.
Do	4859	North Sea, Germany and the Netherlands: East Frisian Islands, Friesche Zeegat to Jade River.
Do	4858	North Sea, Netherlands: West Frisian Islands, Terschelling Zeegat to Friesche Zeegat.
Do	4903	North Sea, Netherlands: Texel.
Do	4901	North Sea, Hook of Holland.
Do	4900	Belgium: Ostende Roads.
Do	4323	France, north coast: Fecamp to Boulogne. Plans of Freport and Fecamp.
Do	4324	France, north coast: Cape Levi to Fecamp.
Do	4325	The Channel Islands and Adjacent Coast of France.
Do	4326	France, north coast: Ile d'Ouessant (Ushant Island) to Plateau des Roches Douvres (Douvres Rocks).
Do	4339	France, north coast: Cape Flamanville to St. Marcouf Islands.
Do	4340	France, north coast: Dunkerque Road.
Do	4341	France, north coast: Calais Road.
Do	4343	France, north coast: LeHavre and Entrance to the Seine.
Do	4344	France, north coast: Port of Cherbourg.
Do	4364	France, west coast: The Channels between Ile d'Ouessant (Ushant I.) and the Mainland.
Do	4365	France, west coast: Cape de la Chevre to Pointe de Corsen, including Rade de Brest (Port of Brest).
Do	4332	France, west coast: Pte. d'Arcachon to Pte. de la Coubre.
Do	4331	France and Spain: Bay of Biscay.

Charts photozincographed in the Division of Chart Construction, Hydrographic Office, and published during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
Europe	4379	Spain, north coast: Rio Bidasoa to Cape Peñas.
Do	4380	Spain, north and west coasts: Cape Peñas to Pontevedra Bay. Plan of Camariñas Bay.
Do	4322	Spain and Portugal, west coasts: Cape Finisterre to Cape St. Vincent. Plans of— Sines Bay. Cezimbra Bay. Peninsula of Peniche and Burling and Farilhoes Islands. Port Figueira. Entrance of the River Douro. Port Leixões.
Do	4400	Portugal, west coast: Burling Island to Cape Espichel, including approaches to the River Tagus.
Do	4402	Spain and Portugal: Cape St. Vincent to the Strait of Gibraltar.
Do	4019	France, south coast: Villefranche Bay, Port of Nice and St. Hospice Bay.
Do	4072	Austria: Fiume, including Port Martinscica.
Europe and Africa	3920	Sardinia to Malta, including Sicily.
Africa	3928	North coast, Algeria: Cape Ferrat to Cape Bougaroni. Plans of— Mostaghanem. Port Shershel. Arzeu. Port Tipaza. Dellys. The Pisan Rocks.
Do	3927	North coast, Libia (Tripoli): Ras (Cape) Makhabez to Benghasi. Plans of— Marsa Brega. Porte Sirte or Port Chebek. Cape Misurata Anchorage. Port Dzeira or Zoraik. Marsa Ugra Anchorage. Khoms Bay. Port Zuaga. Ras Elmsel Anchorage.
Do	4270	North coast, Algeria: Port of Algiers.
Asia	3131	China Sea, Malay Peninsula, east coast: Singapore to Kapas Island.
Do	3146	French Indo-China, Cambodia and Cochin China, Gulf of Siam Fukok (Kaw Tron) Island and Channels leading to the Anchorages off Kampot.
Do	3279	French Indo-China, Gulf of Siam: Pulo Dama Group.
Do	3152	French Indo-China, Anam: Fanrang Bay to Tonkin Gulf.
Do	3153	China Sea: Tonkin Gulf.
Do	3161	French Indo-China, Tonkin: Approaches to Haifong.
Do	3164	China, south coast: Hainan Strait.
Do	3168	China, southeast coast: Approach to Kwangchow Bay.
Do	3169	China, southeast coast: Kwangchow Bay and River Matshe.
Do	3170	China, southeast coast: Tinpak to Macao. Plans of— Macao Harbor. Shito Bay. Namo Harbor. Huilingsan Harbor.
Do	3199	China, southeast coast: Macao to Pedro Blanco, including Hongkong.
Do	3177	China, southeast coast: The Brothers to Ockseu Islands, including the west coast of Formosa (Taiwan) from Onkan (Wankan) Bank to Kukan Road.
Do	3200	China, southeast coast: Hiechechin Bay.
Do	3196	China, southeast coast, Chu Kiang or Canton River: Kapsing Mun to Boca Tigris (Southern Sheet).
Do	3174	China, southeast coast: Hongkong to the Brothers.
Do	3201	China, east coast: Namoa Island.
Do	3202	China, east coast: Han River Entrance, Port Swatow.
Do	3204	China, east coast: Haitan Strait.
Do	3205	China, east coast: Channels between Red Yit and Rugged Island, leading to South Entrance of Haitan Strait. Plan of Dwarf Anchorage.
Do	3206	China, east coast: The Narrows of Haitan Strait.
Do	3209	China, east coast: River Min, Mamoi to Foochow.
Do	3212	China, east coast: Nimrod Sound (Siangshan Kiang) to Yung River, including the Southern Portion of the Chusan Archipelago.
Do	3178	China, east coast: Ockseu Islands to Tungyung, including the North Part of Taiwan (Formosa) from Kukan Road to Kilrun (Kelung) Harbor.

Charts photozincographed in the Division of Chart Construction, Hydrographic Office, and published during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
Asia	3181	China, east coast: Kueshan Islands to the Yangtze River, including the Chusan Archipelago.
Do	3213	China, east coast: Chusan Archipelago, Tinghai and Approaches.
Do	3214	China, east coast: Yung River and Approaches: Chinhai to Ningpo. Yuyao or Tzeki Branch and Fenghwa Branch. Ningpo Anchorage.
Do	3216	China, east coast: Chusan Archipelago, Changtu Harbor and Approaches.
Do	3218	China, east coast: Approaches to the Yangtze River.
Do	3220	China, east coast: Yangtze Kiang, Approaches to Woosung (Hwangpoo) River.
Do	3221	China, east coast: Woosung (Hwangpoo) River, Plan of Woosung River Entrance.
Do	3184	China, east coast: Yangtze River, The Poyang Lake: Chang River and Loan River. Kan River to Nienyu Tan. Ning River above Kienchanghaien.
Do	3185	China, east coast: Yangtze River, Tungliu to Hankow.
Do	3186	China, east coast: Yangtze River, Hankow to Compton Reach.
Do	3187	China, east coast: Yangtze River, Tungting Lake and Siang River: Shaniekan (Sianikiang). Yuen River, Changteh to Chienchichu. Linchapo Crossing. Taiping Canal to Red Bluff. Changsha. Compton Reach to Ichang.
Do	3296	China, east coast: Yangtze Kiang, Kialing Kiang (River) or Chungking Siao Ho, Chungking to Paoning.
Do	3222	China, northeast coast: Province of Shantung, Cape Yatao to Taotsui Head.
Do	3223	China, northeast coast: Province of Shantung, Taotsui Head to Shihtao Bay.
Do	3224	China, northeast coast: Province of Shantung, Shihtao Bay to Northeast Promontory.
Do	3225	China, north coast: Weihaiwei and Approaches.
Do	3226	China, north coast: Province of Shantung, Litao Bay to Chu Tao (Eddy Island), including Weihaiwei Harbor.
Do	3228	China, east coast: Pechili Strait. Plan of Tangiwan Anchorage (Charybdis Harbor).
Do	3229	China, east coast: Gulf of Pechili, Litaing Ho (River) to Ninghai, showing the Pei Ho (River) to Peking. Plans of— Lwan (Leumu) Ho Entrance. Tsing (Ching) Ho Entrance. Pehtang Ho Entrance. Chi Ho Entrance.
Do	3230	China, east coast: Liaotung Gulf, Fort Head to Kinchow, including Kwangtung (Society) Bay.
Do	3231	China, north coast: Kinchow to Terminal Head, including Kwangtung Peninsula.
Do	3232	China, north coast: Yellow Sea, Terminal Head to Haiyung Tao, including Elliot and Blonde Groups.
Japan	3254	Coasts of Kiushu and Shikoku: Bungo Channel.
Do	1933	Kiushu, west coast: Ushibuka Harbor and Approaches.
Do	2735	Honshu, south coast: Gulf of Tokyo, Yokosuka and Nagaura Harbors.
Do	3253	Honshu, south coast: Gulf of Tokyo, Yokohama to Uraga.
Do	508	Hokushu, east coast: Akkeshi Bay.
Asia	3176	China Sea: Formosa (Taiwan To) and Strait.
Do	3203	West coast of Taiwan (Formosa) and Pescadores (Hoko) Channel
Do	3242	Chosen (Korea), west coast: Taidong Inlet (Pingyang or Daid Inlet).
Do	3243	Chosen (Korea), west coast: Southern Approach to Taidong Inlet (Pingyang or Daido Inlet), Choppeki Point to Cho Island (Da).
Do	3244	Chosen (Korea), west coast: Approaches to Sajan Kaye (Shoal Gulf). Plan of Entrance to Sajan Kaye.
Do	3236	Chosen (Korea), west coast: Approaches to Taidong Inlet (Pingyang or Daido Inlet) and Yalu River (Oryoku Ko), Choppeki Point to Yalu River.
Do	3237	Chosen (Korea), west coast: Approaches to Keijo (Seoul), including Daisei Group (Sir James Hall).
Do	3238	Chosen (Korea), west coast: Daikokuzan (Mackau) Group to Kakureppi (Clifford) Islands. Plan of Ochonto Anchorage (Palos Harbor).
Do	3288	Chosen (Korea), southwest coast: Tonai Kai (Port Hamilton to Daikokuzan (Mackau) Group.

Charts photozincographed in the Division of Chart Construction, Hydrographic Office, and published during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
Asia	3240	Chosen (Korea), south coast: Fusan Harbor to Tonai Kai (Port Hamilton).
Do	3241	Chosen (Korea), east coast: Fusan Harbor to Chukupen Bay. Plans of— Chukupen Bay. Chukusan Bay.
Do	3247	Chosen (Korea), southeast coast: Masan Po (Masan Harbor) and Approaches. Plan of Chiseppo (Center Harbor).
Do	3248	Chosen (Korea) east coast: Suon Kutchi (Cape Duroch) to Kokko Kutchi (Linden Point). Plans of— Toecho Kei (Vitiaz Bay) and Approaches. Chanjindon (Chagu Chien Dogu) Anchorages. Karumaho. Peijin Bay. Iiho Anchorage. Odechin Bay. Chonjin (Seishin) or Chungchin Bay.
South Pacific Ocean	[1] 2903	Solomon Islands: Utuha Harbor or Port Purvis, Florida Island; Korombusu (Point) to Susu Point; Guadalcanal Island.
Do	2977	Plans on the northwest coast of New Guinea: Bori Harbor. Karas Island Anchorage. Patipi Bay. Fakfak and Atiati Onin (Acha Tuning) Roads. Triton Bay (Uru Languru). Sele Strait. Sekar (Segaar) Bay. Kaju Mera and Lakahia Bays.
Africa	2346	West coast: Sinu Bay to San Pedro River.
Do	2352	West coast: Forcados River to Opobo River.
Australia	2428	East coast: Sydney Harbor, Bradley Head to Dawes Point.
The World	2406	The Variation of the Compass for the year 1915.

[1] Supplement.

Index charts.

AX. The World, showing the limits of the various Index Charts.
A. The World, showing General Ocean Charts.
B. Canada, including Labrador, New Brunswick, Nova Scotia, and Newfoundland.
C. The Great Lakes.
D. Mexico and Central America.
E. West Indies and northern part of South America.
F. South America.
G. South America, Southern Part.
H. British Columbia.
I. East coast of Siberia, Bering Strait to Valdivostok, and northern part of Japan.
J. Japan Islands.
K. China, Chosen, and Eastern Siberia, Vladivostok to Hongkong.
L. China, Anam, Siam, and Malay Peninsula, Hongkong to Singapore.
M. Eastern Archipelago, Western Part.
N. Eastern Archipelago, Eastern Part.
O. Australia.
P. New Zealand, New Caledonia, New Hebrides, and Santa Cruz Islands.
Q. Western Pacific Islands.
R. Central Pacific Islands.
S. The North Sea, Baltic, Norway, and Lapland.
T. England, Ireland, and North Coast of France.
U. Scotland and adjacent islands.
V. West coast of France, Spain, Portugal, and western part of the Mediterranean.
W. Eastern part of the Mediterranean.
X. West and south coasts of Africa and adjacent islands.
Y. Indian Ocean, Western Part.
Z. Indian Ocean, Eastern Part.
Index Chart of Light Lists and Sailing Directions.

[illegible] [illegible] process of [illegible]
[illegible] 1916

[illegible]

Older charts reconstructed and carried through the entire process of zincography during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
Africa	2235	West coast: Gambia River Entrance.
Do	2240	West coast: Salum and Jumbas Rivers.
Do	2264	West coast: Lagos Harbor.
Do	2274	West coast: Sierra Leone River.
Do	2285	Southwest coast: Saldanha Bay.

Pilot Chart and miscellaneous work lithographed in the Division of Chart Construction during the fiscal year ended June 30, 1916.

Description of work.	Copies.	Date delivered.
Pilot Chart of the North Atlantic Ocean:		
For August, 1915—		
Plain	6,585	July 31, 1915.
Mounted	40	
For September, 1915—		
Plain	6,575	Aug. 30-31, 1915.
Mounted	20	
For October, 1915—		
Plain	6,675	Oct. 1, 1915.
Mounted	20	
For November, 1915—		
Plain	6,674	Oct. 29, 1915.
Mounted	20	
For December, 1915—		
Plain	6,690	Nov. 30-Dec. 1, 1915.
Mounted	20	
For January, 1916—		
Plain	6,660	Dec. 29-30, 1915.
Mounted	20	
For February, 1916—		
Plain	6,622	Feb. 1, 1916.
Mounted	40	
For March, 1916—		
Plain	6,800	Feb. 26, 1916.
Mounted	60	
For April, 1916—		
Plain	6,650	Mar. 28, 1916.
Mounted	20	
For May, 1916—		
Plain	6,750	Apr. 27-28, 1916.
Mounted	40	
For June, 1916—		
Plain	6,752	May 29, 1916.
Mounted	20	
For July, 1916—		
Plain	6,800	June 27, 1916.
Mounted	20	
Total—		
Plain	80,233	
Mounted	340	
Pilot Chart of the North Pacific Ocean:		
For September, 1915—		
Plain	3,475	July 16, 1915.
Mounted	20	
For October, 1915—		
Plain	3,478	Aug. 18, 1915.
Mounted	20	
For November, 1915—		
Plain	3,480	Sept. 16-17, 1915.
Mounted	20	
For December, 1915—		
Plain	3,500	Oct. 15, 1915.
Mounted	20	
For January, 1916—		
Plain	3,461	Nov. 16, 1915.
Mounted	20	
For February, 1916—		
Plain	3,510	Dec. 16-17, 1915.
Mounted	20	
For March, 1916—		
Plain	3,483	Jan. 15, 1916.
Mounted	20	
For April, 1916—		
Plain	3,476	Feb. 18, 1916.
Mounted	20	

[illegible] Construction [illegible]

[illegible]

Pilot Chart and miscellaneous work lithographed in the Division of Chart Construction during the fiscal year ended June 30, 1916—Continued.

Description of work.	Copies.	Date delivered.
Pilot Chart of the Central American Waters—Continued.		
For April, 1916—		
Plain	4,015	Mar. 18, 1916.
Mounted	20	
For May, 1916—		
Plain	4,043	Apr. 20, 1916.
Mounted	20	
For June, 1916—		
Plain	4,050	May 19-20, 1916.
Mounted	20	
For July, 1916—		
Plain	3,980	June 20-21, 1916.
Mounted	20	
Total—		
Plain	48,326	
Mounted	240	
Pilot Chart of the South Atlantic Ocean:		
For quarter September, October, and November, 1915—		
Plain	2,650	July 19, 1915.
Mounted	20	
For quarter December, 1915, January and February, 1916—		
Plain	2,645	Oct. 16-18, 1915.
Mounted	20	
For quarter March, April, and May, 1916—		
Plain	2,650	Jan. 15, 1916.
Mounted	20	
For quarter June, July, and August, 1916—		
Plain	2,640	Apr. 19, 1916.
Mounted	20	
Total—		
Plain	10,585	
Mounted	80	
Pilot Chart of the South Pacific Ocean:		
For quarter September, October, and November, 1915—		
Plain	2,340	July 21, 1915.
Mounted	20	
For quarter December, 1915, January and February, 1916—		
Plain	2,340	Oct. 16, 1915.
Mounted	20	
For quarter March, April, and May, 1916—		
Plain	2,360	Jan. 15, 1916.
Mounted	20	
For quarter June, July, and August, 1916—		
Plain	2,325	Apr. 18, 1916.
Mounted	20	
Total—		
Plain	9,365	
Mounted	80	

SUPPLEMENTS FOR PILOT CHARTS.

List of Navigational Books and Charts by the Hydrographic Office.
The Currents and Navigational Details in the Waters of the Gulf of Mexico, the Caribbean Sea, and the west coast of Central America.
The Circulation in the North and South Atlantic Oceans.
Storm Signals at Indian Ports in the Arabian Sea and Bay of Bengal.
Questions and Answers.
The Circulation of the North Atlantic during the month of May.

RECAPITULATION.

	Copies.
Pilot Charts:	
North Atlantic Ocean—	
Plain	80,233
Mounted	340
North Pacific Ocean—	
Plain	41,708
Mounted	280
Indian Ocean—	
Plain	25,650
Mounted	260
Central American Waters—	
Plain	48,326
Mounted	240
South Atlantic Ocean—	
Plain	10,585
Mounted	80
South Pacific Ocean—	
Plain	9,365
Mounted	80
Total	217,147

Charts extensively corrected during the fiscal year ended June 30, 1916—Continued.

General locality.	Catalogue No.	Title.
North and Central America	1007	Atlantic and Pacific Coasts of Mexico and Central America: San Blas to Panama.
North America	2424	Mexico, west coast: Port of Salina Cruz.
Do	1775	British Columbia, Vancouver Island: Esquimalt and Victoria Harbors.
Do	1408	British Columbia, Burrard Inlet: Vancouver Harbor.
Do	1390	British Columbia: Anchorages in the Strait of Georgia.
Do	1419	British Columbia, Vancouver Island: Sooke Inlet.
Do	1596	British Columbia: Nass Bay.
Do	1771	British Columbia, Queen Charlotte Islands: Skidegate Inlet.
Europe and Africa	285	Strait of Gibraltar.
Eastern Archipelago	1188	Java: Batavia Roads.
Asia	1595	Malakka Strait, Salang or Junkseylon Island to Singapore.
Do	2784	China Sea: Pratas Reef and Island.
Do	2528	China, Canton River: Lankit Spit to Tiger Island.
Do	2530	China, Canton River: Second Bay Pagoda to Whampoa Barrier and Changshan Island.
Do	2220	China, south coast: Hongkong Waters, East.
Do	2221	China, south coast: Hongkong Waters, West.
Do	2521	China, east coast: Pagoda Anchorage and Approaches.
Do	2522	China, Kwangtung Peninsula: Dairen Bay.
Japan	2069	Harbors on the west coast of Shikoku.
Do	2310	Kiushu, north coast: Fukuoka Wan (Bay).
Do	1645	Honshu, south coast: Kobe and Hyogo Bays.
Asia	2107	Japan Sea: Anchorages on the east coast of Chosen (Korea).
Do	2071	Siberia: Vladivostok Harbor and vicinity, including the Eastern Bosporus or Hamelin Strait.
Do	1944	Siberia, Gulf of Tartary: Castries Bay.
Do	1780	Japan Sea, Siberia and Chosen: Approaches to Vladivostok with Adjacent Coast, etc.
Do	1777	Siberia, southeast coast: Cape Bulki to Cape Byelkin, and southern Part of Sakhalin Island.
North Pacific Ocean	95	Upolu Island: Apia and Faleálili Harbors; Vailele Bay.
Do	1748	Plans in the Marianas.
South Pacific Ocean	1221	Samoa Islands: Safata Harbor.
Do	1980	Islands and Anchorages in the South Pacific Ocean.
Do	2916	Solomon Islands: Guadalcanal and Florida Islands with a portion of Malaita Island.
Do	2917	Anchorages in the Solomon Islands.
Africa	1603	East coast: Innamban Bay to Port Natal.
Do	2505	East coast: Port Natal.
Do	2285	Southwest coast: Saldanha Bay.
Do	2264	West coast, Bight of Benin: Lagos Harbor.
Do	2274	West coast, Sierra Leone: Sierra Leone River.
Do	2316	Anchorages and Bays on the west coast of Africa.
Australia	2942	East coast: Port Jackson.
	2600	Pilot Chart of the South Atlantic Ocean.
	2601	Pilot Chart of the South Pacific Ocean.

Charts in the course of preparation in the Division of Chart Construction, Hydrographic Office, unfinished at the close of the fiscal year ended June 30, 1916.

General locality.	No.	Title.	Percentage of work of construction finished.
North America	1581P	Canada, Lake Superior: Port Arthur and Fort William.	60 per cent of drawing done.
Do	2478	Mexico, east coast: Puerto Mexico (Coatzacoalcos)	Drawing finished.
Central America	1582P	Nicaragua, east coast: Cape Gracias a Dios to Punta Gorda.	Do.
West Indies	1569P	Cuba, south coast: Jucaro to Point Manati	90 per cent of drawing done.
Do	1639P	Cuba, south coast: Casilda and Approaches	65 per cent of drawing done.
South America	1191	Brazil: Rio Grande do Sul	Drawing finished.
Do	2458	Brazil: Barra Tramandahy to Rio Grande do Sul, including Lagoa dos Patos.	Do.
Do	1229P	Chile: Maullun River to Guaitecas Islands, including Chiloe Island.	Do.
Central America	1574P	Nicaragua and Honduras, west coast: San Juan del Sur to Gulf of Fonseca.	70 per cent of drawing done.
Asia	3738	Malakka Strait: The Dinding Islands and Channel	Drawing finished.
Do	3742	Malakka Strait: Klang Strait and Approaches	Do.
Do	3743	Malakka Strait: Port Swettenham	Do.

[illegible] Construction [illegible]

[illegible]	Percentage of work of construction finished.
[illegible] Warping Point.	Drawing finished.
[illegible] Point to Data	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	Do.
[illegible]	[illegible]
[illegible]	Drawing finished.
[illegible]	Do.
[illegible]	[illegible]
[illegible]	[illegible]

ENGRAVING.

Copper chart plate engravings finished:	
1914–15 (also 8 with wind roses for No. 3500)	17
1915–16 (also 4 with wind roses for No. 3500)	19
Copper plates extensively corrected:	
1914–15	28
1915–16	41
Copper plates with minor corrections:	
1914–15	620
1915–16	788
Extensive corrections on new basso plates:	
1914–15	5
1915–16	10
Worn engraved chart plates recut:	
1914–15	8
1915–16	8
Seals transferred on engraved plates:	
1914–15	276
1915–16	432
Numbers and prices changed on engraved plates:	
1914–15	462
1915–16	364
Engraved plates electrotyped:	
1914–15—	
Altos	38
Bassos	9
1915–16—	
Altos	54
Bassos	10
Engraved plates unfinished:	
1914–15	8
1915–16	8

LITHOGRAPHY.

New lithographic charts published:	
1914–15	211
1915–16	188
Old lithographic charts reconstructed:	
1914–15 (13 extensively corrected, 20 with minor corrections)	33
1915–16 (28 extensively corrected, 51 with minor corrections)	79
Lithographic charts with minor corrections:	
1914–15	34
1915–16	40
Engraved charts transferred to zinc:	
1914–15	4
1915–16 (14 navigational and 2 pilot charts)	16
Miscellaneous work:	
1914–15	17
1915–16 (including 22 Index Charts for Sailing Directions, 6 supplements for Pilot Charts, and 13 odd jobs)	41

PRINTING.

Number of navigational charts printed from engraved plates:	
1914–15	60,175
1915–16	91,007
Number of navigational lithographic charts printed:	
1914–15	62,983
1915–16	81,097
Total number of navigational charts printed:	
1914–15	123,158
1915–16	172,104
Total number of Pilot Charts printed:	
1914–15	205,326
1915–16	217,147

REPORT OF SUPERINTENDENT OF NAVAL OBSERVATORY.

NAVY DEPARTMENT,
UNITED STATES NAVAL OBSERVATORY,
Washington, D. C., July 1, 1916.

From: Superintendent, Naval Observatory.
To: Bureau of Navigation.
Subject: Report of the Superintendent, Naval Observatory, for the fiscal year ending June 30, 1916.

Capt. J. A. Hoogewerff, United States Navy, continued as superintendent throughout the year.

The time service has been improved in accuracy and convenience during the year by the installation of two new transmitting clocks contracted for last year, by a new switchboard, and by arrangements for receiving and checking by radio the actual time of the emission of the radio signal at Arlington.

Special efforts have been successful in interesting American firms in the manufacture of torpedo-boat watches and timepieces, in general, of sufficient accuracy to pass the tests required by the observatory.

Increased speed and draft of surface vessels, increased ranges for fighting, and the development of underwater and air craft have necessitated new and improved methods and instruments for accurate and rapid navigational and plotting work and the instruction and practice of the personnel of the service in their use. The ability to locate and place modern fighting craft accurately and in the least possible time is not only necessary for safe navigation, but is an important factor in action and one which is not always understood or appreciated.

The Naval Observatory encourages suggestions and the development of methods and instruments for navigation and sends out to the service for trial such as give promise of usefulness. This policy has produced in the past year several new methods and instruments of value, particularly for submarine and aircraft use, and continual advance is being made.

The nautical instrument repair shop has proved to be economical both in expense and time as compared with the repair by contract system, and the work turned out shows continued improvement. The number of instruments repaired for the year was 2,554, an increase of 44 per cent over the number repaired in the preceding year. This increase and the addition of aircraft instruments will in the near future require an enlargement of the shop building, for which tentative plans have been made and for which an appropriation will be requested.

The assignment to the observatory of navigation and photographic instruments for aircraft, the increasing number of gyro-compasses in-

Department of Compasses, Chronometers, and other Nautical, Aeronautic, and Surveying Instruments; the Time Service; the Nautical Instrument Repair Shop; Inspection and Survey.

Commander E. T. Pollock, United States Navy, continued as head of this department until January 20, 1916, when he was relieved by the present head, Commander W. D. MacDougall, United States Navy, who had reported December 31, 1915.

October 1, 1915, the supply department, formerly the general storekeeper's department, was put in charge of Professor of Mathematics H. E. Smith, United States Navy, who reported for duty September 25, 1915, and the cost accounting for the nautical instrument repair shop was taken over by Prof. Smith January 1, 1916.

Commander H. Kimmell, United States Navy, retired, continued as inspection and survey officer.

Lieut. Commander J. P. Murdock, United States Navy, continued in charge of the compass office, in which office the greater part of the business of aeronautic instruments was handled.

Lieut. C. W. Magruder, United States Navy, was assistant in nautical instruments and time service until September 15, 1915, when he was detached.

Lieut. (Junior Grade) J. H. S. Dessez, United States Navy, reported for duty April 15, 1916, and became assistant in chronometers and other nautical instruments and time service.

Mr. C. B. Watts was assistant in chronometers and time service, specially charged with care of timepieces in stock and trial, computations, and time-service apparatus.

TIME SERVICE.

Time signals were sent by radio from stations as follows:

Radio, Va., daily at noon and 10 p. m., seventy-fifth meridian time; wave length, 2,500 meters. Key West, Fla., and New Orleans, La., daily at noon, seventy-fifth meridian time; wave length, 1,000 meters. Key West, Fla., special signal for surveying ships daily at 10 p. m., from June 1 to July 13, 1916. Great Lakes, Ill., daily at 11 a. m., ninetieth meridian time, beginning in June; wave length, 1,512 meters. The transmission of these signals is automatic from the observatory over special wire to Radio, Va., and by courtesy of the Western Union Telegraph Co. over their wires to other stations. Time signals were sent at noon daily by Western Union Telegraph lines to all parts of the country east of the Rocky Mountains served by that company.

The station at Radio, Va., covers the country east of the Rocky Mountains and the greater part of the North Atlantic Ocean. The radio signals have been used by an increasing number of jewelers and of vessels.

The mean daily error in signals for the year was 0.030 second, and the maximum error was 0.24 second, with the mean of the 12 monthly maximum errors for each month as 0.113 second.

The lag due to transmission over the direct wire to Radio, Va., is 0.02 second, that over the Western Union wires to Key West 0.27 second.

Two new transmitting clocks were installed, adjusted, and the first signal from them was sent from No. 1 clock at noon on March 16. These clocks replaced two transmitting clocks that had been in use for over 40 years.

Changes and improvements have been made in the switchboard and apparatus connected with the sending of the time signal from the new clocks.

Since October 9, 1914, certain stars less than 10° from the zenith have been observed for clock correction, giving increased accuracy.

Time for the Pacific coast has been furnished from the time and chronometer station at the Mare Island Navy Yard by independent observations, the radio station there sending the signal at noon and 10 p. m. daily, one hundred and twentieth meridian time, wave length, 2,500 meters, and the radio stations at North Head (2,000 meters), Eureka (1,400 meters), Point Arguello (750 meters), and San Diego (2,000 meters) sending the signal at noon, except Sundays and holidays, one hundred and twentieth meridian time. This signal has been distributed by Mare Island to the country west of the Rocky Mountains by means of the Western Union Telegraph Co.

CHRONOMETERS AND TORPEDO-BOAT WATCHES.

The following is a summary of the annual trial of chronometers and torpedo-boat watches, which began January 15 and ended June 26, 1916:

	Number in trial.	Number passing.
Chronometers:		
New American	44	33
New foreign	9	9
Old	51	32
Torpedo-boat watches:		
New American	18	3
New foreign	60	27
Old	13	1

A chronometer or watch is regarded as passing when its trial number is less than 25. The accompanying Tables I, II, and III give the data for those which passed.

During the year 81 chronometers and 30 torpedo-boat watches were issued, and 81 chronometers and 10 torpedo-boat watches were received from repairs.

The usual work of rating and issuing chronometers and torpedo-boat watches, and of the purchase and trial of stop and comparing watches for navigation use, and of deck clocks, has been carried on as heretofore.

NAUTICAL INSTRUMENTS.

The supply of nautical instruments has been kept up to fill the requirements of vessels and navy yards, with an adequate reserve to meet repair and other necessities.

Instruments for navigation, surveying, and aviation have been purchased and issued by the Naval Observatory for use under the Navy Department. A small number of instruments have been

furnished to the Lighthouse Service, under the Department of Commerce, to the Coast Guard, under the Treasury Department, and to the Department of Labor.

Recommendations have been made as to requisitions, surveys, the acceptance of bids for supplying instruments, allowance lists of vessels, specifications and tests of instruments and implements of navigation, and kindred matters under the Bureau of Navigation.

Certain specifications have been prepared and revised.

New and improved types of navigation instruments have been tried and adopted, among them a special drafting machine for use in chart navigation, the Battenburg course indicator for use in maneuvering vessels, and a "ship's telescope," so mounted as to permit of easy observation of aeroplanes.

The plates, obtained by the observatory from England, of Aquino's tables, have been turned over to the Hydrographic Office for publication for navigational purposes.

Repairs to nautical instruments.—The repair of instruments in the nautical instrument repair shop at the Naval Observatory has proved an economy in time and expense in comparison with the previous system of contract. To the shop force of seven instrument makers, including the foreman, there were added, January 10, 1916, one instrument maker (watches and clocks), and May 1, 1916, one instrument maker, a total of nine at the end of the year.

A graduating engine has been ordered.

Tentative plans have been made for a needed enlargement of the shop building.

During the year repairs have been made in the shop to navigation and surveying instruments in numbers and at a cost as given in the following list:

Instruments.	Number.	Cost.	
		Total.	Average.
Alidades	9	$167.10	$18.57
Azimuth circles	113	1,165.09	10.31
Barographs	4	37.60	9.40
Barometers:			
Aneroid	59	221.46	37.54
Mercurial	13	167.27	12.89
Binoculars:			
Day	78	311.87	4.00
Night	68	319.20	4.69
Prismatic	142	1,306.81	9.20
Chronometer boxes	56	25.25	.45
Clinometers	22	83.90	3.81
Clocks:			
Deck No. 1	123	378.72	3.08
Engineering	70	280.38	4.01
Deck No. 2	130	379.14	2.92
Deck No. 3	23	79.47	3.45
Boat	85	280.14	3.30
Compass readers	4	9.00	2.25
Compasses, surveying	2	11.74	5.87
Drawing instruments	5	18.52	3.70
Equipment for shop	2	14.19	7.10
Heliotrope	1	2.55	.....
Levels	4	43.19	10.80
Magnetometers	2	37.30	18.65
Magnetic sets	2	3.18	1.59
Mirrors resilvered	705	151.68	.22
Mirrors made, stadimeter	59	22.68	.38
Octants	22	202.87	9.22
Parallel rulers	4	2.75	.69
Peloruses	14	78.77	5.27
Plane tables	4	5.28	1.32

Instruments.	Number.	Cost.	
		Total.	Average.
Protractors:			
Three-arm	22	[illegible]	[illegible]
Transparent	4	6.78	1.13
Psychrometers	4	9.20	2.30
Reading glasses	4	7.58	1.89
Sextants:			
High-grade	28	[illegible]	12.42
Surveying	128	1,426.34	11.14
Ship's seal	1	1.56	.....
Spyglasses:			
High-power	27	[illegible]	5.88
Marine-glasses	35	[illegible]	5.35
Low-power	12	[illegible]	6.56
Officers of the deck	145	[illegible]	4.17
Stadimeters	19	[illegible]	[illegible]
Telescopes, ship's	9	[illegible]	[illegible]
Thermograph	1	16.65	.....
Tide gages	4	58.65	14.66
Theodolites and transits	21	[illegible]	[illegible]
Testing machine extent	1	24.75	.....
Micrometer:			
For transit instrument	1	23.04	.....
For 26-inch equatorial	1	55.36	.....
Watches:			
Comparing	82	[illegible]	2.73
Ship	116	765.13	6.66
Torpedo	1	1.22	.....
Miscellaneous	38	38.04	.....
Total	2,554	11,324.94	.....

Charged to appropriations:	
Ocean and Lake surveys	$1,986.73
Engineering, 1916	289.50
Aeronautics, 1916	142.65
Maintenance, yards and docks	4.80
Naval Observatory	78.36
Instruments and supplies, 1916	8,903.90
Total	11,324.94

Grand total, instruments, 2,554; labor, $8,086.05; indirect, $1,617.21; material, $1,621.68; total, $11,324.94

Approximate total of instruments repaired, omitting miscellaneous shop equipment and observatory items, is $66,728.

The corresponding amount for the fiscal year 1915 for number of instruments was 1,781, and for cost of repairs was $7,682.99, showing increases 44 and 47 per cent, respectively. This increase of shop work has increased the clerical and incidental business correspondingly, and it is now beyond the capacity of the force allowed.

COMPASS OFFICE.

Gyro-compasses. This compass has been installed on a number of vessels from time to time throughout the year, and, with the increase in knowledge and experience of the personnel in charge of it, and the improvements to the apparatus itself, it has become an invaluable asset on all vessels on which it is installed.

New gyro-compass sets have been installed on the following vessels: *Oklahoma*, *Nevada*, and *Pennsylvania* (duplex sets); *North Carolina*, *Colorado*, *Baltimore*, *San Francisco*, *L-1-2-3-4*, and *M-1* (single sets).

Single sets for the *Delaware*, *Michigan*, and *South Carolina* have been made duplex.

Sets for the following are in process of installation or are ready to be installed on the *Washington*, *Arizona*, and *L-5* to *11*.

Contract has been signed for the seven sets for the N submarines and two have been ordered.

Sets of the following have been thoroughly modernized and brought up to date, and where necessary relocated: *Tennessee*, *Minnesota*, *Rhode Island*, *H-1-2-3*, *G-1*, *G-4*, *E-1*.

Those of the *F-1-2-3* are in process of overhauling now.

One gunner, after special instruction at the Sperry Factory and at New York, was ordered last winter to the Submarine Flotilla for gyro-compass duty, and the compasses in the flotilla have shown great improvement since that time. Another gunner is now about to join the Atlantic Battleship Fleet for similar duty.

A commissioned officer is kept on the Pacific coast as the bureau's representative in gyro-compass duty.

A gyro-compass test plant has been set up at the submarine base, New London, and at the Mare Island Navy Yard. For the latter the gyro-compass set at the exposition was purchased. Similar plants are proposed for Puget Sound, and possibly Pearl Harbor.

New attachments to the gyro-compass for ship-control aid, which have been added or are being experimented with, are:

Bearing indicators for conning tower.
Bearing indicators for submarines connected with the periscope.
Large angle roll brackets for submarines.
Course and distance recorder.
Portable isolated battle repeaters for battleships.

The bureau has made a practice during each docking period of the fleet of sending to all navy yards either a representative of the Sperry Co. or one of the fleet gyro gunners for the close inspection and overhaul of all ships' compasses.

Magnetic compasses and attachments.—The following compass equipment has been delivered during the year:

100 boat compasses.
120 5 and 6-inch spheres.
1 anemometer, recording.
30 sets, corrector magnets.

The following equipment has been contracted for or requisitioned:

200 boat compasses.
5 compasses of submarines.
50 Type III azimuth circles.
30 Type V azimuth circles.
48 illuminated dial peloruses with telescope attachment.
100 azimuth circle mirrors.
30 Type VII binnacles.
30 7½-inch compasses, illuminated.
12 flinders bars.
1 indicating anemometer.
200 field compasses.

A Type V azimuth circle with a telescope attachment, designed by Lieut. Greenlee, late navigator of the *Montana*, is being made up for particular use on the gyro-compass repeater, the Type III being unsuitable for use with this repeater.

Seven officers have taken the course in compasses.

Inspection of jewels and magnets of all compasses have, as heretofore, been made at the observatory, the compasses when completed being inspected at the works of the manufacturers.

Aeroplane instruments.—This branch of the compass office started early in the year when the various classes of instruments in use in the air service were regularly divided among the various bureaus of the Navy Department.

Due to the limited manufacture of aeroplane instruments in this country and the difficulty of importing from abroad on account of the war, there has been difficulty in securing these instruments.

The following instruments have been delivered, either for stock, or in a majority of cases for experimental use, in working up to a standard instrument:

13 aero-compasses, British Admiralty type, made in the United States by the Sperry Co.
21 altimeters.
2 statoscopes.
4 pocket barographs.
6 rectangular barographs.
2 hygrometers.
1 balloon aneroid.
1 camera for colored photographs, commercial type.
1 specially developed aeroplane camera from the Eastman Kodak Co.

The following have been contracted for or requisitioned:

13 barographs, rectangular type.
6 barographs, pocket type.
4 aeroplane compasses from the British Admiralty.
32 aeroplane compasses (B. A.), Sperry type.
57 altimeters.
5 statoscopes.
1 aeroplane compass, Star Compass Co.
1 aeroplane camera, Eastman Kodak Co.
3 ballon aneroids.
2 portable anemometers for balloon.

Contract has been signed by the Sperry Co. for the development and manufacture of one gyro-compass for aeroplanes.

The routine work of the office has been conducted as heretofore.

Supply Department.

Prof. H. E. Smith, United States Navy, was in charge of this department after January 1, 1916, with Mr. H. G. Hodgkins assistant in the department of nautical instruments, as assistant.

A brief summary of the work of this department during the year is given below:

Value of stock on hand July 1, 1915	$116,795.02
Value of instruments, etc., purchased	$50,314.13
Value of instruments received from yards and ships	$39,563.29
Value of instruments issued and expended	$75,949.35
Value of stock on hand July 1, 1916	$130,723.09
Number of shipments made	1,467
Number of instruments and parts shipped (an increase of 944 over 1915)	6,217
Number of shipments received	1,025
Number of instruments and parts received	13,154

Inspection and Survey.

Commander H. Kimmell, United States Navy, retired, has continued as inspection and survey officer throughout the year.

During the year the following new instruments were inspected and passed:

100 prismatic binoculars.
100 day binoculars.
200 spyglasses, officer of the deck.
50 telescopes for sextants.
25 surveying sextants.
50 universal drafting machines.
20 stadimeters.
10 3-arm protractors.
12 court protractors.
200 parallel rulers.
44 Sigsbee rulers.
100 psychrometers.
200 psychrometer thermometers.
50 psychrometer cases.
10 sets drawing instruments.
80 sets navigator's dividers.

In addition, all material and tools for the repair shop have been inspected as to quantity and quality and all the repair work done by the shop has been inspected. During the year 181 sextants were tested for eccentricity, about double the number of last year.

Instruments and material are constantly being returned from ships and stations and are surveyed for repairs or as material for use in the shop in the repair of similar articles.

Department of the Nautical Almanac.

This department has continued under the direction of Prof. W. S. Eichelberger, United States Navy.

Mr. Arthur Newton and Mr. Morris Liferock were transferred from pieceworkers to assistants on July 1, 1915.

The American Ephemeris and Nautical Almanac for 1918 was received from the printer on January 6, 1916.

The American Nautical Almanac for 1917 was received from the printer on September 14, 1915.

The American Nautical Almanac for 1918 was received from the printer on April 24, 1916.

The complete copy of the American Ephemeris and Nautical Almanac for 1919 has been sent to the printer and 594 pages are in type. Tables for computing the times of rising and setting of the sun and moon will appear for the first time in Nautical Almanac publications in this volume.

Thirty-two pages of the American Ephemeris and Nautical Almanac for 1920 are in type.

The following assistants and pieceworkers were employed in preparing for publication the annual volumes of the American Ephemeris and Nautical Almanac; Assistants, James Robertson, William T. Carrigan, Arthur Snow, Arthur Newton, Perez Fisch, George F. Crawley, Clifford S. Lewis, Joseph J. Arnaud, Frank Langellotti, Reuben Weinstein, and Morris Liferock; pieceworkers, Elizabeth B. Davis, Janet McWilliam, Hannah F. M. Hedrick, Alfred Doolittle, George B. Merriman, Thomas E. Trott, and Isabel M. Lewis.

The investigation of the orbits of Saturn's satellites has been continued. Thirty-two sets of corrections to the elements have been obtained for 5 pairs of satellites covering 11 oppositions. The equations of condition have been formed for the determination of 7 additional sets of corrections for 2 additional pairs of satellites. All these corrections depend upon observations made at Washington from 1895 to 1907. Much work has been done in comparing with theory 1,088 observations of pairs of satellites made at the Lick Observatory during the years 1896 to 1905. Three hundred and eighty-seven observations made at the Yerkes Observatory during the years 1910 to 1914 have been collected for discussion in the near future.

The work of obtaining a new orbit of the seventh satellite of Jupiter has been continued intermittently.

The uncompleted work of the late Prof. Newcomb on the orbit of the satellite of Neptune, referred to in a previous report, has been examined as to the method of treatment and as to the portions of the work that had been checked and the portions that had not. The checking of those portions which had not been checked or about the checking of which there is doubt has been commenced preparatory to completing the work.

Two papers by Dr. Frank E. Ross, have been published in the Astronomical Journal, "The sun's mean longitude," A. J. No. 691, and "Investigations on the orbit of Mars," A. J. No. 692.

The following assistants and pieceworkers were employed on the various pieces of the above-mentioned work of improving the tables of the planets, moon, and stars: Assistants, William T. Carrigan, Walter M. Hamilton, Arthur Newton, Perez Fisch, George F. Crawley, Clifford S. Lewis, Joseph J. Arnaud, Frank Langellotti, Reuben Weinstein, and Morris Liferock; pieceworkers, Frank E. Ross, Elizabeth B. Davis, Janet McWilliam, Henry B. Hedrick, Thomas E. Trott, Louis Lindsey, and Isabel M. Lewis.

Department of Astronomical Observations.

DIVISION OF 6-INCH TRANSIT CIRCLE.

The personnel of this division consisted of Assistant Astronomer J. C. Hammond (in charge), Assistant Matt Frederickson, Assistant C. C. Wylie and Miscellaneous Computer Ralph W. Aston to September 24, 1915.

The fundamental observations, begun on May 15, 1911, were completed on May 20, 1916. Each star in the program was observed at least eight times, twice in each of four different positions of the instrument, in accordance with the plan outlined in the annual report for 1911.

A new program of work, comprising the sun, Mercury, Venus, and a list of 152 fundamental stars, selected from the American Ephemeris and Boss, was begun on May 29, 1916. This list includes 73 clock stars, 17 azimuth stars, 28 refraction stars, and 34 stars chosen for the purpose of determining the difference day minus night. Included in the program, also, is the determination of time for the time service and the positions of certain miscellaneous stars.

Until the reduction of the preceding work is completed, observations will be made on four days a week only, viz, Mondays, Tuesdays,

Thursdays, and Fridays. The tours of observing will extend from about 5.30 a. m. continuously to 11.30 p. m. The method of observing, except in a few minor details, will be similar to that in the program just completed.

The number of observations secured during the year is as follows:

Clock stars	2,499
Time stars	839
Pole stars, direct	450
Pole stars, reflected	117
Refraction stars	204
Standard stars	2,443
Inclination stars	181
Direct and reflected stars	332
Day-night stars	70
Miscellaneous stars	17
Sun	144
Mercury	53
Venus	11
Total	7,360

The number of determinations of instrumental constants is as follows:

Collimation	830
Level (spirit)	303
Level (nadir)	953
Marks	913
Nadir	966
Runs	39
Flexure (horizontal)	8
Flexure (vertical)	6
Total	4,018

The instrument was reversed 14 times and the stellar focus adjusted twice during the year.

In May, 1916, the errors of the pivots were measured with the axial microscope. The results obtained agree well with those secured in 1911, 1912, and 1913 showing that there has been no appreciable change in the pivots in the last five years.

CLOCK VAULT.

The temperature in the clock vault has been maintained practically constant at 84° F. during the year. Riefler clock No. 60 was used as the standard clock throughout the year. Its rate was very satisfactory.

The following table gives the mean daily rate of this clock, as deduced by the time service, together with the maximum variation in the rate for each month:

Month.	Mean daily rate.	Maximum variation.	Month.	Mean daily rate.	Maximum variation.
1915	s	s	1916	s	s
July	−0.02	0.04	January	−0.05	0.03
August	− .02	.04	February	− .02	.05
September	− .03	.02	March	− .01	.03
October	− .04	.04	April	+ .01	.02
November	− .05	.01	May	+ .01	.03
December	− .05	.03	June	− .01	.02

DIVISION OF 9-INCH TRANSIT CIRCLE.

The personnel of this division consisted of Assistant Astronomer Herbert R. Morgan (in charge), Assistant Jesse Pawling, Assistant Leroy P. Steele, and Miscellaneous Computer Paul Sollenberger.

The observations begun August 1, 1913, have been continued according to the plan outlined in the annual report for 1914. The observing list includes all the fundamental stars culminating at less than 75° zenith distance, and all the intermediary stars between +90° and −30° declination.

The number of observations made during the year is as follows:

Intermediary stars	4,110
Standard stars	1,094
Clock stars	1,470
Azimuth stars	247
Refraction stars	36
Miscellaneous stars	10
Reflection stars	359
Moon	73
Mars	17
Jupiter	15
Saturn	15
Uranus	15
Neptune	12
Vesta	16
Total	7,489

The total number of observations since the beginning of this work is 23,492.

The instrument was reversed three times during the year, and the number of determinations of instrumental constants is as follows:

Collimation	443
Level (nadir)	547
Level (spirit)	163
Azimuth (marks)	547
Nadir	586
Flexure (horizontal)	18
Flexure (vertical)	6
Personal equation	20
Micrometer equivalent	2
Runs, microscopes	8
Thread intervals	13

Some of the micrometer threads which had become slack were replaced by new ones in December, 1915.

In the time not spent in observing, the members of this division have worked on the reductions. The chronograph sheets are read; the means in the observing books taken to April, 1916; the azimuth of the marks, all instrumental constants, and clock star reduction sheets for the year ending August, 1915, have been computed; and the preliminary clock corrections and rates for the first year's work have been derived.

DIVISION OF THE EQUATORIALS.

The personnel of this division consisted of Prof. Asaph Hall, United States Navy (in charge), Assistant George H. Peters, Assistant H. E. Burton, and Assistant E. C. Bower, from July 7, 1915.

Observations were taken with the various instruments as follows:

26-INCH EQUATORIAL.

Satellites of Mars	1
Satellite VI of Jupiter	4
Satellites of Saturn	74
Satellites of Uranus	21
Occultations of stars by the moon	36
Asteroids	3
Comets	23
Arcs for micrometer screw	26
Instrumental constants	15

Of the observations of the satellites of Saturn 4 were of Mimas-Tethys, 3 of Mimas-Rhea, 26 of Rhea-Titan, 14 of Titan-Hyperion, and 27 of Titan-Iapetus.

Eight measures were made of Uranus-Titania, 12 of Titania-Oberon, and 1 of Ariel-Titania.

Of the comets, 6 observations were of 1915a (Mellish), 10 of 1915e (Taylor), 4 of 1916a (Neujmin), and 3 of 1916b (Wolf).

Three observations were taken of (624) Hector.

Investigation was made of the screw of Clark micrometer II by means of an eyepiece microscope and auxiliary spider lines suitably placed on the movable slide carried by the micrometer screw. The necessary threads were inserted at the nautical instrument repair shop of the Naval Observatory, and the optical fitting of the eyepiece microscope was done there. The general arrangement was the same as that planned by the Repsolds for the new micrometer constructed by them for the 26-inch.

The results of this examination of the screw of Clark II agreed substantially with those previously obtained with the transit of Venus measuring engine.

12-INCH EQUATORIAL.

With this instrument 34 occultations were observed, the same occultations being usually observed on the 12-inch and 26-inch equatorials. Also, there were made 4 observations of the asteroid (4) Vesta.

The contact times of the partial eclipse of the sun of February 29–30, 1916, were observed with the 12-inch and four 5-inch equatorials.

On Thursday evenings and on a considerable number of special nights 1,517 visitors were shown through the 12-inch by Mr. Peters, Mr. Burton, and Mr. Conrad. Among the visitors were many schools and teachers.

Considerable time has been given to the discussion of the observations of the satellites of Saturn made during the period 1909–1914.

The following observations have been sent to the Astronomical Journal:

Occultations, from 1914, July 8 to 1916, February 14; Comet 1913f (Delavan), from 1914, July 28 to 1915, January 20; observations of (433) Eros, taken in 1914 and 1915, of (796) taken in 1914, and of (624) made in 1915.

PHOTOHELIOGRAPH.

Photographs of the sun were taken on 200 days. There were spots on 199 days. During the year the sun spot activity has increased.

Eight photographs were made of the partial eclipse of the sun of February 29–30, 1916.

PHOTOGRAPHIC TELESCOPE.

With the pair of 10-inch lenses Mr. Peters has taken plates of asteroids in the following zones: March, April, September, October, +4° to +8°; May to August, inclusive, +0° to +4°; November to February, inclusive, +12° to +16°.

Mr. Peters has measured the plates and reduced them, except that for the period October 28 to December 31, 1915, the reductions were made by the computing division.

The observations of asteroids through October 27 have been sent to the Astronomical Journal. In the observations as published have been incorporated corrections furnished by Prof. Cohn, director of the Royal Astronomical Computing Bureau of Berlin. One asteroid in the list above referred to is new.

A redetermination was made of the position of B. D. −16° 4875, which is included in the part of the Astronomische Gesellschaft Catalogue observed at the Naval Observatory.

The asteroids photographed, measured, and reduced during the year are as follows:

Asteroid.	Number observations.	Asteroid.	Number observations.	Asteroid.	Number observations.
5 Astraea	2	199 Byblis	1	403 Cyane	1
12 Victoria	2	201 Penelope	2	420 Bertholda	2
34 Circe	2	225 Henrietta	2	425 Cornelia	2
39 Laetitia	2	230 Athamantis	2	440 Theodora	1
41 Daphne	1	233 Asterope	2	446 Aeternitas	2
51 Nemausa	1	234 Barbara	2	451 Patientia	2
57 Mnemosyne	3	239 Adrastea	3	469 Argentina	2
59 Elpis	1	250 Bettina	4	479 Caprera	1
65 Cybele	2	276 Adelheid	2	490 Veritas	1
67 Asia	2	279 Thule	2	498 Tokio	2
69 Hesperia	2	306 Unitas	2	503 Evelyn	2
96 Aegle	1	322 Phaeo	1	518 Halawe	2
119 Althaea	2	331 Etheridgea	2	536 Merapi	2
121 Hermione	2	339 Dorothea	1	542 Susanna	2
122 Gerda	2	340 Eduarda	2	551 Ortrud	2
124 Alkeste	2	341 California	2	556 Phyllis	2
140 Siwa	2	352 Gisela	2	727 Nipponia	2
147 Protogeneia	2	363 Padua	3	787 (1914 UQ)	2
167 Urda	3	377 Campania	7	797 (1914 VR)	2
184 Dejopeja	2	387 Aquitania	2	Nova	2

DIVISION OF PHOTOGRAPHIC ZENITH TUBE AND ALT-AZIMUTH.

This division has been in charge of Prof. F. B. Littell, United States Navy, who has been assisted in the observational work by Assistant Astronomer G. A. Hill.

PHOTOGRAPHIC ZENITH TUBE.

The sheet-iron louver building for the photographic zenith tube and the platform connecting it with the alt-azimuth house were completed in August, 1915. A convenient device for centering the

floating mercury basin and an electric blower for drawing a current of air through the tube were installed. After the various adjustments had been made, regular observations for the determination of the variation of latitude were begun in October. A list of 64 stars, divided into 8 groups, with 7 additional stars for scale value, was adopted for this work. The stars culminate within 10½ minutes of the zenith, and the mean zenith distance of each group is made as small as practicable by balancing north and south stars. Usually 2 groups are observed per night, but at certain times of the year 3 groups are on the program. Some of the stars first selected proved to be too faint for the purpose and the groups had to be rearranged in order to utilize the brighter stars.

During the winter there was considerable difficulty with the tube clock. The trouble was attributed to the effect of the cold on the lubricating oil, but near the end of the cold weather a slight maladjustment was detected which may have been the real cause of the difficulty.

It was found that the installation of the tube clock on the floor as originally arranged was not satisfactory, even though the floor under the clock was braced by an iron I beam, so a support independent of the floor was provided. This consists of a tripod formed of three iron I beams with their feet set in cement and a top composed of two iron plates connected by adjusting screws, by means of which any desired adjustments can be made. Since this was installed in April the tube clock has worked very satisfactorily.

A canvas screen attachable to the two sections of the movable roof is used when needed to keep moonlight from falling upon the objective. Four brass mesh screens of varying power are used either singly or in different combinations over the objective in the case of observations of the brighter stars to prevent the formation of images too large for accurate measurement.

The following observations have been secured:

Test plates	22
Plates for variation of latitude	151
Stars for variation of latitude	1,028

ALT-AZIMUTH.

It is intended to operate the alt-azimuth in connection with the work of the photographic zenith tube, utilizing the intervals between the observations with the latter instrument to get declination observations with the alt-azimuth. The stars on the observing list will be those of the Liste Géneralé Provisiore d'Etoiles Fondamentales contained in the Supplement a la Connaissance des Temps pour l'An 1914, culminating within 75° of the zenith. The work of the photographic zenith tube will probably prevent the list from being completely observed.

The following changes have recently been made in the alt-azimuth in preparation for this work. The field illumination has been effected by means of a small 3.8-volt electric lamp, the light passing through one of the pivots to a mirror, thence to a mirror on the outside and at the center of the objective, thence to the field. A third level has been attached to the microscope alidade. Two thermometers, one

to be used as a standard and the other to be used as a wet bulb, have been mounted on a whirling apparatus on the north collimator pier.

The method of observing has been changed. The instrument is used in the meridian. Two bisections are made with the telescope micrometer at side threads as the star approaches the center of the field. The instrument is then revolved 180° on its vertical axis, reset, and two bisections are made as the star leaves the field at the same points as in the previous position of the instrument. A reversing prism is used, and in each case the two bisections are made with the image direct and reversed. The microscopes and levels are read before the first two bisections and after the last two. The microscopes are provided with reversing prisms, by means of which all the division lines of the circle are made to appear vertical. Readings are made on two divisions of the circle six minutes apart under each microscope, using two pairs of threads five and a half minutes apart.

Observations were begun in May, and the number of observations secured is 79.

DIVISION OF PRIME VERTICAL TRANSIT INSTRUMENT.

This division has been in charge of Assistant Astronomer George A. Hill.

During the past year observing with this instrument has been suspended.

At the close of the preceding fiscal year the individual observations, in declination, of the stars observed with the instrument had been collected on cards. Since then each observation has been reduced to 1900, the mean taken of all observations made of each star, and the final position for 1900 secured.

The results have been entered on printer's copy, which includes, in tabular form, the individual observation of each star, the date of observation, as well as the mean epoch of the final result.

Another table is made in the form of a catalogue, and contains the name of the star, the magnitude, the right ascension for 1900, the mean epoch, the number of observations, the declination, and the precession and secular variation for the same period.

Following the above computations, tables have been prepared that give by running dates the latitude of the instrument resulting from all stars the places of which are definitely known. There are about 7,000 individual latitudes included in this table.

After the above had been computed and checked all the latitudes which were secured in 1904–1912 by the polygon method were tabulated. A list was made of dates when all stars of a group were observed, and from this list have been secured the correction to the observed latitude of each star to reduce it to the mean of the group in which it occurs.

Tables are now being prepared giving the difference between the mean of the four latitudes observed in a group each night and that of each individual latitude in that group.

The instrument remains in good order. During the year the exterior walls, windows, and roof of the prime vertical transit house were painted.

DIVISION OF REDUCTION OF OBSERVATIONS.

This division has been in charge of the executive committee. The personnel consisted of Assistant Eleanor A. Lamson, Miscellaneous Computers Etta M. Eaton until October 26, 1915 (died); S. Goldstein; C. B. Watts from July 1, 1915 (detailed to time service department); William A. Conrad from November 15, 1915; E. S Horsley from November 20 to December 9, 1915 (resigned); R. R. Candor from January 17, 1916; R. D. Gustin from January 31 to June 19, 1916 (temporary).

REDUCTION OF THE 9-INCH TRANSIT CIRCLE WORK, 1903–1911.

This work has been largely collecting and arranging material desired for use in preparing the introduction for Part I, Volume IX, Second Series, Publications of the United States Naval Observatory, which will contain the final results of this series of observations and the discussions in connection therewith. The work included a comparison of the right ascensions and declinations of the zodiacal stars with the positions in Hedrick's Catalogue, and a determination of the correction to the equinox and of the correction to the obliquity of the ecliptic from the observations of the sun and also from the observations of the moon.

The printer's copy of the final catalogue has been started.

Part II, Volume IX, Second Series, Publications of the United States Naval Observatory, has been received from the printer and distributed. This part comprises the journal of the observations from September 3, 1903, to September 28, 1908, and contains 766 pages.

REDUCTION OF THE 9-INCH TRANSIT CIRCLE WORK, 1912–13.

This work, which comprises observations extending over the period January 31, 1912, to April 25, 1913, has been completed, with the exception of the discussion of the final results, and the printer's copy of the journal has been made out.

REDUCTION OF THE 6-INCH TRANSIT CIRCLE WORK, 1913–14.

The observations from November 3, 1913, to April 17, 1914, have been reduced in right ascension as far as the clock correction. A preliminary discussion of the relative personal equations of the observers and the clock corrections for this period was made for comparison purposes for the Washington-Paris longitude work, 1913–14. The declinations of the series are also being reduced.

WASHINGTON-PARIS LONGITUDE WORK.

The Appendix to Volume IX, Second Series, Publications of the United States Naval Observatory, which contains the details of the Washington-Paris longitude determination, 1913–14, is at the printer's ready to be plated. The reprints, which will appear first, are being bound.

REDUCTION OF PRIME VERTICAL WORK.

The computation of the latitude, 1893–1912, based on Newcomb and Boss, and the discussions of the results, have been carried on in cooperation with the observer.

REDUCTION OF PHOTOGRAPHIC EQUATORIAL WORK.

The observations of asteroids made from October, 1915, to January, 1916, have been reduced and checked.

LIBRARY.

Mr. W. D. Horigan continued as librarian throughout the year.

	Volumes.	Pamphlets.	Total.
Contents of library July 1, 1915	28,378	5,619	33,997
Accessions:			
By purchase	154	.....	154
Through exchange	254	85	339
Total	28,786	5,704	34,490

The following publications were printed:

	Copies.
Annual Report of Naval Observatory, 1915	1,200
Publications, Naval Observatory, 2d series, Vol. IX, pt. 2	800
American Ephemeris, 1918	1,300
American Nautical Almanac:	
1916	260
1917	1,500
1918	1,495
Dip and refraction for aerial navigation	230

There were distributed 1,662 of the department of astronomical observations and 2,670 publications of the department of the Nautical Almanac, making a total of 4,332 copies.

CONDITION OF MATERIAL.

INSTRUMENTS.

The instruments are in good condition and available for any appropriate work.

BUILDINGS, GROUNDS, AND ROADS.

Prof. H. E. Smith, United States Navy, has had charge of buildings, grounds, and roads in addition to his other duties since reporting for duty September 25, 1915.

The 53 buildings, constituting the Naval Observatory plant, are in good condition. During the fiscal year repairs as follows have been accomplished:

Paint—Inside work:
- Halls and pier room of main building.
- East and west observer's rooms.
- Clock house.
- Foreman's house.

Paint—Outside work:
- All outside wood and iron work, main building.
- Longitude houses and their meridian mark houses.
- Prime vertical building.
- 12-inch equatorial dome.

Repairs to buildings:
- All copper, tin, and slate roofs repaired.
- All down spouts and eave troughs repaired.
- Paint house removed south of barn; and brick walls and windows, new tin roof, and concrete floor installed.
- Watch box removed to site east of barn and necessary repairs made.
- Cold frame for early plants abolished.
- Small chicken house and yard erected.
- Repaired roof framing to photoequatorial house.
- Built two passageways from east and west transit houses to observers' houses.
- Enlarged watchmakers' booth in instrument repair shop.
- Replaced old electric wiring in attic of main building with wiring which meets with the approval of the National Board of Fire Underwriters.
- Replaced old electric wiring and fixtures in library of main building and they now meet the approval of the National Board of Fire Underwriters.

Grounds:
- Put lime on all lawns in fall.
- Put phosphate and sheep manure on all lawns in spring.
- Sowed grass seed on all bare spots.
- Cleared out dead trees and dead wood from trees.
- Cleared way for boundary survey.
- Surveyed grounds and placed 36 boundary stones.
- Repaired boundary fence south part of circle.
- Planted shrubs at north entrance.
- Transplanted two large trees.
- Planted 2,500 feet of boundary hedge (privit).
- Cleared three clogged sewers—(1) east of superintendent's house, (2) drains for east transit house, (3) sewer from sleeping quarters. (These involved considerable digging.)
- Rerigged wireless aerial.
- Inspected all outside wiring and placed two new lamp posts.
- Built two retaining walls near Home School boundary.

Roads:
- Built several hundred yards of new roadway.
- Resurfaced all roads.
- Put tarvia on all hills in old roads.
- Repaired 1,000 feet of roadside gutters, resetting stone in tarvia.
- Repaired stone and concrete walks.

Inspections:
- Inspected power-plant boilers and road roller (District inspector).
- Inspected all roofs.
- Inspected steam, air, gas, and water pipes.
- Inspected conduits.
- Inspected fire equipment.
- Inspected flushing system.
- Inspected sewers and drains.
- Inspected buildings.
- Inspected tools.
- Inspected equipment.

J. A. HOOGEWERFF,
Captain, United States Navy.

REPORT OF CHIEF OF THE BUREAU OF ORDNANCE.

NAVY DEPARTMENT,
BUREAU OF ORDNANCE,
Washington, D. C., October 6, 1916.

To: The Secretary of the Navy.
Subject: Annual report for the fiscal year 1916.

The bureau submits herewith its annual report. Much material of interest has been omitted, owing to its confidential nature.

GUNS.

The manufacture of all 5-inch guns required to arm the *New Mexico*, *Mississippi*, and *Idaho* has been completed. All 14-inch 50-caliber guns for the *Idaho* have been delivered to that vessel, and the proof of the 14-inch guns for the *Mississippi* and *New Mexico* is proceeding satisfactorily.

All 5-inch 51-caliber cartridge case guns have been replaced with bag guns, and the conversion of the cartridge case guns is nearly completed.

All 8-inch guns have been replaced. The turret guns in the fleet are in excellent condition as regards remaining life except those of the *Arkansas;* the battery of that ship will be replaced this autumn.

Relining of spare guns of the following calibers is being carried out at the Washington Navy Yard: Six 14-inch 45-caliber, four 12-inch 50-caliber, four 10-inch 40-caliber, eighteen 8-inch 45-caliber, and twenty 5-inch 51-caliber.

All other spare guns are ready for service.

Anti-aircraft guns have been provided for the following-named vessels: *Arizona*, *Oklahoma*, *New York*, *Arkansas*, *Utah*, *Delaware*, *South Carolina*, *Pennsylvania*, *Nevada*, *Texas*, *Wyoming*, *Florida*, *Michigan*, and *Connecticut*.

Some of them have been mounted and the remainder will be mounted as soon as the ships are available. Anti-aircraft guns have been provided for six destroyers, the mine sweepers, and mine layers.

In order to test the effect of deepening the rifle grooves in the 4-inch gun as to length of life, the grooves of one gun were successively deepened twice, increasing the depth the first time by 50 per cent and then doubling the original depth. The results of these tests were satisfactory and indicate the advantage of providing deeper grooves to all of our guns.

In general, the bureau has ascertained that the life of our guns has been underestimated—a matter of great importance in its military aspect as well as in its economical result. Experiments have

been continued with a view to decreasing erosion, but without progress so far.

All spare guns from 6-inch 45-calibre to 3-pounder, inclusive, for which mounts are available, have been grouped in reserve batteries, and either tentatively or finally assigned to merchant ships. There is a shortage of guns for this purpose, which will partly be filled by guns which are being manufactured under the appropriation "Batteries for merchant auxiliaries" carried in the naval appropriation act approved August 29, 1916.

GUN MOUNTS.

All work in connection with the turret gun mounts and powder hoists was completed on the *Nevada*, *Oklahoma*, and *Pennsylvania*, all of which ships were in full commission before June 30, 1916. All work on the turret mount installation on the *Arizona* was completed by September 15. The triple-mount turrets as installed on the *Nevada*, *Oklahoma*, and *Pennsylvania* have had preliminary tests, with satisfactory results. The turret mounts for the *Mississippi*, *Idaho*, and *New Mexico* are now being assembled at the Gun Factory. Ten slides belonging to the *Mississippi* and *Idaho* have already been delivered to the shipbuilders. All deck lugs for the *Idaho* have been delivered, as well as those for two turrets of the *Mississippi*.

The 5-inch mounts for the *Arizona*, *Idaho*, and *Mississippi* have been completed, those for the *New Mexico* are nearly completed, and those for the *Tennessee* and *California* are well in hand. The 4-inch mounts for destroyers *57* to *68* are ready for installation, and those for *Nos. 69–74* are well in hand. The gun mounts for submarines of the L and M classes have been completed and have been installed on all but the first four of the L class. Mounts of an improved type are being manufactured for the *Schley*, submarines of the O class, and the fleet submarines. A considerable number of 3-inch and 1-pounder automatic anti-aircraft mounts have been manufactured and will be installed as soon as opportunity occurs.

A new design of 4-inch twin mount for destroyers has been completed and the type mount will be tested within the month. An aircraft gun has also been completed and tested at the proving ground. A design is being prepared for a light 1-pounder mount for motor patrol boats.

POWER POWDER HOISTS.

Power powder hoists have been installed in the *Texas*, *Wyoming*, *Arkansas*, *Oklahoma*, and *Nevada*. The material has been assembled and is ready for installation in the *Delaware* and *South Carolina*. This will complete the scheme for all dreadnaughts.

PROJECTILES.

Contracts were awarded during the year for all the projectiles for which funds were available. Twenty thousand 6-inch and one hundred thousand 3-inch forged steel shell are being manufactured at the navy yards. The 1913 specifications for armor-piercing projectiles demanded new conditions for acceptance, which have been

successfully met by four companies. Further experiments are being conducted in the manufacture of armor-piercing shell at the Washington Navy Yard. The Midvale Steel Co. has manufactured a lot of ten 16-inch armor-piercing projectiles. Nine of these have been tested with excellent results, and the bureau is now prepared with the necessary data upon which to base specifications for such projectiles.

SMOKELESS POWDER.

There were manufactured at the naval powder factory, Indianhead, Md., during the fiscal year 1916, a total of 4,220,405 pounds of smokeless powder. A comparative statement of powder manufacture at Indianhead during the fiscal years 1914 and 1915 is given below:

	Fiscal year—	
	1915-16	1914-15
New powder manufactured ..... pounds	3,327,329	3,140,013
Reworked powder manufactured	893,076	892,046
Total	4,220,405	4,052,059
Cost:		
New powder—		
Shop cost, per pound	$0.321061	$0.24912
Overhead cost	.096052	.072243
Interest	.023669	.019893
Total	.440782	.341256
Reworked powder—		
Shop cost, per pound	.120633	.102334
Overhead cost	.096052	.072243
Interest	.023669	.019893
Total	.240354	.194470

Owing to shortage in labor, delays in delivery of material, and numerous breakdowns, due to defective material or faulty installation by private contractors, the completion of the extensions to the powder factory was delayed several months, and only now is the output approaching the rated capacity of the plant—20,000 pounds per day. These difficulties were practically all due to conditions arising from the European war.

The trained labor at the proving ground was depleted by 41 per per cent, due to higher offers of pay being made by private manufacturers, and the factory was under the necessity of procuring new employees and training them for the work.

The shop cost of manufacture of new powder at Indianhead rose from $0.249 for the fiscal year 1915 to $0.321 for the fiscal year 1916, an increase of $0.072 per pound. This large increase in cost was caused mainly by the increase in the market price of all raw materials entering into the manufacture of explosives, due to the war abroad. As an example, the cost of mixed acid more than doubled, and it was accordingly decided to increase the capacity of the nitric and sulphuric acid plants at Indianhead to take care of the entire capacity of the powder factory. These extensions to the acid plants are now practically completed, and at the current rate for mixed

acid they will pay for themselves in a few months. More recently alcohol and nitrating cotton have greatly advanced in price. A supply of sodium nitrate of excellent quality was obtained at a low figure by purchase in Chilean ports and transporting in Navy collier to the United States.

No contracts for smokeless powder were placed with private manufacturers during the year, and no deliveries were made by private manufacturers. One outstanding contract for 790,000 pounds is due for delivery during the next few weeks. Owing to the large demands of the new building program, which are beyond the capacity of the Indianhead plant, additional contracts will be placed with private manufacturers during the coming fiscal year. A number of new firms have gone into the manufacture of smokeless powder since the European war began, and it is expected that it will now be possible to secure competitive bids on the Navy's requirements for smokeless powder.

The record of the stabilized powders continues excellent. With but two or three exceptions, all the unstabilized powders in service afloat have been replaced by stabilized powders. The unstabilized powders so withdrawn continue to form an important part of the war reserve of powder, especially for the older guns. As a large proportion of these powders are still of very good stability, it will undoubtedly be several years before they are all finally withdrawn from issue.

A large amount of work has been done in re-proving and correcting the weight of charge of powders which were found to have been proved originally under nonstandard conditions. This work has now been nearly completed for all service powders afloat with the result that ships having two or more indexes on board for a given caliber may rest assured that their powders will "shoot together."

WORK AT NAVAL MAGAZINES.

The policy of inspecting and overhauling ships' service-ammunition outfits as they became available during the ships' repair periods has been continued, with decidedly beneficial results. Besides the routine preparation of target-practice ammunition and of service-ammunition outfits for new construction, the various naval magazines have been actively engaged in the overhauling of service-ammunition outfits of ships undergoing repair as stated above, and also with the assembly of ammunition for ships on the Navy list out of commission, of ammunition for reserve batteries to be mounted on merchant auxiliaries in time of war, and of reserve service ammunition for the fleet. As a result the volume of work has greatly increased requiring additional facilities and more workmen.

HIGH EXPLOSIVES, ETC.

The cost of high explosives for torpedoes, mines, projectiles, etc., has continued very high, owing to the demands from abroad and the difficulty of obtaining certain raw materials. The operations of the new high-explosives plant at Indianhead has been greatly delayed, owing to various causes, but a small quantity of explosive has been successfully produced and it is anticipated that an output of at least

1,000 pounds per day will be reached shortly. The war has shown the necessity of procuring ample reserves in peace time of certain special materials which are normally nearly or quite all imported from abroad, and the bureau is prepared to act accordingly as soon as market conditions become favorable.

FUSES.

The development work with fuses has been actively prosecuted throughout the year. The quality of all service fuses has been greatly improved as a result of the new specifications mentioned in the last annual report and two new types of detonating fuses of high efficiency have been adopted for the naval service. Every effort is made to improve the quality of fuses and to increase the number of acceptable types, thereby increasing the source of supply. A large number of old fuses which were found to have greatly deteriorated with age have been withdrawn from service and reloaded, making them as good as new. A new mixed shell filler has been adopted for common shell fitted with ignition fuses which is much more efficient than the black shell powder filler previously used.

ARMOR.

In April, 1916, contract was made with the Carnegie Steel Co. for armor for the *Tennessee* and *California*. This contract called for the following armor:

Class A	tons	14,479.2
Class A-2	do	820
Class B	do	602

The armor under this contract was divided by the Carnegie Steel Co. equally among the Midvale, Carnegie, and Bethlehem Steel Cos.

Armor prices.

Ship.	Class A-1.	Class A-2.	Class B.	Class C.
38	$454	$518	$496	$548
39	440	504	471	448
40, 41, 42	425	486	466	376
43, 44	425	486	460	376–395

During the year the three armor makers delivered armor as follows:

Bethlehem Steel Co	tons	5,649
Carnegie Steel Co	do	5,430
Midvale Steel Co	do	6,928

This completed the delivery of all armor for ships prior to the *Tennessee*, except one group of 657 tons, *New Mexico* armor. (This is a Carnegie group and has been accepted ballistically.)

One group of armor for the *Tennessee* has passed its ballistic test. Otherwise no armor for the *Tennessee* and *California* has been submitted. Drawings for this armor have not yet been received, except for four groups, three of which were received in June and the fourth in August. Otherwise, all of this armor would have been well in hand.

TORPEDOES.

The bureau has placed contracts for all funds for this purpose available under the 1916 appropriation, and is now arranging for the placing of contracts and orders for the torpedoes required under the 1917 appropriation bill.

The facilities for torpedo manufacture at the torpedo station, Newport, have been largely increased so far as buildings and equipment are concerned. Owing to the scarcity of labor and the increased amount of repair and overhaul demanded for torpedoes in service, the output of the plant has not reached our expectations.

The manufacture of torpedoes at the Washington Navy Yard is progressing satisfactorily, though on a limited scale. The present shop equipment is capable of turning out about 100 torpedoes per annum. All the torpedoes for the United States Navy are now being manufactured by the E. W. Bliss Co., the torpedo station, and the Naval Gun Factory. As they are all practically the same type, uniformity in manufacture and interchangeability of parts must be secured to the fullest extent. In order to accomplish this the bureau proposes to employ subinspectors at the Government plants, as is done with private contractors. Continued experiments are being made at the torpedo station with a view of increasing the range and speed of our torpedoes.

The upkeep of the torpedoes in the fleet and maintaining them in good condition ready for war service is a complex and growing problem. The continual running of torpedoes results that several in the fleet are always unserviceable. Experiment is being made on the *Wyoming* of issuing torpedoes to ships practically ready for firing. Should this experiment ultimately prove successful, the maintenance of torpedoes should become a far more simple problem.

The *Montana* still continues to render valuable service, although her useful time during the past year has been very much curtailed by a prolonged stay at the navy yard for repairs. At the date of this report she is engaged in proving torpedoes manufactured at the Washington Navy Yard, at a station near the mouth of the Potomac River, and at the same time continuing her regular class under instruction.

MINES.

The manufacture of mines at the Norfolk Navy Yard has been continued. The output has been interfered with to some extent by lack of material, and the bureau's expectations of output have not, for this and other reasons, been met.

Exercises with mines have been carried out by the mine force of the fleet, and the reliability of the standard mine determined. A field of mines was planted at Pensacola, to remain down until next spring, in order to test the durability of the mines. In general, all tests so far indicate that the mine is thoroughly reliable and efficient.

ALLOWANCE LISTS.

The work of standardizing broadside battery allowance lists has been practically completed and the standardization of turret lists is going ahead satisfactorily.

Allowance lists are being prepared for merchant vessels to be placed in service in case of war. Detailed instructions will be issued in regard to complete ordnance outfits for these vessels as soon as practicable.

ASSEMBLING OF OUTFITS FOR NEW VESSELS.

In spite of detailed instructions in allowance lists and instructions contained in Naval Regulations and Instructions, the assembling of outfits for vessels completed during the year has not been satisfactory. Long lists of shortages in outfits were reported in connection with several ships, particularly noticeable were the *Oklahoma* and *Pennsylvania*. Effort is being made to overcome this by continuing the system of starting inquiries as to status of vessel's outfit, when the vessel is about 75 to 80 per cent completed. A good deal of the trouble has been with material obtained from contractors (optical material, for example).

SHIPS' REQUISITIONS AND SURVEYS.

Requisitions have increased in number and the system of following up a requisition until the material is received by the ship has been continued. There is still considerable time required for the furnishing of certain articles, due principally to supplying and manufacturing all the material at one point (the Washington Navy Yard). Steps are being taken to enlarge the stock of ordnance material carried at New York, Norfolk, and Mare Island, with a view to reducing the delay.

SUPPLY OF MISCELLANEOUS MATERIAL FOR SHIPS.

A definite policy has been approved for determining the stock of spare parts, etc., to be carried at the Washington Navy Yard. The details of getting the material into store are being worked out at the Washington Navy Yard, and it is believed a great saving in time necessary to fill requisitions will result.

FIRE-CONTROL AND OPTICAL INSTRUMENTS.

During the fiscal year ending June 30, 1916, deliveries of fire-control instruments and optical material, except range finders, has been practically completed for all battleships up to and including *Arizona*, destroyers *Nos. 63* to *68*, and all auxiliaries under construction. Delay has been experienced in obtaining deliveries of range finders, due to scarcity of suitable glass for these instruments. It is anticipated that the *Arizona's* range finders will be ready before the ship joins the fleet. Contracts have been made for practically all material for the *New Mexico*, *Mississippi*, and *Idaho*, and deliveries for these ships should be made on contract time.

Development of optical instruments during the year has been in the direction of standardization and simplification of designs with a view to facilitating the supply of such instruments in emergencies. By keeping the number of types to a minimum, accumulating a stock of spares, and simplifying the designs so that additional instruments

can be obtained in the shortest possible time in an emergency a much better state of preparedness in this respect can be maintained.

Since the outbreak of the European war it has been increasingly difficult to get deliveries of satisfactory optical material, due to the scarcity of suitable optical glass, particularly for the more complicated instruments, such as range finders, where it is necessary for the glass to be free from defects which might be of minor importance in other instruments. Great strides have already been made by the various manufacturers in producing glass of desired qualities, and it now appears probable that they will soon be able to produce glass of all grades in sufficient quantities to meet the demand.

Gunnery has developed rapidly during the year, due to reports received in regard to naval battles abroad. The necessity of being able to make hits at ranges much greater than were heretofore considered likely to obtain in battle has emphasized the importance of getting and keeping the range accurately. As firing ranges increase, the relative values of the various errors change radically, the error caused by incorrect sight bar range assuming a relative value which makes it more important than ever that the range be kept with the utmost accuracy possible. Increased attention is therefore being devoted to the development of instruments that will get and keep the range with the greatest precision possible, having in mind conditions as they will probably exist in battle as indicated by reports of naval engagements during the present war.

SPECIAL BOARD ON NAVAL ORDNANCE.

During the fiscal year ending June 30, 1916, the board conducted and reported upon a number of tests with seven different types of fuses. Much has been learned about the action of fuses which has enabled us to make them reliable and uniform.

The board conducted tests to determine the practicability of sympathetic detonation of high explosive shells, mines, and war heads on board a vessel struck by a mine or torpedo. The results of these experiments indicate that danger from such a cause is very slight, if it exists at all, as the board was unable to produce a sympathetic detonation.

The board investigated the subject of "oil explosions" in torpedoes and recommended certain steps to be taken to prevent these accidents.

The board witnessed and reported upon the firing at targets A and B by the *Tallahassee* and *Ozark*.

Preliminary tests of the Clarke bomb were made by the board, but the remaining tests are being made by an officer specially designated by the bureau.

The board has examined and reported on about 850 inventions and devices that have been submitted to the bureau. A large number of the inventors of these devices showed more or less ignorance of the conditions to be met. Many of the devices were wholly impracticable, and a large majority were either too complicated or too visionary to be seriously considered. A great many of these devices were founded upon false principles, while others were devices tested many years ago and discarded as inefficient or impracticable. Of the many de-

vices examined, only three or four appeared to possess sufficient merit to warrant further consideration and development.

Much of the experimental work of the board takes place at the naval proving ground, and many hours are now lost by the board in proceeding to and from the proving ground. Moreover, nearly all the ballistic data needed by the board is on file there. The work of the board, therefore, would be much facilitated if it were stationed at the proving ground instead of at Washington. The inspector of ordnance in charge of the proving ground could then be ex officio a member of the board.

NAVAL GUN FACTORY.

The following is a summary of the most important work performed at the Naval Gun Factory during the year:

Fourteen 14-inch guns, three 12-inch, fifty-six 5-inch, and twenty-eight 3-inch guns were manufactured; one other 14-inch gun was completed, but the liner was rejected after proof.

The following numbers of guns were relined and rebuilt: 17 major caliber, twenty-four 8-inch, one 7-inch, twenty-two 5-inch, forty-six 3-inch.

Guns modified, overhauled, and put in serviceable condition: Two hundred and twenty-four of all calibers from 5-inch down to 1-pounder.

Miscellaneous.

Contract guns star-gauged, examined, and placed in serviceable condition	87
Breech mechanisms manufactured, overhauled, modified, etc.	490
Drill guns completed	41
Firing mechanisms manufactured, modified, or overhauled and placed in serviceable condition	424
Sights completed and partially completed	1,022
Telescopes and optical instruments repaired	1,385
Gun mounts and parts completed, partially completed and overhauled	1,096

Fifty Mark VII Mod. 2 torpedoes have been practically completed, and 50 others are 75 per cent completed. Ninety-six torpedoes on a new order have had 8 per cent of work done on them.

Forty-one Mark II twin tubes have been completed at the yard and eight others are nearing completion. Sixteen Mark III triple tubes have been delivered, and 32 others of the same type are in hand, some of them nearing completion. In addition to this, a number of submerged tubes have been finished and others are well in hand. One hundred and sixty-six thousand two hundred and fifty cartridge cases were manufactured at the yard during the year. The production of cartridge cases at the Gun Factory has been three and a half times as great during this year as during the year preceding. In the same shop a large number of other auxiliaries for ammunition have been manufactured, including powder tanks, cartridge tanks, and ammunition boxes. The Gun Factory has been active in the production of time fuzes, primers, and auxiliaries.

The work done in the forge shop has greatly increased in quantity over that of last year. It has extended in variety, and work that has heretofore been considered of a difficult character has been under-

taken, such as forgings for torpedo flask heads, and a 14-inch screw box liner of excellent quality was forged from steel produced in our own foundry. The bureau heretofore has had great trouble in getting these forgings of satisfactory quality from private manufacturers. The total output amounted to over 2,500,000 pounds; some of this apparent increase, however, is due to a different system of accounting of work completed.

The steel foundry is producing ingots of a very high quality. The output in steel castings for the year amounted to nearly 2,700,000 pounds, as against about 2,000,000 pounds last year. The production of iron castings has increased over 27 per cent. The total output of castings of all kinds and metals amounts to 5,458,300 pounds for 1916, as against 4,535,495 pounds for 1915.

The reworking of nonferrous scrap metal has received a great deal of attention, with a resulting increased economy.

In reviewing the work done at the Gun Factory the most notable achievement lies in the greatly increased output of cartridge cases at a correspondingly reduced cost, and the improved efficiency of the forge shop and foundry. The optical shop has continued its usefulness, and the large accumulation of instruments damaged in service and requiring repairs has been reduced to a very great extent. Before the establishment of this shop this work was generally done by private manufacturers. The establishment of this shop and its extension have not only contributed to the rapidity of replacing injured instruments in service, but has greatly reduced the cost of such replacement to the Government. A new storehouse, completed early in 1916, has helped the efficiency of the Gun Factory in permitting the gathering of stores and supplies in a more systematic manner, and permitting the disposition of obsolete and condemned material more promptly.

New machinery has been installed in the cartridge-case shop, and the facilities of the gun-carriage shops increased by the addition of much-needed machinery. The old foundry, after lying idle, has been converted into a useful shop for the manufacture of torpedo tubes. A number of old machines that were not accurate enough for other work have been removed from the shops and assembled in this building, where they have proved serviceable. Improvements in equipment have been installed in the forging shop and foundry.

The Washington Navy Yard has submitted estimates covering a large amount of machinery for replacements and of improved type to meet the increased activities called for by the building program. These have been made the subject of another communication to the department.

NAVAL PROVING GROUND.

The year's work shows approximately the same amount of work during the year in proof of guns and proof of powders, a considerable increase in proof of breech mechanisms, cartridge cases, and primers, and a decrease in proof of mounts and projectiles. Armor and class B armor showed increases and decreases, respectively. The following is a summary of the most important items of proof work performed during the year:

Guns	371
Breech mechanisms	411
Mounts	135
Powder	150
Projectiles	95
Armor	71
Cartridge cases	292
Primers	388

Of the armor tests enumerated above, four class A plates were experimental. Fifty-three experimental projectiles of various kinds were tested, as compared with 64 in the preceding year. The proof of powder has been made more exact and every possible source of error eliminated in order that the assigned weight of charge as determined at Indianhead will give exact results afloat. As a result of this work, reassignments of powders have been made and weights of charge corrected. In this manner nearly all the powders in service have been subjected to a re-proof.

Many experiments have been made at the proving ground with a view to preventing the sticking of primers in their seats. In 1916 much trouble was experienced in the fleet from this cause. The torpedo station and the proving ground co-operated in ascertaining wherein the fault could be corrected. The design has been improved and the material changed, and it is believed that these faults will be remedied.

Re-tests have been made of all old fuses in store. This work was begun in 1915 and has just been completed. The investigation has enabled the bureau to assure itself of the operation of all fuses in service by withdrawing and replacing such as were found to have deteriorated.

One hundred and thirty-seven experiments were comprised in the year's work at the proving ground, exclusive of tests and proofs. Some of these experiments were of considerable importance, involving the tests of proposed new explosives, fuses submitted, erosion, etc.

The work of improving and increasing the restricted facilities at the proving ground has been continued. The character of the proof work has changed very greatly with the change that has taken place in the last few years in naval implements of war. These conditions have arrived at a point where it is imperative that an additional proving ground be provided. This is a matter that can not be delayed any longer without serious detriment to the efficiency of the Navy.

POWDER FACTORY.

As stated elsewhere in this report, the production of powder at the proving ground did not reach our expectations. The factory is now, however, on a good working basis and we will probably lose no more of our trained labor, and the existing condition therefore should continue. The acid plant is taking care of our entire needs at the present time, and at a great economy in cost and transportation.

Estimates for improved facilities for handling heavy guns and armor have been submitted, some of which have been taken care of under funds now available. Fifty-eight accidents occurred during the year at the proving ground and powder factory; none of them was serious.

NAVAL TORPEDO STATION, NEWPORT, R. I.

The work of range testing the lot of 200 Mark IX Mod. 1 torpedoes was begun in July, and for the first three months of the fiscal year 1917 78 torpedoes were passed. At the rate of passing accomplished during the month of September it is possible that nearly all of this lot of 200 will be accepted for service by the end of the calendar year. If this expectation is fulfilled, the number of torpedoes produced at the Newport torpedo station for the calendar year ending December 31, 1916, will be approximately double the number delivered in the previous calendar year. The torpedo station reports a rate of production for the fiscal year 1916 of 166 torpedoes per annum. Two hundred and thirty-nine torpedoes were received from the service for overhaul during the fiscal year, and 243 overhauled torpedoes were issued to the service. Seventeen new outfits, amounting to 148 torpedoes, were issued, and 84 torpedoes replaced.

Besides the work of manufacture and repair of torpedoes, and partially proving torpedoes manufactured by the Bliss Co., 305,000 primers of all kinds were manufactured. This is a 50 per cent increase over last year's output. The total expenditure for labor and material during the fiscal year 1916 for manufactured articles was $1,663,376.04, as against $1,712,718.48 for 1915. The number of men employed at the end of the fiscal year was 1,086, an increase over the previous year of nearly 14 per cent.

PACIFIC COAST TORPEDO STATION, KEYPORT, WASH.

The combination storehouse, power plant, and office building has been completed. The station force has completed the water and sewer systems, besides the extension to the lighting system, and provided a torpedo range with the necessary equipment. The work of receiving and issuing torpedoes to service has been started, and torpedoes from the *South Dakota* and *West Virginia* have been ranged by the crews of those vessels. The amount of work performed, as shown by expenditures, is more than double, and the bureau believes that the usefulness of this station will now be manifested in an increasing degree. Much, however, remains to be done before the equipment is such as to permit the work to go on with economy and celerity.

NAVAL MAGAZINES.

HINGHAM, MASS.

Many improvements have been instituted at this depot, all tending to increase the storage and operating facilities. The work done during the fiscal year 1916 exhibits a very large increase over that for the previous year. Among the improvements that may be mentioned are a new engine shed and check room, and a temporary stowage space for empty tanks. Estimates have been submitted for largely increasing the capacity of this depot to enable it to take the increased consignments of ammunition that the current appropriation bill calls for.

NEW YORK DISTRICT.

The work of the naval magazines in the New York district has proceeded in a satisfactory manner during the past year, and the magazines have met every requirement promptly and in an orderly and efficient manner. The amount of work performed and ammunition handled at the Iona Island magazine has exceeded that of any previous year and necessitated a considerable increase in the force toward the end of the year, which force will be still further increased during the fiscal year 1917. Much difficulty is experienced in obtaining men, a large percentage of ordnance men or ordnance helpers failing to report when called. It has therefore been necessary to carry on much of the work by the employment of laborers, which in time will result in a very satisfactory force of ordnance workers to be drawn from the vicinity.

At Iona Island, based on the amount of smokeless powder passing through the filling houses (about 2,747,000 pounds), the volume of work has exceeded that of previous years by about 13 per cent. General work has also increased, and during the year upward of 165,000 pounds of T. N. T. were melted and cast into mine charges. Six thousand eight hundred and fifteen tons of ammunition have been handled by water during the year. This does not include material issued directly to vessels at the magazine wharf.

At Lake Denmark over 2,312,000 pounds have been received and stored and 1,581,000 pounds shipped. This has involved the handling of 276 freight cars and is an indication of the extensive work being performed there.

The magazine at Fort Lafayette is used as a ready magazine for such articles as small-arms ammunition and wrecking outfits. It is also a repository for torpedo material, war heads awaiting delivery, and for other explosives awaiting shipment. We are also storing naval defense mines at this point.

FORT MIFFLIN, PA.

A new shell house 50 by 200 feet, fixed ammunition house 50 by 100 feet, and magazine 50 by 100 feet have been completed. The work of supplying the track to these buildings will be completed about the date of this report. Estimates have been submitted for new buildings to take care of the constantly growing demands for storage.

ST. JULIENS CREEK, VA.

The St. Juliens Creek magazine has performed the very large amount of work that has fallen to it in the way of preparing and storing ammunition with care and dispatch. Appreciable progress has been made in the preparation of ammunition for reserve batteries. A large amount of shell of various calibers has been overhauled, cleaned, and put in serviceable condition. A new electric locomotive has contributed largely to the expedition with which work is performed. Many improvements have been instituted tending toward economy; one an arrangement by which the output of piled powder

has been increased by 25 per cent; another a device for cleaning shell up to 6 inches in caliber. This machine increased the output from four to eight fold, depending on the caliber.

MARE ISLAND, CAL., AND PUGET SOUND, WASH.

The magazines at Mare Island and Puget Sound have continued their activities, and improvements have been made at both places in the line of economy and efficiency.

OLONGAPO AND CAVITE, P. I.

While it is not contemplated to increase the storage capacity of the magazine at Olongapo, two additional buildings are necessary, one a high-explosive magazine costing $3,500; another for the storage of small-arms ammunition for a similar amount. The plant is being kept up, and the laboratory occupied in testing ammunition on the Asiatic Station.

STUDENT OFFICERS.

The system of instruction of student officers in ordnance has been continued. These officers spend four months at the postgraduate department of the Naval Academy and then follow a course of practical instruction at steelworks, optical works, Gun Factory, and proving ground.

While at the Naval Academy a brief course is received in metallography, and this is enlarged upon at steelworks, working under the inspector. In view of the probable need of experts in metallurgy for the armor and projectile plants, four officers have been assigned to technical schools in order to perfect themselves in this line of work.

J. STRAUSS.

REPORT OF CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR.

NAVY DEPARTMENT,
BUREAU OF CONSTRUCTION AND REPAIR,
Washington, D. C., October 7, 1916.

To: The Secretary of the Navy.

Subject: Report of the Bureau of Construction and Repair for the fiscal year ended June 30, 1916.

1. I respectfully submit herewith the report of the bureau for the fiscal year ended June 30, 1916, together with estimates for appropriations required for the fiscal year ending June 30, 1918.

2. The estimates marked "A" are for the salaries of the clerical employees of the bureau. These estimates include the new positions authorized under the deficiency act, approved September 8, 1916. The increase of the present estimates over the amount authorized for clerical employees in the bureau for the fiscal year ending June 30, 1917, i. e. $2,000. The conditions obtaining in the bureau's clerical force have been somewhat improved by the additional employees allowed in the deficiency bill; but difficulty is being experienced in obtaining efficient men from the civil-service register of eligibles. The work of the bureau being largely of a technical character, considerable time is required for new men to become familiar with the terms used and with the bureau's style of correspondence. However, notwithstanding some handicaps, and the greatly increased volume of work due to the large building program inaugurated, and the continued increase in the Navy, the bureau's clerical work has been kept up to date. This has only been made possible by untiring efforts and by many hours of overtime willingly given by the members of the clerical force. It seems proper to again ask and recommend that the department give consideration to the question of an advance in the rates of pay for the more important and experienced members of the clerical force. There have been no material increases in the rates of pay for these positions in many years despite the increased volume and added importance of the work handled. In order to maintain a high efficiency and a reasonable stability in a clerical force it is necessary to hold out good prospects for promotion, and this can not be done unless a proper and adequate basis of pay is provided for the most important positions.

3. The estimates marked "B" are for the construction and repair of vessels at navy yards and on foreign stations; the purchase of stores, material, machinery, articles of equipage at home and abroad, and tools of all kinds; the construction and repair of yard craft; the pay of the clerical, drafting, inspection, and messenger service in navy yards, naval stations, and offices of superintending naval constructors; and the performance of all work for the Navy in the line

of construction and repair. These estimates have been increased in the sum of $1,428,931. Present indications are that the amount appropriated for the fiscal year 1917 will be found inadequate. It appears probable that even keeping the expenditures to the lowest practicable limit there will be an overexpenditure for the first six months of the present fiscal year. So far as can be determined at present there will be a somewhat greater overexpenditure for the second six months of the current fiscal year.

The appropriation "Construction and repair of vessels" has varied very little in the past six years despite the fact that the Navy has increased each year. The size of the Navy having steadily increased, the time has come when the maintenance appropriations must be increased to meet this condition. Additional expenditures also will be found necessary owing to the additional leave granted to the employees of navy yards and naval stations by the last Congress. Owing to the limited funds available and the necessity for proceeding with work on vessels of the active fleet, it has been necessary to restrict the expenditures on new navy-yard craft to the point where further neglect of this item can not be continued without serious detriment to the service, even without taking into account the increased demands due to the increased size of the whole Navy; this is particularly true in regard to the fuel-oil barges. It appears inevitable that there will be a very considerable increase in the cost of doing work due to the increase in cost of practically all materials utilized in ship work and the increased pay of labor which will, in accordance with the law, be raised in conformity with the increases already made and to be expected at practically all private establishments. The effect of the increase in cost of labor and material has been felt during the current fiscal year as was anticipated in the bureau's annual report for 1916. The condition will, no doubt, be aggravated in the future. The bureau is already experiencing difficulty in obtaining materials of all kinds.

4. The estimates for "Improvement of construction plants" cover the improvement of the shipbuilding and repair plants at the several navy yards and naval stations, it having been found desirable in previous years to include estimates for appropriations of this character which may be specifically devoted to the improvement of hull division shops. Such a provision is necessary in order that such work may not depend entirely upon allotments from the general appropriations, since casualties in the fleet, which could not be foreseen or estimated for, may make it impossible to utilize any considerable portion of the general appropriation for plant improvements. These estimates are identical with the appropriation for the fiscal year 1917.

5. The estimates marked "C" cover the amounts required by the Bureaus of Construction and Repair and Steam Engineering, under the appropriation "Increase of the Navy; construction and machinery" (including submarine torpedo boats), for work on new vessels already authorized by Congress, including those vessels of the three-year program of the naval act of August 29, 1916, specified to be begun as soon as practicable. These estimates for "Increase of the Navy; construction and machinery" (including submarine torpedo boats), for the fiscal year 1918, as has been the case for similar estimates in previous years, do not include any provision for new vessels

of the three-year program to be begun during the fiscal year 1918. For the further information of the department on the subject of appropriations under "Increase of the Navy," there is given below a statement of the amounts actually appropriated for "Increase of the Navy; construction and machinery" (including submarine torpedo boats and colliers), for each of the preceding 11 years and the estimates for the fiscal year 1918 for continuing work on vessels already authorized:

Fiscal year.	Amount appropriated for vessels under old program.	Amount appropriated for first year's work on vessels under new program.	Total.
1908	$12,713,915.00	$500,000.00	$13,213,915.00
1909	9,832,962.00	9,075,000.00	18,907,962.00
1910	16,340,790.00	9,426,033.00	25,766,823.00
1911	13,335,724.00	8,470,000.00	21,805,724.00
1912	6,922,619.67	8,550,000.00	15,472,619.67
1913	6,311,673.00	6,637,500.00	12,949,173.00
1914	15,609,091.00	7,562,412.00	23,171,503.00
1915	13,073,234.00	[1] 10,506,000.00	[1] 23,579,234.00
1916	14,805,803.00	12,090,000.00	26,895,803.00
1917	19,369,127.00	53,130,660.00	72,499,787.00
1918	[2] 90,456,012.00	.....	.....

[1] Includes $2,000,000 appropriated from the proceeds of sale of the former *Idaho* and *Mississippi* toward the construction of a replace vessel.
[2] Estimate submitted for 1918 under old program.

PERSONNEL.

6. The difficulty of carrying on the work of the bureau due to shortage of constructors, which was referrred to in the report for the fiscal year 1915, still continues. The act approved March 3, 1915, provided some prospect of relief, but experience with this act indicated that the limit placed on the number of transfers to the construction corps per year prevented increasing the corps at a rate sufficient to meet the requirements of the work. Congress in the act approved August 29, 1916, removed the restriction on the rate at which transfers could be made and placed it within the discretion of the Secretary of the Navy. Acting on this authority a class of double the size of the preceding classes was selected this fall.

7. The act approved August 29, 1916, authorizes a number of constructors proportioned to the amount of work required to be handled, the number increasing gradually as the size of the Navy increases. The construction corps, however, is at present 24 short of the number determined on as immediately necessary and the selection of classes at least as large as the class selected this fall will require to be continued for some years in order to gradually fill this shortage and at the same time provide for casualties and for the gradual increase in the corps referrred to above.

SHIPBUILDING AT NAVY YARDS.

8. The amount of shipbuilding at navy yards again shows an increase over previous years both as regards number of vessels and their total value.

9. The U. S. S. Arizona was reported by the navy yard, New York, as completed ready for commissioning on September 15, 1916. The first contract for material for this vessel were placed September 16, 1912; the keel was laid March 16, 1914, and the vessel was launched on June 18, 1915.

10. The following vessels have been launched during the year:

U. S. S. Bridge at navy yard, Boston, May 16, 1916.
U. S. S. Henderson at navy yard, Philadelphia, June 17, 1916.
U. S. S. Cassin, at navy yard, Mare Island, June 17, 1916.

11. The construction of the following vessels was assigned to the navy yards indicated during the year:

U. S. S. Tennessee battleship No. 43, navy yard, New York.
U. S. S. California battleship No. 44, navy yard, Mare Island.
U. S. S. Colorado destroyer No. 69, navy yard, Mare Island.
U. S. S. Green destroyer No. [illegible], navy yard, Norfolk.
U. S. S. O-1 submarine No. [illegible], navy yard, Portsmouth.
U. S. S. O-2 submarine No. 63, navy yard, Puget Sound.

12. In addition to these vessels the construction of the following, which were authorized in the naval bill of August 29, 1916, has already been assigned to certain navy yards and the preliminary work is already underway:

Fuel ship No. 16, navy yard, Boston.
Hospital ship No. 1, navy yard, Philadelphia.
Gunboat No. 21, navy yard, Charleston.

13. The construction of one of the 800-ton submarines, which were authorized in the same bill, will be undertaken at one of the navy yards, probably at Portsmouth, N. H.

14. The greatest difficulty has been experienced in avoiding serious delays in the construction of all these vessels, due to the abnormal conditions existing in both the material and labor markets. There is available only a limited number of skilled men in the shipbuilding trades, and as these were in great demand in the various private establishments, where an unprecedented volume of merchant tonnage was under construction, it proved impracticable to obtain men to increase the navy-yard forces to the point warranted by the large amount of work in hand. In fact, difficulty has been experienced in avoiding serious depletion of the force already employed as the opportunities existing in private plants for increased earnings through overtime work form an inducement which goes far to offset other advantages possessed by Government employment. This condition promises to become more acute when the large volume of work involved in the new naval program is taken in hand, as there appears to be no reason to look for a decrease in the demand for additional new tonnage for the merchant marine.

15. Several yards have had difficulty in pushing new construction work on hand without interference with work of repair and maintenance of the active fleet in commission. It is hoped that conditions as regards the matter above will improve, but the bureau does not anticipate material improvement during the next 18 months, and during this period additional new construction work must be undertaken at the yards with great caution and the recognition of the probability of delays in case such a step becomes necessary.

[illegible] d circular signed by the [illegible] ed to bidders upon

16. *Battleships, 1916 program.* [illegible] these vessels been carrying out, in conjunction [illegible] usually large thorough and exhaustive series of [illegible] the underwater protection of [illegible] nt a small torpedo. In November, 1915, the [illegible] but will point where it became evident that the [illegible] aracter- 43 and 44 (U. S. S. *Tennessee* and *California*) [illegible] improved in this vital respect by the [illegible] experimental results. A redesign of these [illegible] undertaken at once. In this redesign, provision [illegible] the installation of electric propelling machinery [illegible] the speed of these vessels will be increased from [illegible] This redesign was completed in February, 1916, [illegible] at once issued to the navy yards, New York and [illegible] construction of these vessels having been in the meantime [illegible] to these yards.

17. *General designs, 1917 program.*—The three-year building program, as authorized by Congress in the act approved August [illegible] includes 15 distinct types of vessels. Of these, provision was made for laying down, as soon as practicable, 10 different types. When the authorization of this program was recommended to Congress by the President of the United States in his annual message, it at once became evident that, if great delays in laying down these vessels were to be avoided, it would be necessary to start the design work in connection therewith at once. This was accordingly done, and at the same time authority was requested from Congress to make a large increase in the bureau's design force. This increase was provided for in the urgent deficiency bill of February 28, 1916. Due to these prompt steps, and the unremitting efforts of the bureau's force, together with the thorough cooperation of the other design bureaus, it was possible on the same date that this bill was finally approved, to issue advertisements for bids for the construction of battleships *Nos. 45* to *48*, scout cruisers *Nos. 4* to *7*, destroyers *Nos. 75* to *94*, coast-defense submarines *Nos. 78* to *104*, and 800-ton submarines *Nos. 105* and *106*, and to issue the necessary plans and specifications to prospective bidders. On the same day instructions were issued to the navy yard, Boston, Mass., to proceed with the construction of fuel ship *No. 16;* to the navy yard, Philadelphia, Pa., for hospital ship *No. 1;* and to the navy yard, Charleston, S. C., for proceeding with the work on gunboat *No. 21*, and the necessary plans and specifications were issued at once to these yards. Advertisements for bids for the construction of battle cruisers *Nos. 1* to *4* were issued on October 2, 1916, and the necessary plans and specifications were sent to prospective bidders. This completes the entire design work in connection with the vessels of the new program, to be laid down in the fiscal year 1917, with the single exception of the ammunition ship, and work is proceeding on the plans and specifications of this vessel at such a rate as to insure their completion by November 1, 1916.

18. In connection with the development of the designs of all of these vessels, there was utilized to the utmost such information as was available in regard to naval developments attendant upon the progress of the European war.

19. The experiments referred to above in connection with the development of an efficient system of underwater protection have been continued throughout the year, and the latest developments therein have been incorporated in these designs. In accordance with its usual policy the bureau has been in constant communication, both by correspondence and through personal consultations, with the officers of the active fleet in commission, and has thereby been able to incorporate in the designs the results of experience gained in maneuvers and exercises.

20. *Battleships.*—The plans and specifications for first-class battleships *No. 45 Colorado, No. 46 Maryland, No. 47 Washington,* and *No. 48 West Virginia,* authorized by the act of Congress approved August 29, 1916, were completed and the circular signed by the Secretary of the Navy on August 29, 1916, and issued to bidders upon request immediately thereafter:

21. These battleships are slightly larger than their predecessors, the *Tennessee* and *California,* their chief characteristics being:

Displacement ..... 32,600 tons.
Speed ..... 21 knots.
Battery:
Eight 16-inch guns, in four turrets.
Twenty-two 5-inch guns.
Four 3-inch antiaircraft guns.
Complement, 1,022.

22. These vessels will have the large cruising radius which characterizes all recent United States battleships. Their underwater protection against torpedo attack will be unusually complete and will include features which the experience in the war have shown to be of vital importance.

23. Bids for the construction of these vessels will be opened at the department October 25, 1916.

24. *Scout cruisers.*—The plans and specifications for scout cruisers *Nos. 4* to *7,* authorized by the act of Congress approved August 29, 1916, were completed and circular signed by the Secretary of the Navy August 29, 1916, and issued to bidders upon request immediately thereafter.

25. These scouts will be the largest and fastest vessels of this class ever laid down by any navy. The chief characteristics are:

Displacement ..... 7,100 tons.
Speed ..... 35 knots.
Length ..... 550 feet.
Breadth, extreme to outside of armor ..... 55 feet 4 inches.
Armament:
Eight 6-inch guns.
Two twin torpedo tubes.
Two 3-inch antiaircraft guns.
Complement, 330.

26. Their high-powered machinery installations will be protected by light but efficient vertical and horizontal armor. A new feature of these vessels, never before incorporated in any ship of the powerful military type, will be their complete equipment for carrying, launching, and operating four hydroaeroplanes.

27. Bids for the construction of these vessels will be opened at the department November 1, 1916.

28. *Torpedo-boat destroyers.*—Plans and specifications for torpedo-boat destroyers *Nos. 75* to *94,* authorized by the act of Congress

approved August 29, 1916, were completed and circular signed by the Secretary of the Navy August 29, 1916, and issued to bidders upon request immediately thereafter.

29. Following the general type of their predecessors, these vessels will carry a very heavy battery and will have an unusually large cruising radius for vessels of their class. They represent a small increase in displacement over the last class laid down, but will deliver an increased speed of about 5 knots. Their chief characteristics are:

Displacement ..... 1,185 tons.
Speed ..... 35 knots.
Battery:
Four 4-inch guns.
Four triple torpedo tubes.
Two antiaircraft guns.
Complement, 95.

30. It should be noted that these vessels will attain their rated speed on their full designed displacement, and not on a very much lesser displacement, which can only be attained by stripping the vessels of many essentials, as is the case of many foreign boats of this class for which very high speeds are claimed.

31. Bids for the construction of these vessels will be opened at the department October 25, 1916.

32. *Submarines.*—A further step has been made this year in the direction of preparing complete designs of submarines in the department. Last year a design of fleet submarine was prepared and issued to bidders, but no bids were received on this design. This year, however, the naval bill contemplated the inclusion of three submarines of about 800 tons, this being the size recommended strongly by the commander of the submarine force. The design of one of these vessels is being prepared complete in the department, and it is the intention to build this vessel from these designs in a navy yard. The other two 800-ton submarines are to be designed and built complete by outside contractors. It is hoped to complete these vessels expeditiously and to obtain from the results of their trials data in regard to the comparative value of the different types.

33. Circulars of requirements for submarines *Nos. 78* to *104*, these being the 27 coast submarines, and submarines *Nos. 105* and *106*, the latter two being of 800 tons displacement, all authorized by act of Congress approved August 29, 1916, were signed by the Secretary of the Navy on August 29, 1916, and together with the specifications were issued to bidders the same day. Bids for the construction of these vessels will be opened at the Navy Department on November 1, 1916.

34. *Hospital ship.*—Plans and specifications for hospital ship *No. 1*, authorized by the act of Congress approved August 29, 1916, were completed simultaneously with the passage of the naval bill.

35. This vessel will be the first built especially for hospital purposes for the United States Navy. The vessels now in use for this purpose are converted merchant vessels. The design has been worked out by the technical bureaus of the department in constant consultation with the Bureau of Medicine and Surgery, with the result that it will embody every feature of the most up-to-date hospital on shore. It

has accommodations for 500 patients. Its chief characteristics and general dimensions are:

Displacement	9,800 tons.
Length	460 feet.
Breadth, extreme	61 feet ¾ inch.
Draft	19 feet 6 inches.
Speed	16 knots.

As this vessel will be immune from capture or attack in time of war under the terms of the Geneva convention, it will not, in accordance with the terms of that convention, carry any armament of any kind for offense or defense, and in its design there are included no military features of any sort.

36. The department has directed that this vessel be built at the navy yard, Philadelphia.

37. *Fuel ship.*—Plans and specifications for fuel ship *No. 16*, authorized by the act of Congress approved August 29, 1916, were completed simultaneously with the passage of the naval bill.

38. This vessel will be a large oil tanker of the ordinary commercial type, except that in many features its design will meet the requirements of a vessel which must accompany the battle fleet and be capable of supplying fuel to all vessels under adverse conditions of wind and sea. The chief dimensions and characteristics are:

Displacement	14,500 tons.
Length	455 feet.
Breadth, extreme	56 feet 2¾ inches.
Draft	26 feet 2 inches.
Dead-weight carrying capacity (total)	9,600 tons.
Speed	14 knots.

39. The department has directed that this vessel be constructed at the navy yard, Boston.

40. *Gunboat.*—Plans and specifications for gunboat *No. 21*, authorized by the act of Congress approved August 29, 1916, were completed simultaneously with the passage of the naval bill. This gunboat is of a type designed especially for long continued service in the tropical waters.

41. The chief characteristics are:

Displacement	1,575 tons.
Length	241 feet 2 inches.
Breadth, extreme	41 feet 2½ inches.
Draft	11 feet 4 inches.
Armament:	
Three 4-inch guns.	
Two 1-pounder guns.	
Four 30-caliber machine guns.	
Two 3-inch field guns.	
Two 3-pounder guns.	
Speed	12 knots.
Complement	149.

42. The department has directed that this vessel be built at the navy yard, Charleston, S. C.

43. *Battle cruisers.*—Plans and specifications for battle cruisers *Nos. 1* to *4*, authorized by the act of Congress approved August 29, 1916, were completed and issued to bidders upon request after October 2, 1916.

44. These battle cruisers mark a distinctly new type of vessel in the United States Navy, and will be the largest and fastest armored vessels in the world. The chief characteristics are:

Displacement	34,800 tons (about).
Length	850 feet.
Speed	35 knots.
Breadth, extreme	90 feet 11 inches.
Armament:	
Ten 14-inch 50-caliber guns, in four turrets.	
Eighteen 5-inch R. F. guns.	
Four submerged torpedo tubes.	
Four above-water torpedo tubes, for firing the largest size torpedoes.	
Four 3-inch antiaircraft guns.	
Complement	1,228.

Their high-powered electric propelling machinery will be protected by efficient vertical and horizontal armor. These vessels are also equipped for carrying, launching, and operating the largest size hydroaeroplanes.

45. Bids for the construction of these vessels will be opened at the department December 6, 1916.

46. *Ammunition ship.*—The plans and specifications for ammunition ship *No. 1*, authorized by the act of Congress approved August 29, 1916, are well underway, and it is expected that the plans and circular will be ready for prospective bidders about November 1, 1916. This will permit contracts to be placed well in advance of the termination of the six months' period named for placing contracts in the appropriation bill. This ammunition ship is the first vessel built especially for this purpose for the United States Navy. The design includes all necessary facilities for powder testing, the cooling of powder spaces, and facilities for handling the cargo. Large 'tween-decks spaces are also provided for the carrying of cooled meats and other perishable articles, besides the spaces provided especially for the carrying of ammunition.

47 The principal dimensions and characteristics of this vessel are as follows:

Displacement	10,600 tons.
Length	460 feet.
Breadth, extreme	61 feet 07/8 inch.
Draft	20 feet 11 inches.
Speed	16 knots.

48. *Air craft design.*—During the past year a complete design of a naval aeroplane of about 6,000 pounds total flying load has been developed at the navy yard; the machine itself has been constructed, and successful preliminary flights have been made. The actual construction of this machine in the navy yard has resulted in the accumulation of much valuable data in regard to the details of construction involved and the suitability of different materials for purposes of aeroplane construction.

49. On account of war conditions, considerable difficulty was experienced in obtaining suitable material, notably in the wire and cable for the trussing of the aeroplane; this situation was met by utilizing the Navy's own resources for manufacture of such material at the rope walk, in the navy yard, Boston.

50. During the course of the past year the revised design of catapult built at the Washington Navy Yard was successfully operated from aboard the U. S. S. *North Carolina*. As a result of these trials a more complete installation was developed and installed on the U. S. S. *North Carolina*, using the same power plant as in the original trials on that vessel.

51. The general layout of the new installation was supervised by the bureau and the details worked out by the Pensacola Aeronautic Stati n. In the meantime, due to demands for increased capacity, the design and construction of new power plants have been taken up at the Washington Navy Yard.

52. In both the installation on the U. S. S. *North Carolina* and the revision of the power plant design, the bureau has found itself seriously handicapped by the bad conditions of the material market.

53. *Motor patrol boats.*—In line with the department's plan of interesting civilian motor boat owners in organizing into divisions and squadrons for the purposes of training in the use of such boats for patrol purposes in time of national need, the bureau has endeavored to stimulate the interest of the motor boating public in acquiring types of motor boats having the characteristics necessary to fit them for the Government's use if needed. The bureau has from time to time reviewed plans and specifications of motor boats when submitted by yacht designers and prospective owners and for each type of boat has indicated the changes that should be made to render such types suitable for the purposes of the Government. To illustrate that motor boats built for pleasure craft but suitable for the Government's purpose as patrol boats can be obtained at a reasonable price and without sacrificing any of the essential features usually provided for such craft for pleasure purposes, the purchase of two motor boats has been undertaken; one 45 feet in length to make a speed of not less than 25 statute miles and to be suitably constructed to carry a one-pounder gun, to cost $12,000; the other not less than 65 feet in length, of a speed of not less than 30 statute miles per hour and to cost $28,000. These boats are now under construction. The boats when completed will be assigned one to the commandant of the second naval district, Newport, R. I., and the other to the commandant of the third naval district, New York. It is the intention that they should be available for examination by, and freely exhibited to, those civilians who are properly interested in the subject and who are about to purchase motor boats of the characteristics indicated.

54. *Experimental model basin.*—Owing to the large prospective building program, the model basin has been kept extremely busy during the year in preparing suitable lines for the different types of vessels contemplated. Though the characteristics of some of these vessels were quite new and beyond the range of previous experience, the results, so far as the model tests indicate, will be satisfactory. As the work was undertaken well in advance, the results have been made available in sufficient time not to involve any delay in the preparation of contract plans.

55. Unprecedented activity in commercial shipbuilding has resulted in an increase in the amount of work done in the model basin for private shipbuilding companies, about 20 per cent of all the work done in the model basin being of this character.

56. The new wave-making apparatus has been used to investigate the rough water qualities of some of the new designs, and also to ascertain the prospective reduction in speed which may be expected when meeting waves of different sizes.

57. The basin has also been equipped with dynamometers to measure all the forces developed when a model is self-propelled, which it is expected will permit more complete analyses to be made of the trial results of naval vessels, as well as facilitating the solution of problems arising in the design of new vessels.

58. *Experimental wind tunnel.*—The work in the wind tunnel at the Washington Navy Yard is increasing in importance. In addition to experiments of a miscellaneous nature for the Naval Air Service and the technical bureaus of the Navy Department, many tests of aerofoils, dirigibles, etc., have been made for private parties. About 15 per cent of the total work done was for private concerns.

59. Experiments have been continued on the radiating efficiency of various types of radiators and the air resistance of the same.

60. A ship's model with complete rigging has been tested for air resistance with interesting results.

61. A type of speed meter for use on aeroplanes has been developed, calibrated in the wind tunnel, and tested in actual flight with satisfactory results. A considerable amount of work has been done also in connection with the inspecting and testing of aeronautical instruments purchased for use by the Navy Department.

MATERIAL DIVISION.

62. *Supply of material—Specifications.*—The activities of this division of the bureau have, as heretofore, been constantly directed toward the standardization of specifications and of materials as to quality, grades, sizes, etc., carried by the principal navy yards for work under this bureau. This standardization is essential if an adequate stock of all materials necessary to ship repairs and alterations is to be on hand when needed. Other bureaus of the Navy Department have been freely consulted in the preparation of specifications for materials used by more than this bureau. Effort has been constantly made to simplify and standardize the several requirements of the bureaus into an identical specification for all bureaus rather than a number of similar specifications with minor and unimportant differences resulting in a higher unit cost for materials of essentially the same grade and quality. Such multiplicity of specifications also gives confusion to prospective bidders in differentiating between the several similar grades of material as well as entailing an unnecessarily large variety of stock in small amounts of essentially the same materials. Improvements in specifications have been made possible by experience gained in actual work, by a close observation through the bureau's inspection force of outside commercial manufacturing practices and purchasing methods, by active participation by the bureau's representatives in the activities of the principal engineering and technical societies, and by utilizing whenever possible the services and technical knowledge of other expert departments and bureaus of the Government, such as the Bureau of Chemistry, Bureau of Standards, the Forest Service, and others. In all

of its relations with manufacturers and contractors the bureau has endeavored, when possible, to give accurate and prompt information when asked as to the reasons for the technical requirements of specifications and, by properly preparing its specifications and requirements, present proposed purchases in such a way as to make the Navy business attractive to desirable manufacturers and to secure the broadest competition on a sound basis with consequent low costs.

63. It has been felt that one of the most serious handicaps that would be experienced in the event of a national emergency would be the difficulty in obtaining immediately the materials necessary to prosecute the greatly increased amounts of work that would be thrown into the navy yards, including, in addition to work on naval vessels, the alterations, repairs, etc., necessary to be made on merchant vessels which would be taken over by the Government for use as auxiliaries. This bureau has actively cooperated with the Bureau of Supplies and Accounts during the last year to materially increase the amounts of stock materials carried at the yards, particularly with regard to industrial stock used by this bureau in work under its cognizance, such as structural plates, shapes, rivets, wrought iron for the manufacture of the larger chain cables, and in equipment not ordinarily readily obtainable in the open market, such as chain cable, anchors, wire, manila and hemp for the manufacture of rope, cables, etc.

64. Throughout the year the high prices of materials, and in special cases, their scarcity as well, has impressed upon the bureau the soundness of the policy of the present Chief of the Bureau of Supplies and Accounts, as consistently recommended by this bureau in years past, of carrying a much greater stock of the principal materials and supplies than has been past practice, not only those materials ordinarily used by the Navy Department in times of peace but also such as may become necessary to use in event of extraordinary conditions. When such stocks have been established it will be less necessary to purchase considerable amounts of material at exorbitant prices when market conditions are abnormal and delays incident to inability to get certain classes of material can be avoided. With such large stocks generally carried and properly standardized advantage can be taken of favorable market conditions for purchasing in replenishing depleted stocks.

65. *Requisitions and purchase.*—The bureau has made constant effort to assist the Bureau of Supplies and Accounts in all of its purchases relating to the work of this bureau. It is believed that only by close cooperation of the technical bureau concerned and the purchasing bureau (Bureau of Supplies and Accounts) can the Naval Establishment be furnished promptly with the materials, equipage, and supplies that it must have.

66. *Yard manufacture.*—Due to outside business conditions that have prevailed during the year it has been necessary to materially increase the output of the yard manufacturing plants in many directions. Progress is steadily being made in the standardization of articles manufactured and in the improvement of the mechanical processes involved. Considerable additions to the plant equipments of the several navy yards have been made throughout the year to

outfit the yards not only for peace time work but also to provide them with facilities for handling the larger operations involved in repair work to vessels that would become necessary in the event of a national emergency and the nature of which would be such that the facilities required are not readily obtainable in outside commercial establishments.

67. The Navy Department continues to manufacture to a considerable extent for other departments of the Government. The manufacturing facilities that are provided by the Navy Department and which are frequently not operated under normal conditions on its own work at full capacity are thus brought into economical use for other branches of the Government. During the year a large order of mail-storage boxes has been completed for the Post Office Department at the Norfolk yard, a field that heretofore has not been entered by the navy-yard activities. This order was obtained in competition with outside bidders.

68. The demands of the naval service in small boats have been heavy throughout the year. As illustrative of the amount of work done of this nature, one yard alone has built or is building fifty-two 35-foot motor boats having a speed of about 15 knots, these boats being for the use of commanding officers of recent capital ships and for use of tenders in torpedo chasing; also eight 40-foot motor barges for the use of division, squadron, and fleet commanders as their flag boats.

69. *Inspection of material.*—Some increases have been approved during the year in the inspection force under the bureau, and more prompt and satisfactory service has been possible in consequence in handling inspections. This improvement will tend to expedite the arrival of material at destination, avoid delays for inspection purposes with consequent earlier payments to contractors for material, and should have an appreciable downward effect in the ultimate cost of material. It has also been possible to take up more detailed and complicated inspection work in the field than has heretofore been possible. For example, it has been possible for the eastern district alone to inspect some 433,355 pounds of special chain iron, as compared to 63,066 pounds of the same material the previous year. With the demands that have been made upon the inspection force during the past year it is clearly evident that the building program for 1917 will necessitate a material increase in the force; such increases, however, will be recommended as they become necessary by separate correspondence. The previous practice of increasing the amount of material inspected at mills has been continued, also the inspection and acceptance of material destined for west-coast navy yards, delivered f. o. b. at mills in the East, thus giving the Government the financial advantage of arranging for shipment over railroads west giving land-grant reductions in transportation cost. The total quantity of materials submitted for inspection to inspectors of hull material, eastern and western districts, during the fiscal year ending June 30, 1916, was 193,010,470 pounds. The material inspected covered material for vessels under contract and for delivery at navy yards. Inspection was conducted at the works of 261 manufacturers, as compared to a figure of 211 for the previous year.

70. Summary of work performed by inspectors under the Bureau of Construction and Repair, for the eastern and western districts, during the fiscal year ended June 30, 1916:

	Eastern district.	Western district.	Total.
Total amount of material submitted and inspected.....pounds..	81,028,120	111,982,350	193,010,470
Amount rejected for physical tests.....do....	11,263,638	3,485,347	14,748,985
Percentage rejected for physical tests.....	13.90	3.11	7.64
Amount rejected for chemical tests.....pounds..	1,026,856	321,910	1,348,766
Percentage rejected for chemical tests.....	1.27	0.28	.69
Amount rejected for surface defects.....pounds..	1,777,864	11,624,825	13,402,689
Percentage rejected for surface defects.....	2.19	10.38	6.94
Amount rejected for all causes.....pounds..	14,068,358	15,432,082	29,500,400
Percentage rejected for all causes.....	17.36	13.77	15.28
Scrap.....pounds..	24,093,987	8,489,629	32,583,616
Total amount of material accepted and shipped .....do....	42,865,775	88,060,639	130,926,414

71. The following is a list of the officers and inspectors engaged upon the inspection of material under the bureau:

EASTERN DISTRICT.

[Headquarters: Post-Office Building, Philadelphia, Pa.]

Naval Constructor A. W. Stahl, United States Navy, inspector in charge.

Naval Constructor Lloyd Bankson, United States Navy, appointed as assistant to inspector and assumed duties as acting inspector June 12, 1916.

Chief Carpenter F. H. Preble, United States Navy, assistant to inspector.

Assistant inspectors: J. T. Callaghan, R. P. Hodgson, I. F. De Lany, W. W. E. Ash, E. F. Kelley, J. K. Dungan, H. J. Carpenter, J. L. Gordon (temporary appointment from July 22, 1915), F. H. Pickel (appointed from June 19, 1916).

Chemist: C. Rascher.

Clerk: Thomas F. MacCabe.

Typewriter: M. J. I. Owens (resigned Feb. 9, 1916).

Stenographer: M. B. Johnson (from Mar. 10, 1916).

WESTERN DISTRICT.

[Headquarters: Homestead Steel Works, Munhall, Pa.]

Prof. O. G. Dodge, United States Navy, inspector in charge.

Assistant inspectors: A. P. Harclerode, W. B. Petch, J. A. O'Brien, W. S. Davis, W. H. Wills, W. H. Caldwell, H. E. Hahn, H. M. Johnson, C. Llewelyn, W. A. Brown (appointed Sept. 16, 1915).

Chemist: W. B. Canfield.

Stenographer and typewriter (clerk): G. B. Sprow.

Messenger: W. M. Mawhinney.

INSPECTION OF ELECTRICAL MATERIAL.

[The inspection of electrical material under the bureau at the works of the General Electric Co., Schenectady, N. Y.]

Naval Constructor F. B. Zahm, United States Navy, retired, inspector in charge from July 1, 1915.

Assistant Inspector E. R. Fellows, second-class expert electrical aid (ship) from July 1, 1915, to June 30, 1916.

Assistant Inspector R. Rich, fourth-class expert electrical aid (ship) from March 3, 1916, to June 30, 1916.

Stenographer and typewriter: James J. Guinane.

72. The following tabular data has been prepared showing the weight of material inspected, the cost of inspection under appropriations "Pay, miscellaneous," and "Construction and repair," the

cost per ton of material inspected, and the inspection cost per dollar of value:

Weight of material inspected (pounds):	
Eastern district	81,028,120
Western district	111,982,350
Total	193,010,470
Weight of material inspected (tons):	
Eastern district	36,173
Western district	49,992
Total	86,165
Cost of inspection chargeable to "Pay, miscellaneous" (telegraph, telephone, travel, and maintenance):	
Eastern district	$2,488.28
Western district	$2,608.57
Total	$5,096.85
Cost of inspection chargeable to "Construction and repair" (salaries, supplies, etc., exclusive of officers):	
Eastern district	$16,757.51
Western district	$19,425.99
Total	$36,183.50
Total cost of inspection:	
Eastern district	$19,245.79
Western district	$22,034.56
Total	$41,280.35
Cost per ton of material inspected:	
Eastern district	$0.53
Western district	$0.44
Average cost per ton	$0.48
Weight of material accepted (pounds):	
Eastern district	42,865,775
Western district	88,060,639
Schenectady	4,396,154
Total	135,322,568
Weight of material accepted (tons):	
Eastern district	19,137
Western district	39,313
Schenectady	1,962
Total	60,412
Approximate value of material accepted:	
Eastern district	$1,417,020.80
Western district	$2,462,350.00
Schenectady	$383,538.87
Total	$4,262,909.67
Total cost of inspection of material accepted:	
Eastern district	$19,245.79
Western district	$22,034.56
Schenectady	$2,466.13
Total	$43,746.48
Inspection cost per dollar of value:	
Eastern district	$0.013
Western district	$0.0089
Schenectady	$0.635
Average	$0.656

TECHNICAL FORCE.

73. The situation in regard to the technical force of the bureau has considerably improved during the past year. The urgent deficiency bill, approved February 28, 1916, authorized a substantial increase in the force in order to expedite the preparation of the designs of the vessels included in the continuing building program proposed for authorization in the pending naval appropriation act. This increase has enabled the bureau to accomplish the unusually expeditious completion of designs as referred to elsewhere in this report.

74. During the consideration in its final stage of the naval appropriation act for 1917, it became apparent that, if the provisions incorporated for the expansion of the naval service in all its branches were to be enacted into law, another increase in the bureau's force would be necessary if long continued and cumulative delays were to be avoided. When new projects for the material increase of the Navy are proposed, it is upon the design bureaus that the first increased burdens must fall, as the actual work can not be taken in hand until the necessary technical investigations have been made and the plans and specifications have been completed. The Navy Department and Congress recognized this principle, and the deficiency bill approved September 8, 1916, authorized a further increase in the bureau's force. Due to the present unprecedented activity in shipbuilding in this country, it has become increasingly difficult to obtain the services of competent ship draftsmen, with the result that in many cases it has been and will continue to be necessary to take on young and comparatively untrained men. This has thrown a heavy burden on the bureau's old force, which has successfully assumed the added work and responsibilities including the training and supervision of the many new and inexperienced men.

75. The situation in the navy yards in regard to technical employees, paid from this bureau's appropriation, has been an increasingly difficult one. The naval appropriation act for 1917 has allowed increases in the limits of expenditure for this purpose, but the dearth of experienced men has prevented the prompt realization of the benefits of such increase, and the laws and regulations relating to classified employees, which are satisfactory in normal times, add to the difficulties of the situation, when the supply of competent men is not equal to the demand. In order to meet the conditions resulting from this situation, it has been necessary to send draftsmen, at considerable expense, from one office to another on temporary detail, in order to avoid, in so far as possible, serious delays which would otherwise have occurred in important work in connection with new vessels. This course has necessarily resulted in delay in other work which, though not of the same degree of importance, must be done in order to insure efficient results in other essential branches of the bureau's work.

VESSELS SURVEYED.

The following vessels have been surveyed and repairs authorized during the past fiscal year:

Vessel.	Where surveyed.	Date of survey.	Estimated cost of repairs.
Arkansas	New York	Oct. 4, 1915	$36,795.07
Do	do	Jan. 11, 1916	9,229.28
Do	do	May 23, 1916	7,239.00
Aylwin	Norfolk	July 7, 1915	4,060.68
Do	New York	Jan. 26, 1916	5,842.14
Baltimore	Norfolk	Aug. 11, 1915	3,951.00
Do	Portsmouth	June 6, 1916	7,222.00
Beale	Norfolk	Jan. 15, 1916	4,162.24
Do	Philadelphia	May 22, 1916	4,615.50
Birmingham	Boston	Nov. 30, 1915	10,875.51
Brooklyn	Philadelphia	July 10, 1915	25,739.00
Brutus	Charleston	Sept. 1, 1915	17,298.50
Bagley	Norfolk	Jan. 20, 1916	3,364.91
Castine	New Orleans	July 8, 1915	11,179.00
Charleston	Puget Sound	Dec. 1, 1915	4,889.44
Chattanooga	do	Dec. 3, 1915	16,617.18
Do	do	Jan. 12, 1916	3,190.97
Chester	Boston	May 23, 1916	16,211.54
Do	do	May —, 1916	5,157.00
Connecticut	Philadelphia	Jan. 27, 1916	15,618.02
Colorado (armored cruiser No. 7)	Puget Sound	Nov. 24, 1915	34,030.00
Do	do	Mar. 1, 1916	4,887.00
Do	do	Mar. 24, 1916	3,642.00
Cyclops	Norfolk	June 14, 1916	25,334.48
D-1	New York	Jan. 11, 1916	5,402.28
D-2	do	do	4,302.17
D-3	do	Jan. 31, 1916	5,807.85
Denver	Mare Island	Nov. 24, 1915	3,986.00
Dolphin	Norfolk	Dec. 27, 1915	5,415.40
Delaware	do	Jan. 22, 1916	33,867.26
Do	do	May 29, 1915	7,521.17
Drayton	Philadelphia	May 11, 1916	7,175.00
E-1	New York	May 8, 1916	8,970.55
E-2	do	Oct. 22, 1915	5,590.30
Eagle	Portsmouth	Dec. 23, 1915	7,385.00
Fanning	Norfolk	July 8, 1915	3,544.80
Florida	New York	Nov. 11, 1915	9,368.00
Do	Norfolk	June 19, 1916	10,945.10
Flusser	Charleston	July 12, 1915	5,481.79
Do	do	Jan. 25, 1916	1,439.00
G-1	New York	Sept. 1, 1915	55,940.34
Georgia	Boston	Jan. —, 1916	19,642.40
Glacier	Mare Island	Sept. 13, 1915	10,846.00
Gloucester	New York	Apr. 15, 1916	2,706.00
Goldsborough	Puget Sound	May 29, 1916	1,571.00
Hector	Norfolk	Mar. 24, 1916	23,501.98
Henley	New York	Sept. 15, 1915	14,589.14
Hopkins	Mare Island	Nov. 6, 1915	1,089.00
Hull	do	Nov. 4, 1915	1,119.00
Jouett	Philadelphia	May 4, 1916	1,490.00
Jupiter	Norfolk	Aug. 18, 1915	3,084.60
Do	do	Jan. 27, 1916	19,421.61
K-1	New York	Sept. 25, 1915	5,308.17
K-2	do	Sept. 1, 1915	7,784.66
K-5	do	Sept. 25, 1915	3,304.94
Kearsarge	Philadelphia	Feb. 18, 1916	11,276.50
Lawrence	Mare Island	Nov. 22, 1915	3,602.00
Lebanon	Norfolk	Jan. 22, 1916	4,351.94
Do	do	June 12, 1916	8,853.56
Leonidas	Portsmouth	Nov. 1, 1915	19,678.00
Louisiana	Norfolk	Dec. 21, 1915	8,281.99
Do	do	Jan. 27, 1916	6,564.98
Mars	Mare Island	Dec. 8, 1915	8,605.00
Marblehead	do	May 3, 1916	12,031.00
Maryland (armored cruiser No. 8)	do	Nov. 15, 1915	18,579.00
Memphis	Portsmouth	Oct. 11, 1915	27,873.00
Michigan	Philadelphia	July —, 1915	22,883.00
Monaghan	Charleston	Feb. 2, 1916	4,021.76
Nashville	New Orleans	Mar. 3, 1916	11,765.00
Nebraska	Boston	July —, 1916	14,727.48
Neptune	Norfolk	Jan. —, 1916	14,162.72
Do	do	Apr. 21, 1916	4,783.93
Nereus	do	July 7, 1915	4,491.00
New Hampshire	do	July 15, 1915	15,616.[illegible]
Do	do	Apr. 26, 1916	15,356.[illegible]

Vessel.	Where surveyed.	Date of survey.	Estimated cost of repair
New Orleans	Puget Sound	July —, 1915	[illegible]
Do	do	Sept. 9, 1915	[illegible]
Do	do	Mar. 16, 1916	[illegible]
New York	New York	Jan. 31, 1916	[illegible]
North Carolina	Portsmouth	July 3, 1915	[illegible]
Olympia	Charleston	Aug. 13, 1915	[illegible]
Orion	Norfolk	June 28, 1916	[illegible]
Osceola	Charleston	Mar. 21, 1916	[illegible]
Ozark	New York	Apr. 4, 1916	[illegible]
Paducah	Portsmouth	Oct. 30, 1915	[illegible]
Paul Jones	Mare Island	Nov. 17, 1915	[illegible]
Panther	Charleston	Jan. 20, 1916	[illegible]
Parker	New York	Jan. 8, 1916	[illegible]
Patapsco	Norfolk	Jan. 20, 1916	[illegible]
Patuxent	do	Dec. 7, 1915	[illegible]
Perry	Mare Island	Nov. 12, 1915	[illegible]
Petrel	New Orleans	Aug. 3, 1915	[illegible]
Philadelphia	Puget Sound	Jan. 27, 1916	[illegible]
Do	do	Apr. 28, 1916	[illegible]
Pittsburgh	do	July 7, 1915	[illegible]
Do	do	Jan. 14, 1916	[illegible]
Do	do	Apr. 10, 1916	[illegible]
Preble	Mare Island	Nov. 26, 1915	[illegible]
Preston	Charleston	July 23, 1915	[illegible]
Do	do	Jan. 24, 1916	[illegible]
Prometheus	Norfolk	Jan. 3, 1916	[illegible]
Proteus	do	July 9, 1915	[illegible]
Raleigh	Mare Island	Sept. 14, 1915	[illegible]
Reid	Charleston	Feb. 9, 1916	[illegible]
Roe	do	Feb. 4, 1916	[illegible]
Saturn	Puget Sound	Sept. 7, 1915	[illegible]
Solace	New York	Dec. 20, 1915	[illegible]
Stewart	Mare Island	Nov. 11, 1915	[illegible]
Supply	Puget Sound	Nov. 13, 1915	[illegible]
Sacramento	Portsmouth	Jan. 24, 1916	[illegible]
San Francisco	do	Dec. 16, 1915	[illegible]
Sonoma	New York	Apr. 4, 1916	[illegible]
South Dakota	Puget Sound	June 22, 1916	[illegible]
Sterett	Charleston	Feb. 23, 1916	[illegible]
St. Louis	Puget Sound	Mar. 30, 1916	[illegible]
Do	do	June 7, 1916	[illegible]
Supply	do	Jan. 26, 1916	[illegible]
Do	do	Mar. 27, 1916	[illegible]
Sylvia	Norfolk	do	[illegible]
Terry	Charleston	Jan. 26, 1916	[illegible]
Texas	New York	Sept. 24, 1915	[illegible]
Do	do	Nov. 22, 1915	[illegible]
Truxton	Mare Island	Nov. 8, 1915	[illegible]
Uncas	Charleston	Dec. 2, 1915	[illegible]
Do	do	May 11, 1916	[illegible]
Utah	New York	July 24, 1915	[illegible]
Do	Norfolk	June 19, 1916	[illegible]
Vermont	do	Jan. 25, 1916	[illegible]
Vicksburg	Puget Sound	Oct. —, 1915	[illegible]
Virginia	Boston	Dec. —, 1915	[illegible]
Vulcan	Portsmouth	Aug. 25, 1915	[illegible]
Walke	Charleston	Jan. 26, 1916	[illegible]
Warrington	New York	Oct. 6, 1915	[illegible]
Washington (armored cruiser No. 11)	Portsmouth	Mar. 7, 1916	[illegible]
West Virginia (armored cruiser No. 5)	Puget Sound	Sept. 30, 1915	[illegible]
Do	do	Nov. 9, 1915	[illegible]
Do	do	Jan. 4, 1916	[illegible]
Do	do	Apr. 5, 1916	[illegible]
Do	do	June 8, 1916	[illegible]
Wheeling	New Orleans	Jan. 24, 1916	[illegible]
Whipple	Mare Island	Nov. 16, 1915	[illegible]
Wyoming	New York	Jan. 25, 1916	[illegible]
Yankton	do	Dec. 16, 1915	[illegible]

ESTIMATES SUBMITTED BY THE BUREAU FOR THE FISCAL YEAR 1917-18.

ESTIMATE A.—*Salaries.*

Detailed objects of expenditures, and explanations:

Chief clerk	$2,250
1 chief of division, at $2,000	2,000
3 clerks, class 4, at $1,800 each	5,400
4 clerks, class 3, at $1,600 each	6,400
4 clerks, class 2, at $1,400 each	5,600

Detailed objects of expenditures, and explanations—Continued.

4 clerks, at $1,300 each	$5,200
4 clerks, class 1, at $1,200 each	4,800
11 clerks, at $1,100 each	12,100
15 clerks, at $1,000 each	15,000
7 copyists, at $900 each	6,300
2 assistant messengers, at $720 each	1,440
3 laborers, at $660	1,980
10 messenger boys, at $600 each	6,000
1 messenger boy, at $480	480
1 messenger boy, at $400	400
Total amount to be appropriated under each head of appropriation	$75,350

Amounts appropriated for current fiscal year ending June 30, 1917:

Legislative, executive, judiciary act of May 10, 1916	62,150
General deficiency act of Sept. 8, 1916	11,200
Total amount appropriated	$73,350

Statement of persons employed as draftsmen and for other technical purposes, and the compensation paid to each as required by the legislative, executive, and judicial act of Mar. 4, 1915, and urgent deficiency act of Feb. 28, 1916.

	Per diem.	Per annum.	Total.
1 chief draftsman	$12.00	$3,756.00	$3,756.00
1 leading draftsman	10.00	3,130.00	3,130.00
1 leading draftsman	8.48	2,654.24	2,654.24
1 electrical expert aid	7.76	2,428.88	2,428.88
2 leading draftsmen	7.52	2,353.76	4,707.52
1 leading draftsman	7.20	2,253.60	2,253.60
4 draftsmen	7.04	2,203.52	8,814.08
2 draftsmen	6.80	2,128.40	4,256.80
4 draftsmen	6.48	2,028.24	8,112.96
9 draftsmen	6.00	1,878.00	16,902.00
3 draftsmen	5.76	1,802.88	5,408.64
1 electrical expert aid	5.60	1,752.80	1,752.80
9 draftsmen	5.52	1,727.76	15,549.84
1 assistant electrical expert aid	5.04	1,577.52	1,577.52
7 draftsmen	5.04	1,577.52	11,042.64
1 draftsman	4.80	1,502.40	1,502.40
4 draftsmen	4.48	1,402.24	5,608.96
5 draftsmen	4.00	1,252.00	6,260.00
1 assistant draftsman	3.76	1,176.88	1,176.88
4 assistant draftsmen	3.60	1,126.80	4,507.20
4 assistant draftsmen	3.28	1,026.64	4,106.56
1 assistant draftsman	3.04	951.52	951.52
3 assistant draftsmen	2.80	876.40	2,629.20
6 assistant draftsmen	2.40	751.20	4,507.20
			$123,597.44

ESTIMATE B.—*Construction and repair of vessels.*

Detailed objects of expenditures, and explanations:

For preservation and completion of vessels on the stocks and in ordinary; purchase of materials and stores of all kinds; steam steerers, pneumatic steerers, steam capstans, steam windlasses, air craft, and all other auxiliaries; labor in navy yards and on foreign stations; purchase of machinery and tools for use in shops; carrying on work of experimental model tank; designing naval vessels; construction and repair of yard craft, lighters, and barges; wear, tear, and repair of vessels afloat; general care, increase, and protection of the Navy in the line of construction and repair; incidental expenses for vessels and navy yards, inspectors' offices, such as photographing, books, professional magazines, plans, stationery, and instruments for drafting room, and for pay of classified force under the bureau; for hemp, wire, iron, and other materials for the manufacture of cordage, anchors, cables, galleys, and chains; specifications for purchase thereof shall be so prepared as shall give fair and free competition; canvas for the manufacture of sails, awnings,

Detailed objects of expenditures, and explanations—Continued.

hammocks, and other work; interior appliances and tools for manufacturing purposes in navy yards and naval stations; and for the purchase of all other articles of equipage at home and abroad; and for the payment of labor in equipping vessels therewith and manufacture of such articles in the several navy yards; naval signals and apparatus, other than electric, namely, signals, lights, lanterns, rockets, running lights, lanterns and lamps and their appendages for general use on board ship for illuminating purposes, and oil and candles used in connection therewith; bunting and other materials for making and repairing flags of all kinds; for all permanent galley fittings and equipage; rugs, carpets, curtains, and hangings on board naval vessels..... $11,500,000

(Amount appropriated for current fiscal year ending June 30, 1917, $9,836,077.)

Provided, That no part of this sum shall be applied to the repair of any wooden ship when the estimated cost of such repairs, to be appraised by a competent board of naval officers, shall exceed 10 per cent of the estimated cost, appraised in like manner, of a new ship of the same size and like material.

Provided further, That no part of this sum shall be applied to the repair of any other ship when the estimated cost of such repairs, to be appraised by a competent board of naval officers, shall exceed 20 per cent of the estimated cost, appraised in like manner, of a new ship of the same size and like material.

Provided further, That nothing herein contained shall deprive the Secretary of the Navy of the authority to order repairs of ships damaged in foreign waters or on the high seas, so far as may be necessary to bring them home.

Provided further, That the sum to be paid out of this appropriation, under the direction of the Secretary of the Navy, for clerical, drafting, inspection, watchmen (ship keepers), and messenger service in navy yards, naval stations, and offices of superintending naval constructor, for the fiscal year ending June 30, 1918, shall not exceed $1,300,000.

Improvement of construction plants: For repairs and improvements of machinery and implements at plants at navy yards, as follows:

Portsmouth, N. H.	$10,000	
Boston, Mass.	25,000	
New York, N. Y.	35,000	
Philadelphia, Pa.	25,000	
Norfolk, Va.	35,000	
Charleston, S. C.	10,000	
Mare Island, Cal.	35,000	
Puget Sound, Wash.	25,000	
		200,000

(Amount appropriated for current fiscal year ending June 30, 1917, $200,000.)

Total..... $11,700,000

ESTIMATE C.—*Increase of the Navy, construction and machinery; and increase of the Navy, torpedo boats.*

Detailed objects of expenditures and explanations.	Estimated amount required for each detailed object.	Total amount to be appropriated under each head of appropriation.	Amount appropriated for current fiscal year ending June 30, 1917.
Increase of the Navy:			
Construction and machinery (on account of hulls and outfits of vessels heretofore authorized) to be available until expended	$73,639,902	$73,639,902	$59,000,194
Torpedo boats (on account of submarine torpedo boats heretofore authorized) to be available until expended	16,816,110	16,816,110	13,499,593
Total	90,456,012	90,456,012	72,499,787

NOTE.—The above does not include any money for new ships which may be authorized to be begun during 1918.

To: The Secretary of the Navy.
Subject: Preliminary estimates for fiscal year ending June 30, 1918, under appropriations "Increase of the Navy, construction and machinery," and "Increase of the Navy, torpedo boats."
Reference: (a) Department's circular letter of August 17, 1916.
Enclosures: Herewith.
(A) Preliminary estimate (Sheet "C") in duplicate.

1. In accordance with the instructions contained in the Department's letter, reference (a), the bureaus submit herewith preliminary joint estimates, inclosure (A), under appropriations "Increase of the Navy, construction and machinery," and "Increase of the Navy, torpedo boats," for work on new vessels heretofore authorized by Congress, as follows:

"Increase of the Navy, construction and machinery."

Estimated expenditures:			
Under Bureau of Construction and Repair—			
Fiscal year 1917		$37,772,826	
Fiscal year 1918		48,476,087	
			$86,248,913
Under Bureau of Steam Engineering:			
Fiscal year 1917		18,560,912	
Fiscal year 1918		43,443,036	
			62,003,948
Total estimated expenditures			148,252,861
Amount available to pay on the above:			
Balance July 1, 1916		$15,612,765	
Appropriated per naval act of Aug. 29, 1916—			
Old program	$14,086,534		
New program	44,913,660		
		59,000,194	
			74,612,959
Appropriation required for fiscal year 1918			$73,639,902

"Increase of the Navy, torpedo boats."

Estimated expenditures:			
Under Bureau of Construction and Repair—			
Fiscal year 1917		$10,771,613	
Fiscal year 1918		8,791,161	
			$19,562,774
Under Bureau of Steam Engineering—			
Fiscal year 1917		6,915,316	
Fiscal year 1918		10,814,600	
			17,729,916
Total estimated expenditures			37,292,690
Amount available to pay on the above:			
Balance July 1, 1916		6,976,987	
Appropriated per naval act of Aug. 29, 1916—			
Old program	$5,282,593		
New program	8,217,000		
		13,499,593	
			20,476,580
Appropriation required for fiscal year 1918			$16,816.110

2. Attention is invited to the fact that the above estimates are for work on new vessels heretofore authorized, including those vessels required to be begun as soon as practicable, by the naval act of August 29, 1916, and do not include any money for the first year's work on vessels of the three-year program in the naval act of August 29, 1916, which may be authorized to be begun during the fiscal year 1918.

ADDITIONS TO THE NAVY SINCE JUNE 30, 1915.

The additions to the effective force of the Navy since June 30, 1915, by the completion of vessels building under contract and at navy yards are as follows: Battleships, *Nevada, Oklahoma, Pennsylvania, Arizona.* Destroyers, *Winslow, Cushing, Ericsson, Tucker, Conyngham, Porter, Wadsworth, Jacob Jones, Wainwright, Sampson, Rowan, Davis.* Tenders, *Bushnell, Melville.* Fuel ship, *Maumee.* Submarines, *L-1, L-2, L-3, L-4, L-9, L-10, L-11.*

TRIAL AND ACCEPTANCE DATA.

Statement of data relative to trials of vessels which have been preliminary but not finally accepted since June 30, 1915.

Name.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	By whom built.
			Knots.	*Knots.*		
Nevada	Battleship	Nov. 5, 1915	20.50	20.53	Mar. 11, 1916	Fore River S. B. Co.
Oklahoma	do	Jan. 25-26, 1916.	20.50	20.58	May 2, 1916	New York S. B. Co.
Pennsylvania	do	Feb. 28, 1916	21.00	21.05	June 12, 1916	Newport News S. B. Co.
Winslow	Destroyer	June 30, 1915	29.00	29.05	Aug. 7, 1915	Wm. Cramp & Sons.
Cushing	do	May 26, 1915	29.00	29.18	Aug. 21, 1915	Fore River S. B. Co.
Ericsson	do	May 19, 1915	29.00	29.29	Aug. 14, 1915	New York S. B. Co.
Tucker	do	Mar. 20, 1916	29.50	29.70	Apr. 11, 1916	Fore River S. B. Co.
Conyngham	do	Dec. 8, 1915	29.50	29.63	Jan. 20, 1916	Wm. Cramp & Sons.
Porter	do	Mar. 11, 1916	29.50	29.58	Apr. 17, 1916	Do.
Wadsworth	do	June 22, 1915	30.00	30.67	July 23, 1915	Bath Iron Works.
Jacob Jones	do	Dec. 27, 1915	29.50	29.57	Feb. 10, 1916	New York S. B. Co.
Wainwright	do	Mar. 18, 1916	29.50	29.67	May 12, 1916	Do.
Sampson	do	May 23, 1916	29.50	29.52	June 23, 1916	Fore River S. B. Co.
Rowan	do	July 21-29, 1916.	29.50	29.57	Aug. 19, 1916	Do.
Davis	do	Sept. 6-10, 1916.	30.00	30.36	Oct. 4, 1916	Bath Iron Works.
L-1	Submarine	Feb. 8-9, 1916			Apr. 11, 1916	Fore River S. B. Co.[1]
L-2	do	Mar. 2-6, 1916			Sept. 28, 1916	Do.
L-3	do	Feb. 11, 1916			Apr. 21, 1916	Do.
L-4	do	Feb. 29, 1916			May 4, 1916	Do.
L-9	do	June 2-12, 1916			Aug. 4, 1916	Fore River S. B. Corpn.[1]
L-10	do	June 3-16, 1916			Aug. 2, 1916	Do.
L-11	do	July 3-19, 1916			Aug. 15, 1916	Do.
Bushnell	Submarine tender.	Sept. 14, 1915	14.00	14.15	Nov. 20, 1915	Seattle Cons't'n & D. D. Co.

[1] Electric Boat Co., New York, contractors.

Statement of data relative to trials of vessels which have been finally accepted since June 30, 1915.

Name.	Type.	Date of trial.	Speed required by contract.	Speed obtained on trial.	Date of preliminary acceptance.	Date of final acceptance.	By whom built.
			Knots.	*Knots.*			
Texas	Battleship	Oct. 28, 1913	21.00	21.05	Mar. 12, 1914	Apr. 22, 1916	Newport News S. B. Co.
McDougal	Destroyer	May 14, 1914	29.00	30.70	June 16, 1914	Oct. 8, 1915	Bath Iron Works.
G-4	Submarine	Sept. 17, 1914	.....	.....	Sept. 21, 1914	Mar. 7, 1916	Wm. Cramp & Sons.
K-2	...do	Dec. 12, 1913	.....	.....	Jan. 30, 1914	Sept. 11, 1916	Fore River S. B. Co.[1]
K-3	...do	Aug. 17, 1914	.....	.....	Oct. 29, 1914	Sept. 8, 1916	Union Iron Works.[1]
K-4	...do	July 6, 1914	.....	.....	Oct. 24, 1914	Sept. 9, 1916	The Moran Co.[1]
K-5	...do	June 4, 1914	.....	.....	Aug. 20, 1914	Sept. 12, 1916	Fore River S. B. Co.[1]
K-7	...do	Sept. 24, 1914	.....	.....	Dec. 1, 1914	Sept. 13, 1916	Union Iron Works.[1]
K-8	...do	Sept. 28, 1914	.....	.....	....do	Sept. 15, 1916	Do.
Sacramento	Gunboat	Mar. 31, 1914	12.50	12.78	Apr. 26, 1914	Aug. 11, 1916	Wm. Cramp & Sons.
Fulton	Submarine tender.	Nov. 1, 1914	12.25	12.34	Dec. 2, 1914	Sept. 25, 1916	New London Ship & Engine Co.
Melville	Destroyer tender.	July, 16-17-18, 1915.	15.00	15.09	Dec. 2, 1915	Sept. 28, 1916	New York Ship Building Co.

[1] Electric Boat Co., New York, contractors.

Vessels dropped from the Navy since June 30, 1915.

Name.	Type.	Stricken from the Navy Register.
F-4	Submarine	Aug. 31, 1915
Stranger	Converted yacht	Oct. 23, 1915
Franklin	Sailing vessel	Oct. 26, 1915
Oneida	Converted yacht	Nov. 8, 1915
Concord	Gunboat	Dec. 31, 1915
Justin	Fuel ship	Do.
Lancaster	Ship	Do.
Miantonomah	Monitor	Do.
Terror	....do	Do.
Mackenzie	Torpedo boat	Mar. 10, 1916
Callao	Gunboat	Apr. 17, 1916
Alice	Tug	Apr. 28, 1916
Fox	Torpedo boat	Aug. 31, 1916

Vessels building for the increase of the Navy are listed in the following tables, which include all those authorized by law, with the exception of 4 battleships, 4 battle cruisers, 4 scout cruisers, 1 fuel ship, 1 hospital ship, 1 ammunition ship, 1 gunboat, 20 destroyers, and 30 submarines appropriated for by the last Congress; and 6 battleships, 2 battle cruisers, 6 scout cruisers, 30 destroyers, 37 submarines, 2 fuel ships, 1 repair ship, 1 transport, 2 destroyer tenders, 1 fleet submarine tender, 1 ammunition ship, and 1 gunboat authorized by the last Congress but not appropriated for.

Vessels building under contract.

Name.	By whom building.	Estimate of— Degree of completion Oct. 1, 1916.	Estimate of— Probable date of completion.	Contract time.	Expiration of contract time.
BATTLESHIPS.		*Per cent.*		*Months.*	
Mississippi (41)	Newport News S. B. Co.	55.9	Dec. 1, 1917	36	Nov. 23, 1917
Idaho (42)	New York S. B. Co.	64.8	Apr. 1, 1918	36	Nov. 9, 1917
DESTROYERS.					
Davis (65)	Bath Iron Works	(2)		21	Oct. 30, 1916
Allen (66)	do	89.9	Feb. 15, 1917	24	Jan. 30, 1917
Wilkes (67)	Wm. Cramp & Sons	91.1	Nov. 28, 1916	22	Nov. 28, 1916
Gwin (71)	Seattle Construction & D. D. Co.	10.2	Nov. 8, 1917	20	Nov. 8, 1917
Conner (72)	Wm. Cramp & Sons	13.6	Aug. 20, 1917	19½	Aug. 20, 1917
Stockton (73)	do	13.6	Sept. 5, 1917	20	Sept. 5, 1917
Manley (74)	Bath Iron Works	27.8	Aug. 30, 1917	20	Aug. 30, 1917
SUBMARINES.					
G-2 (27)[1]	Lake T. B. Co.	92.0		28	Aug. 21, 1911
G-3 (31)[1]	do	89.5		20	Sept. 19, 1912
L-5 (44)	do	87.6	Feb. 1, 1917	24	Apr. 24, 1916
L-6 (45)	Craig S. B. Co.[3]	85.0	Do.	24	Do.
L-7 (46)	do	84.7	Mar. 1, 1917	24	Do.
M-1 (47)	Fore River S. B. Co.[4]	99.4	Apr. 6, 1917	26	Apr. 4, 1915
Schley (52)	Fore River S. B. Corporation[4]	27.3	Mar. 19, 1918	36	Mar. 19, 1918
N-1 (53)	Seattle Construction & D. D. Co.[4]	67.6	May 19, 1917	26	May 19, 1917
N-2 (54)	do	66.3	June 19, 1917	27	June 19, 1917
N-3 (55)	do	64.6	July 19, 1917	28	July 19, 1917
N-4 (56)	Lake T. B. Co.	74.3	Do.	24	Feb. 18, 1917
N-5 (57)	do	73.1	Aug. 1, 1917	25	Mar. 18, 1917
N-6 (58)	do	72.0	Sept. 1, 1917	26	Apr. 18, 1917
N-7 (59)	do	71.5	Oct. 1, 1917	27	May 18, 1917
No. 60	Fore River S. B. Corporation[4]		Oct. 2, 1918	24	Oct. 2, 1918
No. 61	do		Dec. 2, 1918	26	Dec. 2, 1918
O-3 (64)	do	19.0	Oct. 3, 1917	21	Oct. 3, 1917
O-4 (65)	do	19.0	Nov. 3, 1917	22	Nov. 3, 1917
O-5 (66)	do	19.0	Do.	22	Do.
O-6 (67)	do	19.0	Dec. 3, 1917	23	Dec. 3, 1917
O-7 (68)	do	19.0	Do.	23	Do.
O-8 (69)	do	18.6	Jan. 3, 1918	24	Jan. 3, 1918
O-9 (70)	do	18.6	Do.	24	Do.
O-10 (71)	do	18.6	Feb. 3, 1918	25	Feb. 3, 1918
O-11 (72)	Lake T. B. Co.	34.9	Oct. 28, 1917	22	Oct. 28, 1917
O-12 (73)	do	34.1	Nov. 28, 1917	23	Nov. 28, 1917
O-13 (74)	do	32.5	Dec. 28, 1917	24	Dec. 28, 1917
O-14 (75)	California S. B. Co.[5]	23.6	Mar. 1, 1918	23	Nov. 30, 1917
O-15 (76)	do	22.2	Apr. 1, 1918	24	Dec. 31, 1917
O-16 (77)	do	20.4	May 1, 1918	25	Jan. 31, 1918

[1] Contracts forfeited, vessels being completed at navy yard, New York, commissioned preparatory to trials.
[2] Delivered Oct. 4, 1916.
[3] Lake Torpedo Boat Co., Bridgeport, Conn., contractors.
[4] Electric Boat Co., New York, contractors.
[5] Successor to Craig Shipbuilding Co.

Vessels building at navy yards.

Name.	Where building.	Estimate of— Degree of completion, Oct. 1, 1916.	Estimate of— Probable date of completion.	Constructional period.	Expiration of constructional period.
BATTLESHIPS.					
		Per cent.		*Months.*	
Arizona (39)	New York, N. Y.	99.9	(1)	36	Sept. 15, 1916
New Mexico (40)	do	48.6	June 1, 1918	36	June 1, 1918
Tennessee (43)	do	.8	[2] June 9, 1919		
California (44)	Mare Island, Cal.	3.2	do		
DESTROYERS.					
Shaw (68)	Mare Island, Cal.	72.5	Jan. 1, 1917	17	Jan. 1, 1917
Caldwell (69)	do	20.7	Dec. 1, 1917		
Craven (70)	Norfolk, Va.	8.4	Sept. 1, 1918		
FUEL SHIPS.					
Maumee (14)	Mare Island, Cal.	99.7	(3)	27	Jan. 1, 1916
Cuyama (15)	do	81.6	Apr. 1, 1917	21	Aug. 1, 1917
Number 16	Boston, Mass.				
SUPPLY SHIP.					
Bridge (1)	Boston, Mass.	84.0	May 1, 1917	36	Feb. 19, 1917
HOSPITAL SHIP.					
Number 1	Philadelphia, Pa.				
TRANSPORT.					
Henderson (1)	Philadelphia, Pa.	78.7	Apr. 1, 1917	36	Feb. 19, 1917
SUBMARINES.					
L-8 (48)	Portsmouth, N. H.	90.8	Apr. 1, 1917	24	Nov. 27, 1916
O-1 (62)	do				
O-2 (63)	Puget Sound, Wash.				
GUNBOAT.					
Number 21	Charleston, S. C.				
TUGS.					
Wando	Charleston, S. C.	95.0			
Pocahontas	Norfolk, Va.	95.0			

[1] Arizona placed in commission Oct. 17, 1916.
[2] Latest estimate of the navy yard, New York, for the completion of the U. S. S. Tennessee.
[3] Maumee placed in commission Oct. 23, 1916.

VESSELS LAUNCHED SINCE JUNE 30, 1915.

The following is a list of vessels launched since June 30, 1915, together with the date of launching:

Name.	Launched.	Name.	Launched.
Conyngham	July 8, 1915	L-5	May 1, 1916
Porter	Aug. 26, 1915	L-11	May 16, 1916
M-1	Sept. 14, 1915	Bridge	May 18, 1916
L-9	Oct. 27, 1915	Wilkes	Do.
Sampson	Mar. 4, 1916	Henderson	June 17, 1916
Wando	Mar. 7, 1916	Cuyama	Do.
L-10	Mar. 16, 1916	Davis	Aug. 15, 1916
Rowan	Mar. 23, 1916	L-6	Aug. 31, 1916
Pocahontas	Apr. 1, 1916	L-7	Sept. 28, 1916

Proposals received for the construction of two battleships, "Nos. 43 and 44."

[Class 1: Hull and turbine-propelling machinery in accordance with the department's plans. Class 2: Hull and equipment in accordance with the department's plans; machinery, bidder's design.]

Bidder.	Class 1.	Class 2.	Time.	Speed.	Type of propelling machinery.
			Months.	*Knots.*	
Fore River Shipbuilding Corporation.	$7,638,000	.....	34	20.5	Yarrow boilers, Curtis turbines, high and low pressure ahead, high and low pressure astern, cruising turbines through reduction gear.
Do.	7,684,000	.....	34	20.5	Do.
Do.	7,750,000	.....	34	20.5	Do.
Do.	7,229,500	.....	34	20.5	Do.
New York Shipbuilding Co.	7,700,000	.....	34	20.5	B. & W. boilers, high and low pressure ahead, high and low pressure astern, cruising turbines through reduction gear.
Newport News Shipbuilding Co.	7,775,000	.....	40	20.5	Parsons turbines, high and low pressure ahead, high and low pressure astern, cruising turbines through reduction gear.
Do.	.....	$7,765,000	40	20.5	Curtis turbines, high and low pressure ahead, high and low pressure astern, and high and low cruising through reduction gear.

NOTE.—All bids for one vessel only. All of the above bids were conditional on the omission of important items from the department's specifications and material modifications in the usual contract terms.

The navy yard, New York, N. Y., has been designated as the yard at which battleship *No. 43* (*Tennessee*) will be built.

The navy yard, Mare Island, Cal., has been designated as the yard at which battleship *No. 44* (*California*) will be built.

Proposals received for the construction of destroyers "Nos. 69–74."

[Class 1: Hull, equipment, and turbine-propelling machinery with speed-reduction gearing, department's plans. Class 2: Hull and equipment, department's plan; turbine-propelling machinery, bidder's design.]

Bidder.	Class 1.			Class 2.			Months to complete.	Speed.	Type of propelling machinery.
	One vessel.	Two vessels.	Three vessels.	One vessel.	Two vessels.	Three vessels.			
Wm. Cramp & Sons		$852,000					19½ and 20	30	White-Forster boilers, high pressure and low pressure ahead, cruising turbines through reduction gear on outboard shafts and astern turbines.
Wm. Cramp & Sons			$842,000				19⅔, 19⅔, and 20	30	
Wm. Cramp & Sons					$845,000		19½ and 20	30	White-Forster boilers, high pressure and low pressure ahead, cruising turbines through reduction gear on center shaft and astern turbines.
Wm. Cramp & Sons						$835,000	19⅔, 19⅔, and 20	30	
Seattle Construction & Dry Dock Co.	$885,000	870,000					19 and 20	30	Yarrow boilers, high pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.
Fore River Ship Building Corporation.		899,000					20 and 21	30	Yarrow boilers, Curtis turbines, high pressure and low pressure ahead, cruising turbines through reduction gear on outboard shafts and astern turbines.
Fore River Shipbuilding Corporation.					885,000		20 and 21	30	Yarrow boilers, Curtis turbines, ahead turbines, cruising turbines through reduction gear and astern turbines.
Fore River Shipbuilding Corporation.					880,000		20 and 21	30	Yarrow boilers, Curtis turbines, ahead and astern turbines through reduction gear.
Fore River Shipbuilding Corporation.					905,000		20 and 21	30	Yarrow boilers, Curtis turbines ahead and astern turbines, through reduction gear and cruising turbines through reduction gear.
Newport News Shipbuilding Co.		858,000					20 each	30	Thornycroft boilers, high pressure and low pressure ahead cruising turbines through reduction gear and astern turbines.
Newport News Shipbuilding Co.					868,000		20 each	30	Thornycroft boilers, Curtis turbines, high pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.
Union Iron Works	915,000						20	30	Thornycroft boilers, high pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.
Bath Iron Works				$879,500			20	32	Normand boilers, Parsons turbines, high pressure and low pressure turbines through reduction gear on each shaft.
Bath Iron Works				875,000			20	30	
Mare Island Navy Yard		762,638 712,638					15 and 18 months after receipt of material.	32	Thornycroft boilers, high pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.
Mare Island Navy Yard		777,625 727,625						32	White-Forster boilers, high pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.
Norfolk Navy Yard	706,305						26	32	High pressure and low pressure ahead, cruising turbines through reduction gear and astern turbines.

The navy yard, Mare Island, Cal., has been designated as the yard at which destroyer *No. 69* (*Caldwell*) will be built.

The navy yard, Norfolk, Va., has been designated as the yard at which destroyer *No. 70* (*Craven*) will be built.

Contract for destroyer *No. 71* (*Gwin*) was signed with the Seattle Construction & Dry Dock Co., Seattle, Wash., on March 8, 1916, at a price of $885,000; to have Parsons turbines geared cruising and to be completed within 20 months.

Contracts for destroyers *Nos. 72* (*Conner*) and *73* (*Stockton*) were signed with Wm. Cramp & Sons, Philadelphia, Pa., on January 5, 1916, at a price of $845,000; to have Parsons turbines geared cruising and to be completed within 19½ and 20 months, respectively.

Contract for destroyer *No. 74* (*Manley*) was signed with the Bath Iron Works, Bath, Me., on December 30, 1916, at a price of $879,500; to have Parsons turbines with mechanical reduction gearing and to be completed within 20 months.

SUBMARINES "NOS. 60 AND 61" AND "62 TO 77."

Circular of requirements for submarines *Nos. 60* and *61*, authorized by act of Congress approved March 3, 1915, was signed by the Secretary of the Navy on December 6, 1915. The authorizing act required that these vessels should have a surface speed of 25 knots or more if possible, but not less than 20 knots. In view of the new problems presented by this requirement a complete design for these vessels was prepared in the department. This design, together with complete specifications and the circular, was sent to bidders on December 11, 1915. Bids were opened on February 16, 1916. Bids were received from only two firms, the Electric Boat Company and the Lake Torpedo Boat Company. Neither submitted bids on the department's design, but each submitted designs of their own, both designs contemplating vessels of 20 knots speed, but not guaranteeing speeds over 19 knots. The question of modifying the provisions of the authorizing act to permit the acceptance of vessels with a minimum speed of 19 knots was then taken up by the Secretary of the Navy with Congress. A bill was introduced in Congress to modify the original authorizing act in accordance with this recommendation, and this bill was passed and approved on June 27, 1916. In accordance with this act and the original appropriation act, the Secretary of the Navy on June 30, 1916, awarded the contracts for these two vessels to the Electric Boat Company, New York, N. Y., at a price of $1,494,000 each. The contemplated times of delivery are respectively 24 and 26 months. The contracts were signed October 2, 1916.

Circular of requirements for submarines *Nos. 62* to *77*, inclusive, authorized by act of Congress approved March 3, 1915, was signed by the Secretary of the Navy on April 26, 1915, and together with the specifications for these submarines issued to bidders on May 29, 1915. Bids for the construction of these vessels were opened at the Navy Department on September 30, 1915, and contracts were awarded as follows:

Contracts for submarines *Nos. 64* to *71* (*O-3*, *O-4*, *O-5*, *O-6*, *O-7*, *O-8*, *O-9*, *O-10*) were signed on January 3, 1916, with the Electric Boat Company, New York, at a price of $548,000 each, to be completed within 21 to 25 months, respectively.

Contracts for submarines *Nos. 72* to *74* (*O–11*, *O–12*, *O–13*) were signed on December 28, 1915, with the Lake Torpedo Boat Company, of Maine, at a price of $545,000 each, to be completed within 22, 23, and 24 months, respectively.

Contracts for submarines *Nos. 75* to *77* (*O–14*, *O–15*, *O–16*) were signed on December 31, 1915, with the California Shipbuilding Company, of Long Beach, Cal., at a price of $548,500 each, to be completed within 23, 24, and 25 months, respectively.

In addition, the construction of submarines *Nos. 62* and *63* (*O–1* and *O–2*) was assigned to the navy yard, Portsmouth, N. H., and the navy yard, Puget Sound, Wash., respectively. These submarines are to be built from plans furnished at a price of $1,000 for each vessel by the Electric Boat Company, of New York.

PROGRESS OF WORK ON VESSELS UNDER CONSTRUCTION.

[illegible]

Name of vessel.	Name of superintending constructor.	Contract signed.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] and T. G. Roberts	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] and [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Winslow	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cushing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ericsson	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tucker	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	do.	do.	[illegible]	do.	do.	[illegible]	[illegible]	[illegible]
[illegible]	[illegible] and J. H. Walsh	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	do.	do.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	do.	do.	[illegible]	do.	do.	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		Feb. 7, 1914	Dec. 16, 1914	[illegible]	[illegible]	[illegible]
[illegible]	do.	do.	[illegible]		do.	do.	[illegible]	[illegible]	[illegible]
[illegible] (65)	J. H. Walsh	[illegible]	[illegible]		Apr. 13, 1913	Jan. 8, 1913	[illegible]	[illegible]	[illegible]
[illegible] (66)	do.	do.	[illegible]		do.	do.	[illegible]	[illegible]	[illegible]
[illegible] (67)	L. [illegible]	Jan. [illegible]	Nov. 28, 1916		Jan. 13, 1913	Jan. 7, 1913	[illegible]	[illegible]	[illegible]
[illegible] (68)	H. M. [illegible]	[illegible]			Mar. 29, 1913	Nov. 3, 1914	[illegible]	[illegible]	[illegible]
Caldwell (69)	do.	[illegible]							
Craven (70)	R. M. [illegible]				May —, 1916	Oct. 11, 1913			
Gwin (71)	W. [illegible]	Mar. 8, 1916	Nov. 8, 1917			Nov. 6, 1915			
Conner (72)	L. [illegible]	Jan. 5, 1916	Aug. 20, 1917		About Dec. 20, 1915	Dec. 20, 1915	Oct. 16, 1916		
[illegible]	do.	do.	Sept. 5, 1917		do.	do.	do.		
[illegible]	J. H. Walsh	Dec. 30, 1915	Aug. 31, 1917		Apr. 1, 1916	Jan. 1, 1916			
[illegible]	G. H. Rock	Apr. 21, 1909	Aug. 21, 1911	Aug. 13, 1913					
[illegible]	do.	June 19, 1911	Sept. 19, 1912	Nov. 1, 1913					
[illegible]	T. G. Roberts	Feb. 1, 1913	Dec. 1, 1914	Dec. 10, 1915	Dec. 4, 1913	Apr. 8, 1913	Apr. 11, 1914	[illegible]	[illegible]
[illegible]	do.	do.	Jan. 1, 1915	Feb. 9, 1915	do.	do.	Mar. 19, 1914	[illegible]	[illegible]
[illegible]	do.	do.	Feb. 1, 1915	Apr. 21, 1916	do.	do.	Apr. 18, 1914	[illegible]	[illegible]
[illegible]	do.	do.	Mar. 1, 1915	May 4, 1916	do.	do.	Mar. 23, 1914	[illegible]	[illegible]
[illegible]	A. W. Frank	Apr. 24, 1914	Apr. 24, 1916		Mar. 6, 1914	Mar. 26, 1913	May 14, 1914	[illegible]	[illegible]
[illegible]	F. H. Fretz and W. B. Fogarty	do.	do.		May 1, 1914	Mar. 17, 1913	May 27, 1914	[illegible]	[illegible]
[illegible]	do.	do.	do.		do.	do.	June [illegible], 1914	[illegible]	[illegible]

[illegible] (47)	T. G. Roberts	Feb. 4, 1913	Apr. 4, 1915	Apr. 6, 1915	Jan. 6, 1914	Apr. 8, 1913	July 2, 1914	July 21, 1914	
[illegible] (48)	L. S. Adams	June 29, 1914	Nov. 27, 1916		Nov. 9, 1914	Aug. 1, 1914	Feb. 24, 1915	Feb. 24, 1915	Mar. 3, 1915
[illegible] (49)	T. G. Roberts	Mar. 14, 1914	Mar. 14, 1916		Dec. 4, 1913	Mar. 13, 1914	Nov. 2, 1914	Nov. 19, 1914	
L-10 (50)	do	do	Apr. 14, 1916		do	do	Feb. 17, 1915	Feb. 23, 1915	
L-11 (51)	do	July 29, 1914	Sept. 29, 1916		do	Aug. 4, 1914	do	Feb. 27, 1915	
Schley (52)	do	Mar. 19, 1915	Mar. 19, 1918			Nov. 6, 1915	June 21, 1916		
N-1 (53)	G. C. Westervelt and W. Drake	do	May 19, 1917		May 29, 1915	Mar. 31, 1915	July 26, 1915	Aug. 16, 1915	July 29, 1915
N-2 (54)	do	do	June 19, 1917		do	do	July 29, 1915	Aug. 18, 1915	Aug. 8, 1915
N-3 (55)	do	do	July 19, 1917		do	do	July 31, 1915	Aug. 25, 1915	Aug. 27, 1915
N-4 (56)	A. W. Frank	Feb. 18, 1915	Feb. 18, 1917		Jan. 21, 1915	Jan. 21, 1915	Mar. 24, 1915	Mar. 24, 1915	Aug. 2, 1915
[illegible]	do	do	Mar. 18, 1917		do	do	Apr. 10, 1915	Apr. 12, 1915	Do.
[illegible]	do	do	Apr. 18, 1917		do	do	Apr. 15, 1915	Apr. 19, 1915	Do.
[illegible]	do	do	May 18, 1917		do	do	Apr. 20, 1915	Apr. 22, 1915	Do.
[illegible]	T. G. Roberts	Oct. 2, 1916	Oct. 2, 1918						
[illegible]	do	do	Dec. 2, 1918						
O-1 (62)	L. S. Adams								
O-2 (63)									
O-3 (64)	T. G. Roberts	Jan. 3, 1916	Oct. 3, 1917		Apr. 8, 1916	Nov. 11, 1915			
O-4 (65)	do	do	Nov. 3, 1917		do	do			
O-5 (66)	do	do	do		do	do			
O-6 (67)	do	do	Dec. 3, 1917		do	do			
O-7 (68)	do	do	do		do	do			
O-8 (69)	do	do	Jan. 3, 1918		do	do			
O-9 (70)	do	do	do		do	do			
O-10 (71)	do	do	Feb. 3, 1918		do	do			
O-11 (72)	A. W. Frank	Dec. 28, 1915	Oct. 28, 1917		Dec. 17, 1915	Nov. 9, 1915	Mar. 6, 1916	May 8, 1916	
O-12 (73)	do	do	Nov. 28, 1917		do	do	do	do	
O-13 (74)	do	do	Dec. 28, 1917		do	do	do	do	
O-14 (75)	P. H. Fretz and W. B. Fogarty	Dec. 31, 1915	Nov. 30, 1917			do			
O-15 (76)	do	do	Dec. 31, 1917			do			
O-16 (77)	do	do	Jan. 31, 1918			do			
Melville	J. G. Tawresey	June 20, 1913	June 20, 1915	Dec. 2, 1915	Aug. 27, 1913	Aug 16, 1913	Nov. 11, 1913	Nov. 18, 1913	Nov. 26, 1913
Bushnell	G. C. Westervelt	June 30, 1913	Mar. 30, 1915	Aug. 9, 1915	July 15, 1913	Aug. 2, 1913	Nov. 20, 1913 [2] / Jan. 10, 1914 [3]	Dec. 12, 1913	Dec. 5, 1913
Maumee	H. M. Gleason	Mar. 24, 1913	Jan. 1, 1916		May 15, 1913	July 3, 1913	July 23, 1914	July 29, 1914	Apr. 11, 1914
Cuyama	do	Apr. 23, 1915				Apr. 26, 1915	Dec. 15, 1915	Dec. 21, 1915	Feb. 2, 1916
Bridge	W. J. Baxter	Feb. 19, 1914	Feb. 19, 1917		July 30, 1914	Aug. 20, 1914	June 12, 1915	June 24, 1915	Mar. 10, 1915
Henderson	Elliot Snow	do	do		Sept. 1, 1914	Feb. 21, 1914	June 19, 1915	July 21, 1915	Oct. 6, 1914
Pocahontas	R. M. Watt, W. G. Du Bose, S. F. Smith.				Mar. 10, 1915	Jan. 2, 1915	Oct. 2, 1915	Oct. 2, 1915	
Wando	H. Williams	Dec. 7, 1914				Feb. 1, 1915	June 14, 1915	June 17, 1915	July 22, 1915

[1] Contracts forfeited, vessel being completed at navy yard, New York, N. Y. [2] Commenced. [3] Finished.

Progress of work on vessels under construction—Continued.

[Taken from reports of superintending constructors.]

Name of vessel.	First large casting erected.	First armor plate fitted.	First compartment tested.	Vessel launched.	Dock trial.	Official trial.	Estimated degree of completion, Oct. 1, 1916.	Vessel delivered to Government.	Date of first commission.
							Per cent.		
Bushnell	Jan. 12, 1914		Oct. 7, 1914	Feb. 9, 1915	July 21, 1915	Sept. 13, 1915		Nov. 20, 1915	Nov. 24, 1915
Maumee	July 23, 1914		Nov. 20, 1914	Apr. 17, 1915			99.7		Oct. 23, 1916
Cuyama	Feb. 25, 1916		Apr. 29, 1916	June 17, 1916			81.6		
Bridge	Sept. 25, 1915		Nov. 4, 1915	May 18, 1916			84.0		
Henderson	Aug. 24, 1915		Oct. 11, 1915	June 17, 1916			78.7		
Pocahontas				Apr. 1, 1916			95.0		
Wando	Aug. 2, 1915		Aug. 4, 1915	Mar. 7, 1916			95.0		

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Chief Constructor United States Navy, Chief of Bureau.

Gwin (71)							10.2		
Conner (72)							13.6		
Stockton (73)							13.6		
Manley (74)							27.8		
G-2 (27)				Jan. 10, 1912		Dec. 1-10, 1915	92.0		Feb. 6, 1915
G-3 (31)				Dec. 27, 1913			89.5		Mar. 22, 1915
L-1 (40)	May 22, 1914		Aug. 22, 1914	Jan. 20, 1915	Mar. 1, 1915	Apr. 27, 1915 Feb. 8, 9, 1916		Apr. 11, 1916	Apr. 11, 1916
L-2 (41)	May 19, 1914		Sept. 4, 1914	Feb. 11, 1915	Mar. 31, 1915	Apr. 28, 1915		Sept. 28, 1916	Sept. 29, 1916
L-3 (42)	June 12, 1914		Sept. 12, 1914	Mar. 15, 1915	June 28, 1915	Sept. 10, 1915 Feb. 11, 1916		Apr. 21, 1916	Apr. 21, 1916
L-4 (43)	do.		Sept. 21, 1914	Apr. 3, 1915	Aug. 6, 1915	Sept. 10, 1915 Feb. 29, 1916		May 4, 1916	May 4, 1916
L-5 (44)	Aug. 3, 1914		Oct. 20, 1914	May 1, 1916			87.6		
L-6 (45)	Sept. 25, 1914		Dec. 3, 1914	Aug. 31, 1916			85.0		
L-7 (46)	Oct. 3, 1914		Mar. 8, 1915	Sept. 28, 1916			84.7		
M-1 (47)	Oct. 12, 1914		May 6, 1915	Sept. 14, 1915	Jan. 6, 1916	June 24, 1916	99.4		
L-8 (48)	July 12, 1915		Oct. 24, 1915				90.8		
L-9 (49)	Mar. 3, 1915		May 21, 1915	Oct. 27, 1915	Apr. 29, 1916	June 2, 1916		Aug. 4, 1916	Aug. 4, 1916
L-10 (50)	Mar. 20, 1915		July 13, 1915	Mar. 16, 1916	May 13, 1916	do.		Aug. 2, 1916	Aug. 2, 1916
L-11 (51)	July 7, 1915		Aug. 6, 1915	May 16, 1916	June 19, 1916	June 24, 1916		Aug. 15, 1916	Aug. 15, 1916
Schley (52)							27.3		
N-1 (53)	Oct. 5, 1915						67.6		
N-2 (54)	Oct. 7, 1915						66.3		
N-3 (55)	do.						64.6		
N-4 (56)	Aug. 5, 1915		Sept. 22, 1915				74.3		
N-5 (57)	do.		Oct. 12, 1915				73.1		
N-6 (58)	Aug. 9, 1915		Nov. 12, 1915				72.0		
N-7 (59)	Aug. 13, 1915		Dec. 2, 1915				71.5		
60									
61									
O-1 (62)									
O-2 (63)									
O-3 (64)							19.0		
O-4 (65)							19.0		
O-5 (66)							19.0		
O-6 (67)							19.0		
-7 (68)							19.0		
8 (69)							18.6		
9 (70)							18.6		
10 (71)							18.6		
11 (72)							34.9		
12 (73)							34.1		
13 (74)							32.5		
14 (75)							23.6		
-15 (76)							22.2		
-16 (77)							20.4		
-ville	Feb. 4, 1914		Mar. 26, 1914	Mar. 2, 1915	May 13-July 1, 1915.	July 15-19, 1915; Oct. 14, Nov. 10, 1915.		Dec. 2, 1915	Dec. 3, 1915

Progress of work on vessels under construction—Continued.

[Taken from reports of superintending constructors.]

Name of vessel.	First large casting erected.	First armor plate fitted.	First compartment. tested.	Vessel launched.	Dock trial.	Official trial.	Estimated degree of completion, Oct. 1, 1916.	Vessel delivered to Government.	Date of first commission.
							Per cent.		
Bushnell	Jan. 12, 1914		Oct. 7, 1914	Feb. 9, 1915	July 21, 1915	Sept. 13, 1915		Nov. 20, 1915	Nov. 24, 1915
Maumee	July 23, 1914		Nov. 20, 1914	Apr. 17, 1915			99.7		Oct. 23, 1916
Cuyama	Feb. 25, 1916		Apr. 29, 1916	June 17, 1916			81.6		
Bridge	Sept. 25, 1915		Nov. 4, 1915	May 18, 1916			84.0		
Henderson	Aug. 24, 1915		Oct. 11, 1915	June 17, 1916			78.7		
Pocahontas				Apr. 1, 1916			95.0		
Wando	Aug. 2, 1915		Aug. 4, 1915	Mar. 7, 1916			95.0		

D. W. TAYLOR,
Chief Constructor United States Navy, Chief of Bureau.

REPORT OF CHIEF OF BUREAU OF STEAM ENGINEERING.

NAVY DEPARTMENT,
BUREAU OF STEAM ENGINEERING,
Washington, D. C., October 12, 1916.

The appropriations made for the support of the bureau for the fiscal year 1916 were:

Bureau of Steam Engineering:		
Engineering	$7,742,973.00	
Engineering, urgent deficiencies	938,620.40	
		$8,681,593.40
High-power radio stations		400,000.00
Engineering experiment station, United States Naval Academy, Annapolis, Md.—		
Experimental and research work		60,000.00
Equipment of building		20,000.00
Salaries, Bureau of Steam Engineering		45,490.00
Funds available under joint appropriations:		
Increase of Navy, construction and machinery		20,664,459.00
Increase of Navy, torpedo boats		6,231,344.00

NAVY YARD CONSTRUCTION.

The new construction carried on in the navy yards during the past year comprised the machinery for the battleship *Arizona* and the fuel ship *Maumee* at New York, the supply ship *Bridge* at Boston, the transport *Henderson* at Philadelphia, the destroyer *Craven* and the tug *Pocahontas* at Norfolk, the destroyers *Shaw* and *Caldwell* and the fuel ship *Cuyama* at Mare Island, and the tug *Wando* and ferryboat *Wave* at Charleston. Besides this, the machinery for several self-propelled oil barges, ash lighters, and freight lighters was completed at Portsmouth, Norfolk, and Mare Island.

The completion of the machinery of the *Maumee* was delayed while awaiting the passage of the naval appropriation bill providing additional funds for the purpose. At the date of this report it is practically completed and installed, and it is expected that the vessel will soon be in service.

Good progress is being made on the machinery of the *New Mexico*, building under contract, and it is believed that it will be completed within the time fixed in the contract.

The machinery of the *Arizona* was nearly completed on the 1st of July and is now in all respects ready for service.

DESIGN OF MACHINERY.

Plans and specifications were prepared for the machin[illegible] battleships *Nos. 43* and *44*, the *Tennessee* and *California*, of d[illegible] ers *Nos. 69* to *74*, inclusive, and for fleet subma[illegible] 6[illegible]

of the 1916 program. No bids having been received for the latter vessels, the specifications were rewritten, modifying the requirements, and the contracts have since been awarded.

The increase in building carried on at navy yards has taxed to the utmost the clerical, drafting, and technical force of the bureau and the navy yards, and even after provision was made in the deficiency bill for additional draftsmen much difficulty was experienced in securing suitable ones on account of the demand from shipbuilding establishments consequent upon the large increase in the number of merchant ships under construction. By reason of this increase, however, it was possible to complete the design of the new gunboat and to prepare specifications for the coast submarines during the fiscal year, and at the date of this report the plans and specifications for all the vessels of the 1917 program have been completed. These comprise the scout cruisers, the battle cruisers, the destroyers, the hospital ship, the ammunition ship, and the 800-ton submarines. The machinery of the battleships and the fuel ship will be duplicates of preceding ships of the same class. Such a vast amount of work reflects the greatest credit on the officers and employees concerned and was possible of accomplishment only because of the increase in force and of the willingness of all to work overtime when necessary to meet the dates fixed for completion.

Besides the new work, plans and specifications were prepared for new propelling engines to replace the present engines in the battleship *North Dakota*, in the scout cruiser *Salem*, and in the destroyers *Henley* and *Mayrant*. This work was so far advanced that it was possible to advertise and obtain bids for all except the *North Dakota* before the passage of the appropriation bill, so that contracts might be entered into immediately upon its passage, and thus save several months in the time of delivery. The machinery of the *North Dakota* will be built at the New York Navy Yard.

In addition to the above much important and routine work has been carried on in connection with the upkeep of the machinery of the fleet, the most important being the preparation of plans and specifications for new boilers for the *Georgia*, *Virginia*, and *Tonopah*, and plans for propellers for a number of vessels under construction.

ELECTRICAL WORK.

The work of the electrical division has paralleled that of the design division in all matters affecting the electrical installations on new ships and the preparation of specifications and type plans therefor. Complete plans were also prepared for carrying out the changes recommended by the 1915 fire-control board and material assembled for doing the work when the ships are available.

Following the explosion in the submarine *E-2* of an Edison battery, exhaustive tests were made at the New York Navy Yard, under instructions issued by the bureau, to determine the suitability of several types of batteries submitted for test and in order to obtain reliable data regarding the volume and the character of the gas given off under different conditions. The facts developed will be of great value in deciding upon the type of battery to be used in future designs.

The production of high-power searchlights, which are procured under contract, has now reached such a stage as to give assurance

of a supply for all new ships, and it is believed that the facilities will soon be such that conversion of old searchlights may be proceeded with. The estimate for this purpose is included in the estimates submitted.

Important improvements have been effected in the auxiliary lighting systems, in deck illumination, and in means of signaling, as well as in numerous small fixtures and accessories.

RADIO TELEGRAPHY.

Work in connection with the chain of high-power stations is progressing satisfactorily. Contracts were entered into for the radio equipment at San Diego and Pearl Harbor and for the radio and power equipment at Cavite, and while the general trade condition has caused some delay it is believed that the San Diego station will be in operation by the first of next year, and that the others will follow within a few months. All arrangements have been made for the erection of experimental wooden masts at Tutuila, Samoa, and for the supply of the necessary apparatus to secure communication with Pearl Harbor. At Guam contract has been entered into for the masts and for the equipment necessary for communication with Cavite. Improvement has also been made in the equipment at Arlington, with a view to securing improved communication with the Canal Zone.

The equipment of the stations at Boston, Great Lakes, Charleston, Key West, New Orleans, Guantanamo, San Juan, and Cordova, Alaska, has been so improved as to render those stations capable of communicating with vessels beyond the range of low-power stations, and also to relay messages across the continent. The station at Mare Island will be similarly equipped.

New medium-power stations are under construction at Puget Sound and Cordova, and plans are in preparation for a similar station in Porto Rico and for the relocation of the Cape Blanco station at Marshfield, Oreg.

The new station at Point Isabel, Tex., is in operation and has contributed to efficient communication with vessels in Mexican waters.

Distant control of stations, to permit simultaneous sending and receiving, has been established at Arlington, Mare Island, Boston, and Washington, and similar improvement will be made at Charleston, Key West, Puget Sound, and New Orleans. In stations thus equipped for transmitting with a large and a small set, with facilities for receiving simultaneously the signals coming in from similar sets, the capacity for handling messages is increased fourfold.

The direction-finding apparatus installed at Cape Cod as an aid to navigation has been productive of good results. Experiments are being conducted with similar apparatus at Fire Island.

Marked improvement has been made in the transmitting and receiving capacity of the more important vessels of the fleet, and this work will be continued as funds permit.

The manufacture at navy yards of receiving sets and of low-power transmitting sets has proceeded with very satisfactory results.

INSPECTION OF MATERIAL.

The tables below indicate the work done in the inspection of material by the various inspection offices under this bureau, and a comparison of the total work performed during the fiscal year ending June 30, 1916, with that during the three previous fiscal years:

Bureau for which inspection was made by inspectors of engineering material.	Pounds inspected and passed.			
	1913	1914	1915	1916
Steam Engineering	27,164,464	37,264,902	42,906,220	41,744,275.75
Yards and Docks	27,787,697	34,390,921	53,539,227	17,824,344.
Supplies and Accounts	1,974,131	610,848	196,224	476,345.75
Construction and Repair	325,775	338,138	949,998	1,675,880.
Ordnance	809,940	1,964,125	714,902	2,212,606.
Navigation	6,670	3,640	.....	5,467.
Medicine and Surgery	10,725	.....	2,309	.....
Total	58,079,411	74,572,574	98,308,880	63,938,918.50

Number of —	1913	1914	1915	1916
Districts	8	8	8	8
Officers in charge	7	7	7	[1] 7
Civilian assistants	29	30	32	33
Warrant officers	1	2	3	3
Chemists (Pittsburgh, Pa.)	1	1	1	1
Manufacturing establishments at which inspections have been made	626	788	950	880

[1] There are 3 commissioned officers detailed as assistant inspectors excluding officers detailed for aeronautical inspection.

NOTE.—In addition to the material inspected by inspectors of engineering material there was inspected by inspectors of machinery in 1914, 5,686,218 pounds; in 1915, 3,908,235 pounds; and in 1916, 3,659,185.62 pounds.

Material inspected in each district, 1916.

INSPECTORS OF ENGINEERING MATERIAL.

	Pounds accepted.	Pounds rejected.	Cost of inspection.
South Bethlehem	2,170,040	261,626	$3,073.00
Pittsburgh	35,344,696	1,052,179	29,720.43
Philadelphia	8,134,385	448,078	9,640.60
Schnectady	2,036,038	60,165	3,096.97
Brooklyn	6,162,648	207,144	18,314.76
Hartford	3,480,230	153 014	6,802.32
Boston	4,143,969	285,184	10,202.62
Chester	2,466,912	28,228	2,796.20
Total	63,938,918	2,495,618	83,665.90

INSPECTORS OF MACHINERY.

	Pounds accepted.	Pounds rejected.
Quincy, Mass	49,578	.....
Cramp's Shipyard	744,739.25	1,392
Bayonne, N. J	2,560,078.08	.....
Camden, N. J	100,108.85	.....
Bath, Me	143,268	52,000
Seattle, Wash	8,021.44	.....
Total	3,605,793.62	53,392

Weight of material rejected by inspectors of engineering material.

	Pounds.
1913	3,143,981
1914	3,241,818
1915	3,199,864
1916	2,495,618

Cost of inspection per ton of accepted material.

1913	$3.22
1914	2.55
1915	2.05
1916	2.93

NOTE.—The cost of inspection of all material inspected, both accepted and rejected, was $1.98 per ton in 1915, and $2.82 in 1916.

The cost for individual offices is given below:

SOUTH BETHLEHEM.

Year.	Pounds accepted.	Pounds rejected.	Cost of inspection.	Cost per ton of inspection.
1909	959,720	.....	$5,506.32	$12.84
1910	2,077,732	.....	6,247.15	6.71
1911	1,830,696	149,088	7,186.86	8.79
1912	3,029,582	138,720	6,960.74	5.15
1913	2,384,148	180,221	3,177.01	2.98
1914	5,810,910	380,242	3,668.65	1.41
1915	3,409,735	129,981	4,905.65	3.22
1916	2,170,040	261,626	3,073.00	3.17

BOSTON.

1909	2,023,641	.....	$4,706.88	$5.20
1910	2,280,117	.....	7,358.03	7.22
1911	2,682,645	33,809	9,262.33	7.73
1912	3,069,178	44,584	9,757.48	7.12
1913	2,271,315	50,222	10,651.57	10.50
1914	2,326,316	13,331	10,982.84	10.57
1915	3,679,917	62,094	11,086.31	6.75
1916	4,143,969	285,184	10,202.62	5.51

BROOKLYN.

1909	1,852,356	.....	$8,237.23	$9.91
1910	4,066,485	.....	10,341.29	5.70
1911	7,335,214	1,018,630	14,973.01	4.57
1912	7,391,495	411,611	17,092.63	5.18
1913	6,653,100	248,468	20,012.32	6.73
1914	4,278,630	115,741	20,237.88	10.59
1915	13,348,757	289,841	20,152.49	3.38
1916	6,162,648	207,144	18,314.76	6.65

HARTFORD.

1909	2,187,540	.....	$6,195.77	$6.33
1910	1,480,147	.....	6,170.80	9.32
1911	1,480,288	34,737	6,671.36	10.09
1912	2,052,624	37,743	6,525.58	7.12
1913	2,133,165	61,302	6,716.11	7.05
1914	1,975,680	86,979	6,679.18	7.57
1915	3,298,400	113,681	6,894.11	4.68
1916	3,480,230	153,014	6,802.32	4.37

PHILADELPHIA.

1909	3,315,326	.....	$5,612.00	$3.78
1910	4,323,315	.....	5,571.52	2.87
1911	5,757,868	74,727	5,924.60	2.30
1912	16,602,628	1,660,200	6,119.55	.82
1913	12,459,850	480,917	9,558.44	1.72
1914	13,985,126	398,718	9,111.43	1.46
1915	15,338,325	548,532	10,165.71	1.49
1916	8,134,385	448,078	9,660.60	2.66

HARRISBURG.[1]

Year.	Pounds. accepted.	Pounds. rejected.	Cost of inspection.	Cost per ton of inspection.
1909	1,417,699	.....	$2,030.15	$3.20
1910	5,333,891	.....	3,520.43	1.48
1911	4,077,163	181,524	4,221.27	2.32
1912	2,839,742	239,704	4,047.88	3.19

PITTSBURGH.

1909	16,922,413	.....	$17,299.16	$2.28
1910	14,658,175	.....	16,312.43	2.48
1911	23,949,941	1,492,228	20,619.35	1.93
1912	19,372,092	2,237,608	23,234.75	2.68
1913	21,523,735	1,665,070	24,156.48	2.51
1914	39,333,541	2,138,055	29,823.85	1.74
1915	55,280,209	1,853,105	31,012.73	1.26
1916	35,344,696	1,052,179	29,729.43	1.88

SCHENECTADY.

1911	1,076,596	.....	$1,460.13	$3.03
1912	778,110	.....	1,477.14	4.25
1913	966,583	.....	1,314.94	3.05
1914	2,085,055	.....	1,355.63	1.46
1915	2,110,085	.....	2,893.23	3.07
1916	2,036,038	60,165	3,086.97	3.[illegible]9

[1] The Harrisburg office was combined with the Philadelphia office on Jan. 31, 1913, and the report of material inspected, cost, etc., from July 1, 1912, to Jan. 31, 1913, is included in the 1913 report of the Philadelphia office.

The total cost of inspection has decreased from $89,821.17 in 1915 to $83,665.90 in 1916. The total weight of material inspected during the past year shows a decided decrease, which is due to the decrease in the quantity of material inspected for the Bureau of Yards and Docks. This material is usually of such a character as to make its inspection quite simple, and as it is obtained from comparatively few companies its inspection involves little travel, so that the decrease represented by the decreased weight in no manner indicates a proportionate decrease in the work of the inspection offices.

During the past year much material which was previously given a perfunctory factory inspection and later thoroughly tested at a navy yard has had such factory inspection eliminated. This refers particularly to radio material, and as its inspection at the factory was merely perfunctory it was deemed a useless drain on the inspection offices.

ENGINEERING SUPPLIES.

The practice of making annual contracts for supplies has been extended and has resulted in economy. It has also had the effect of eliminating much work at navy yards in the preparation of requisitions, has reduced to a minimum the variety of articles carried in stock, and effected the supply of standard equipage and supplies for the naval service. One of the important results accomplished has been the development of new sources of supply, which would hardly have been possible if the old practice of buying in small quantities had continued.

Owing to the congested condition of the mills much delay has been experienced in getting boiler plate and boiler tubes, and the situation

is now such that practically only one firm will supply such materials. Others sometimes bid, but either their price is so high as to be prohibitive or the time named for delivery is so long that the bidders undoubtedly assume that their bid will not be accepted. The one firm that does supply this material has so far met our wants, but the condition is one that should not be overlooked by the department when normal trade conditions are resumed and firms which now will not supply our wants will be eager to secure contracts.

EXPERIMENT STATION.

The good work of the past has continued, and the value of the station to the service at large is evidenced by numerous requests from officers on shore and afloat for information and for tests of material. During the past year many investigations were carried out that have been of great value to the service, and it is expected that the increased appropriation made for the current year will enable a wider field to be covered.

VESSELS UNDER CONSTRUCTION.

The most notable additions to the fleet during the year were the *Nevada*, *Oklahoma*, and *Pennsylvania*, the first of our oil-burning battleships. The trials of these ships were satisfactorily completed and all have joined the fleet. The other additions comprised 10 destroyers, 3 submarines, 1 destroyer tender, 1 submarine tender, and 1 fuel ship.

The accompanying tables give the results of the trials of the vessels mentioned above and also the condition of the work on those under construction.

New vessels delivered during year.

No.	Vessel.	Building yard.	Number of shafts.	Speed designed, knots.	Speed on trial.	I. H. P. or S. H. P.	Percentage machinery completed July 1, 1915.	Date of contract.	Date of delivery.
36	Battleships:								
37	Nevada	Fore River Shipbuilding Corporation	2	20.5	20.529	23,312	94.13	Jan. 22, 1912	Mar. 11, 1916
38	Oklahoma	New York Shipbuilding Co	2	20.5	20.583	21,703	96.32	.....do	May 2, 1916
	Pennsylvania	Newport News Shipbuilding Co	4	21	21.05	29,366	75.11	Feb. 28, 1913	June 12, 1916
53	Destroyers:								
55	Winslow	Wm. Cramp & Sons	2	29	29.054	15,984	96.92	Dec. 7, 1912	Aug. 7, 1915
56	Cushing	Fore River Shipbuilding Corporation	2	29	29.183	15,280	97.38	Dec. 11, 1912	Aug. 21, 1915
57	Ericsson	New York Shipbuilding Co	2	29	29.29	17,151	98.00	Dec. 16, 1912	Aug. 14, 1915
58	Tucker	Fore River Shipbuilding Corporation	2	29.5	29.696	16,399	66.82	Sept. 12, 1913	Apr. 11, 1916
59	Conyngham	Wm. Cramp & Sons	2	29.5	29.629	17,651	79.41	Oct. 2, 1913	Jan. 20, 1916
60	Porter	.....do	2	29.5	29.579	18,334	77.18	.....do	Apr. 17, 1916
61	Wadsworth	Bath Iron Works	2	30	30.673	16,100	99.00	Oct. 15, 1913	July 23, 1915
62	Jacob Jones	New York Shipbuilding Co	2	29.5	29.568	17,735	84.00	.....do	Feb. 10, 1916
63	Wainwright	.....do	2	29.5	29.671	17,955	84.00	.....do	May 12, 1916
	Sampson	Fore River Shipbuilding Corporation	2	29.5	29.518	17,696	40.57	Dec. 19, 1914	June 26, 1916
	Fuel ship:								
	Kanawha	Navy Yard, Mare Island	2	14	.....	.....	99.95	(1)	(1)
40	Submarines:								
42	L-1	Fore River (Electric Boat Co.)	2	14	.....	.....	98.41	Feb. 1, 1913	Apr. 11, 1916
43	L-3	.....do	2	14	.....	.....	96.89	.....do	Apr. 21, 1916
	L-4	.....do	2	14	.....	.....	95.99	.....do	May 4, 1916
2	Submarine tender:								
	Bushnell	Seattle Construction & Dry Dock Co	1	14	14.149	2,617	95.30	June 30, 1913	Nov. 20, 1915
2	Destroyer tender:								
	Melville	New York Shipbuilding Co	1	15	15.087	4,006	95.16	June 20, 1913	Dec. 2, 1915

[1] Built by Government.

Vessels under construction.

No.	Vessel.	Building yard.	Number of shafts.	Speed, knots.	Percentage machinery completed.		Date of contract.	Contract date of delivery.
					July 1, 1915.	July 1, 1916.		
	Battleships:							
39	Arizona	Navy yard, New York	4	21	46.57	92.54	(1)	(1)
40	New Mexico	do	4	21		8.08	(1)	(1)
41	Mississippi	Newport News Shipbuilding Co.	4	21	4.61	42.27	Nov. 23, 1914	Nov. 23, 1917
42	Idaho	New York Shipbuilding Co.	4	21	18.82	53.05	Nov. 9, 1914	Nov. 9, 1917
43	Tennessee	Navy yard, New York	4	21			(1)	(1)
44	California	Navy yard, Mare Island	4	21			(1)	(1)
	Destroyers:							
64	Rowan	Fore River Shipbuilding Corporation	2	29.5	40.93	94.75	Dec. 19, 1914	Dec. 19, 1916
65	Davis	Bath Iron Works	2	30	26.21	93.22	Jan. 30, 1915	Oct. 30, 1916
66	Allen	do	2	30	26.21	90.58	do	Jan. 30, 1917
67	Wilkes	Wm. Cramp & Sons	2	29.5	22.70	87.68	Jan. 28, 1915	Nov. 28, 1916
68	Shaw	Navy yard, Mare Island	2	29.5	6.15	62.14	(1)	(1)
69	Caldwell	do	2	32		3.51	(1)	(1)
70	Craven	Navy yard, Norfolk	2	32			(1)	(1)
71	Gwin	Seattle Construction & Dry Dock Co	2	30		2.40	Mar. 8, 1916	Nov. 8, 1917
72	Conner	Wm. Cramp & Sons	3	30		6.90	Jan. 5, 1916	Aug. 20, 1917
73	Stockton	do	3	30		6.73	do	Sept. 5, 1917
74	Manley	Bath Iron Works	2	32		15.09	Dec. 30, 1915	Aug. 30, 1917
	Fuel ships:							
14	Maumee	Navy yard, Mare Island	2	14	65.47	92.11	(1)	(1)
15	Cuyama	do	2	14		50.00	(1)	(1)
	Submarines:							
31	G-3	Lake Co. (Bridgeport)	2	14	93.00	93.00	Jan. 19, 1911	Sept. 19, 1912
41	L-2	Fore River (Electric Boat Co.)	2	14	98.41	98.41	Feb. 1, 1913	Jan. 1, 1915
44	L-5	Lake Co. (Bridgeport)	2	14	12.00	88.70	Apr. 24, 1913	Apr. 24, 1916
45	L-6	California Shipbuilding Co. (Lake design)	2	14	8.97	70.70	do	Do.
46	L-7	do	2	14	8.97	69.80	do	Do.
47	M-1	Fore River (Electric Boat Co.)	2	14	91.66	97.29	Feb. 4, 1913	Apr. 4, 1915
48	L-8	Navy yard, Portsmouth (Lake)	2	14	4.84	30.93	(1)	(1)
49	L-9	Fore River (Electric Boat Co.)	2	14	89.92	97.45	Mar. 14, 1914	Mar. 14, 1916
50	L-10	do	2	14	89.52	97.42	do	Do.
51	L-11	do	2	14	78.95	96.16	July 29, 1914	Sept. 29, 1916
52	Schley	do	2	20		19.20	Mar. 19, 1915	Mar. 19, 1918
53	N-1	Seattle Construction Co. (Electric Boat Co.)	2	13		73.84	do	May 19, 1917
54	N-2	do	2	13		74.00	do	June 19, 1917
55	N-3	do	2	13		57.77	do	July 19, 1917

[1] Building by Government.

Vessels under construction—Continued.

No.	Vessel.	Building yard.	Number of shafts.	Speed, knots.	Percentage machinery completed.		Date of contract.	Contract date of delivery.
					July 1, 1915.	July 1, 1916.		
	Submarines -Continued.							
56	N-4	Lake Co. (Bridgeport)	2	13		14.30	Feb. 18, 1915	Feb. 18, 1917
57	N-5	do	2	13		14.30	do	Mar. 18, 1917
58	N-6	do	2	13		14.30	do	Apr. 18, 1917
59	N-7	do	2	13		14.30	do	May 18, 1917
62	O-1	Navy yard, Portsmouth (Electric Boat Co.)	2	14			(1)	(1)
63	O-2	Navy yard, Puget Sound (Electric Boat Co.)	2	14			(1)	(1)
64	O-3	Fore River (Electric Boat Co.)	2	14		2.27	Jan. 3, 1916	Oct. 3, 1917
65	O-4	do	2	14		2.27	do	Nov. 3, 1917
66	O-5	do	2	14		2.27	do	Do.
67	O-6	do	2	14		2.27	do	Dec. 3, 1917
68	O-7	do	2	14		2.27	do	Do.
69	O-8	do	2	14		2.27	do	Jan. 3, 1918
70	O-9	do	2	14		2.27	do	Do.
71	O-10	do	2	14		2.27	do	Feb. 3, 1918
72	O-11	Lake Co., Bridgeport	2	14		3.30	Dec. 28, 1915	Oct. 28, 1917
73	O-12	do	2	14		3.30	do	Nov. 28, 1917
74	O-13	do	2	14		3.30	do	Dec. 28, 1917
75	O-14	California Shipbuilding Co. (Lake design)	2	14		3.32	Dec. 31, 1915	Nov. 30, 1917
76	O-15	do	2	14		3.35	do	Dec. 31, 1917
77	O-16	do	2	14		3.39	do	Jan. 31, 1918
	Transport:							
1	Henderson	Navy yard, Philadelphia	2	14	5.51	29.00	(1)	(1)
	Supply ship:							
1	Bridge	Navy yard, Boston	2	14	6.85	29.00	(1)	(1)
	Tugs:							
17	Wando	Navy yard, Charleston	1	11		44.00	(1)	(1)
18	Pocahontas	Navy yard, Norfolk	1	11		79.00	(1)	(1)
	Ferry:							
	Wave	Navy yard, Charleston	1			75.00	(1)	(1)

[1] Building by Government.

BUREAU'S QUARTERS.

The bureau is embarrassed for lack of space for the proper conduct of its work and, in the endeavor to keep the different divisions as close together as possible, overcrowding has resulted. This is especially true of the drafting rooms, where the draftsmen have not sufficient space for the proper performance of their duties. It has also necessitated the location of three other divisions on another floor, which is not only inconvenient for the divisions concerned but frequently results in unnecessary delay in handling business.

Very respectfully,

R. S. GRIFFIN,
Engineer in Chief, U. S. Navy,
Chief of Bureau.

The SECRETARY OF THE NAVY.

REPORT OF PAYMASTER GENERAL OF THE NAVY, CHIEF OF BUREAU OF SUPPLIES AND ACCOUNTS.

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, 30 September, 1916.

To: The Secretary of the Navy.
Subject: Annual Report.

As stated in the closing paragraph of last year's report, there should be no real difference between peace times and war times—between peace footing and war footing—with respect to ship supply.

With the regular Navy, both afloat and ashore, habitually doing its utmost to keep the active fleet at all times symmetrically supplied, the shift over from peace to war conditions should not, in fact, produce the confusion that invariably accompanies radical changes in method; for, under such circumstances, there need take place merely an expansion incident to the orderly absorption of newly acquired units into an already existent and satisfactorily working system.

The first step in that direction was taken when the Navy Regulations were changed so as to prescribe that every fighting ship keep fully outfitted at all times—not with a month's requirements of one thing and two years' of another but with supplies of every kind so assorted that all ordinary items will last about the same length of time.

The next is to accumulate a reserve stock of necessary supplies so that, in time of need, it may be right at hand instead of on the dealers' shelves or even in transit. The getting of this reserve is well under way—the limit of progress being set by lack of stowage space.

For a long time the stock was kept down for reasons wholly financial; and storehouses were for the most part only such buildings as were left over from other purposes. The war in Europe has shown, however, that supplies (particularly those that require a long time to produce and of which commercial concerns do not keep large stocks on hand) are a military asset the value of which can not be measured in dollars and cents.

With the need for a reasonable reserve stock being so plain, the number and type of additional storehouses to be provided by the next appropriation bill becomes but a question of detail. As a matter of fact, it will take nearly as long to authorize, build and stock the necessary storehouses as it will to secure the ships already appropriated for.

In May 1915, on the initiative of the General Board and by advice from the Chief of Naval Operations, work was begun on the source of supply data—finding out where and from whom to buy and how much each concern can be counted on to furnish. The first thing to do is, of course, to determine what the Navy needs—and then to ascertain the source of supply to meet that need.

The nature of the products of all concerns regularly selling to the Navy is being recorded on cards showing for each item the quantity

ordinarily kept in stock and ready for shipment within 2 days, what under normal conditions can be produced in 7, 14 and 30 days and the maximum production in 30 days. This information is being systematically secured by supply officers and by naval inspectors direct from the plants.

On account of conditions in the metal markets, the Navy's requirements of metals and manufactured steel, brass, zinc, copper and tin materials have, during the year, had to be further anticipated than in the past. Mills have been taking on such heavy orders that in many cases it has been impossible to get deliveries until long after the orders were placed.

As was to have been expected, the most noticeable advances in prices were on those materials for which the European demand was abnormally heavy.

Quotations on lake copper for the period from 1909 to the outbreak of the war abroad averaged below 15 cents a pound. The average price for the fiscal year 1916 was 23 cents.

The price of steel bars at Pittsburgh is now two and a quarter times as high as it was January 1, 1915.

The average price of zinc for many years was 6½ cents a pound. Twenty-seven cents was reached in June, 1915; but the market has had a general downward trend since that time, the price now being about 9 cents. The price of zinc affects the price of galvanizing, composition metals and zinc paints particularly.

Shellac, one of the principal components of ship's bottom paint, is 50 per cent higher now than in January 1915.

The cost of serge and flannel has increased about 70 per cent, this being largely due to the increased cost of dyes. The dye entering into a yard of serge cost, before the European war, about 10 cents; whereas it now costs about 80 cents.

Shoes are almost a dollar a pair higher.

The unusually high cotton market is felt in the cost of white drill which is now nearly twice what it was before the war.

The average time required to make awards of contracts during the year was 12 per cent less than during the best month of 1915; meanwhile the volume of business increased over 43 per cent.

In this connection the following is quoted from a letter just received from one of the largest concerns on the west coast which regularly deals with the Navy:

> We wish to take advantage of this opportunity of expressing our appreciation of your hearty spirit of cooperation and the prompt action you gave this entire schedule. Under exceptional market conditions such as are existing at the present time, your efficient manner in handling large propositions of this kind is of all importance to contractors and does much to create a keen competition for the business with a consequent saving for the Government.

It is understood that about 2,500 British merchant ships have been taken over by that Government for use as transports and for fleet supply. This, together with the withdrawal of the colliers of German and Italian ownership, has caused such a shortage in shipping that the rates from the United States to English and French ports are reported to have risen as high as 1,300 per cent on some items.

On account of this wholesale diversion of foreign ships from the usual trade channels, it has been impossible to make any shipments

to the Orient except in naval colliers; the same being true of late with respect to shipments to the Pacific.

This situation regarding water transportation presented difficulties in connection with the large shipments of fuel which had to be made to Navy fuel depots at both nearby and distant points; and, had the stocks not been greatly increased just prior to and during the early months of the war, the shortage of merchant tonnage might have caused serious embarrassment.

Heavy shipments of coal were made to west coast stations during the first half of 1915; and even as late as August of that year a transportation rate of $4.20 per ton was obtained for the delivery of coal at the naval coal depot at Tiburon. It was anticipated that ocean rates would advance; and, by arranging for frequent charterings during those months when it was to the advantage of owners to get their vessels to west coast ports, large quantities of coal were delivered at fairly reasonable rates.

It finally became necessary, however, to replenish the stocks of fuel; and, rates being then abnormally high, Navy fuel ships were placed on the run to west coast stations with the result that the cost of transportation was much lower than commercial costs would have been.

During recent months there have been many instances in which the need for improvement in fuel storage and for additional colliers and tankers has been most marked. As it has become necessary from time to time to increase and distribute the various forces of the fleet, the shortage in naval fuel ships has become even more manifest.

The sudden advance in the price of fuel oil, gasoline and other products of crude petroleum has been the subject of much discussion, even to the extent of congressional inquiries; but, long before these investigations began, action had been taken toward laying in large stocks under the advantageous contracts then in force.

During the year, oil was purchased at 64 cents per barrel delivered at Port Arthur, Texas; and, prior to the expiration of those contracts, practically all tankage under Navy control was filled to capacity.

This oil, taken in bulk from the contractor's pipe line, cost the Government less than one-third of the price that would have been asked for the same oil delivered at the various fuel-oil stations under the prevailing market prices. At the end of June 1916 there was in storage more than half a million barrels. Navy tankers were used in delivering a large part of this.

For some time after the outbreak of the war, congested freight conditions led to embargoes which resulted in delays in delivery of material. By the cooperation of the transportation companies, however, this condition has been remedied; and definite action has been taken to provide for similar contingencies in the future by the provision contained in the naval act that:

> In time of war or threatened war preference and precedence shall, upon demand of the President of the United States, be given over all other traffic for the transportation of troops and material of war; and carriers shall adopt every means within their control to facilitate and expedite the military traffic. And, in time of peace, shipments consigned to agents of the United States for its use shall be delivered by the carriers as promptly as possible and without regard to any embargo that may have been declared; and no such embargo shall apply to shipments so consigned.

The standardizing of Navy specifications for stores and materials has gone steadily forward. Over 1,100 standard specifications are in force. These are revised as trade conditions occasion a change. There is a constant demand for them from business firms, contractors, railroad companies, municipal authorities, scientific institutions, civil and mechanical engineers, libraries and colleges.

The mailing list of prospective bidders contains the names of nearly 8,000 firms. Over 360,000 copies of the weekly Notice of Purchases were distributed during the year. These notices are arranged alphabetically according to the lines of business, and it takes but a moment for a bidder to see whether the Navy is in the market for anything in his line.

The demand for bidding forms continues to increase. Approximately 71,000 requests for bidding sets were received; and the number of copies distributed to various purchasing officers located at yards and stations, including the number sent out to firms direct, aggregated 1,250,000.

In his annual report for 1888, Secretary of the Navy William C. Whitney said:

> * * * Naval brokers have for the most part disappeared and regular responsible dealers are becoming more and more contractors for these supplies. For a time it seemed impossible to dislodge them.

Secretary of the Navy Hilary A. Herbert, in speaking of the efforts then being made to further improve the purchase system, said in his annual report for 1896:

> * * * The outcome will undoubtedly be wider competition, lower prices, equally as good and in some cases a better quality of article. It is also expected that the labors of this board will go very far toward ridding the Navy of middlemen and professional contractors. * * *

The fight for direct dealing between producer and consumer, however, is by no means finished; for there still remain and constantly appear insistent commercial free-lances who seem to be under the impression that the Navy is seeking the services of outside purchasing agents instead of simply buying the goods direct as required by section 3722 of the Revised Statutes which provides that:

> * * * No person shall be received as a contractor who is not a manufacturer of, or regular dealer in, the articles which he offers to supply.

The records show that this restrictive statute was the outcome of a Civil War situation to which Secretary of the Navy Gideon Welles thus referred in his annual reports for 1864 and 1865:

> * * * Under the practice that has prevailed, the whole system has become tainted with demoralization and fraud by which the honest and fair dealer is too often driven from the market.
>
> The most efficient remedy for this state of things within the power of the department has been applied in the transfer of the few remaining agencies to paymasters who * * * perform their duties under the responsibility of their commissions. * * *

How effective this remedy proved to be is shown by the following extract from the 1899 annual report of Secretary of the Navy John D.

Long with respect to the work of Paymaster General Edwin Stewart during the Spanish War:

> It is worthy of note that, notwithstanding the immense amount of supplies purchased immediately preceding and during the war and the necessity of expedition, the contractors were held to specifications, the prices paid were no higher than before the emergency arose and the work of the bureau was performed with the most gratifying efficiency and promptness.

When it is remembered that every doubtful dealer means unsatisfactory deliveries and consequent loss in fleet efficiency, it is obvious why the application of any candidate for admission to the bidding list must be and is being critically scrutinized.

For years past, the Navy has been buying many items of groceries under retail contracts providing for deliveries as required for issue to ships at the various yards and stations. All such items as will keep in store are now purchased in wholesale quantities. The new plan permits the purchase of large quantities for delivery at one time; and, as the quantities are exact, the speculative element which in former contracts tended to increase costs is eliminated.

Notwithstanding the unusual rise in the provision market, the cost of subsistence for the year has been kept below what it was before the European war began.

According to statistics compiled by the Department of Labor, there was an average increase of 5 per cent in the cost of 26 of the most commonly used foodstuffs during the two years of the war as compared with the two preceding years. Meanwhile the cost of the Navy ration during the fiscal years 1915 and 1916 averaged a little more than one-half a cent lower than for 1913 and 1914; so that, taking into consideration the rise in the provision market, the comparative cost of subsisting the Navy during the past two years was approximately $800,000 less than for a like period before the war. This is at the rate of something over a thousand dollars a day.

The causes are the regulation prohibiting the use of patent and experimental foods, the requirement that all provision contracts be awarded item by item to the lowest bidder on each, the improvement in the purchasing system whereby contracts covering delivery of all needed provisions are made by purchasing officers located at the ports usually visited by naval vessels and the hard and fast rule that a contractor once rightfully debarred is not restored to the bidding list—debarment being, of course, in no sense a punishment of the individual but simply a protection to the Government.

Any reduction in cost, however, at a sacrifice of quantity or quality would be so far outweighed by the consequent loss in naval efficiency that it could not, of course, be considered.

That the standard has been by no means lowered is shown by official reports from all sources, conspicuous among which is the following, dated August 29, 1916, from the Surgeon General of the Navy:

> I was prompted last year to write you a letter advising you concerning the excellent opinion expressed by the medical officers of our service on the work of your department and on the quality of your ration. I gave you a few samples of the many commendatory paragraphs of this tenor excerpted from annual sanitary reports.

> The reports of this year have been even more favorable, and I would repeat them here were it not that the repetition might seem monotonous. I can assure you, however, that no navy in the world is as well fed, as well clothed, its general welfare so thoroughly looked out for as that of the United States; and I am glad to offer you and the entire personnel of your corps my heartiest congratulations for the large share you have had in producing this well-being and its resultant contentment.

The regulations prescribing exactly what articles may be carried for sale in the ship's store have proved to be higly satisfactory, the stores being now conducted in a strictly businesslike manner and the accumulation of dead stock being reduced to a minimum.

Authority was given early in the year to survey all dead stock then in the ship's store, without having the amount of the loss caused by this survey charged against the crew's entertainment allotment. This was practicable in view of a small accumulated profit which had reverted to the Treasury but which, by a decision of the comptroller, was credited back to the profit fund.

In order that naval supply account stock which had become obsolete at certain yards might be advantageously used, each yard was some months ago directed to submit a list of material which might be classed as obsolete. These lists were consolidated and then distributed to all yards, so that stock that has remained inactive at one particular yard has been shipped to other points where it could be used. In addition to utilizing this stock, which in most cases had been purchased at a low price, the space thus vacated has become available for more active stock.

Work on the Standard Stock Catalogue, commenced over a year ago, has been continued with only such interruption as was from time to time caused by the pressure of other business; 31 of the 65 classes having thus far been completed.

The clothing factory at Charleston has, without difficulty, produced the required supply of the articles manufactured there at a considerably lowered cost to the enlisted men of the Navy.

In establishing the new yearly prices of clothing and small stores in January they were again made as near cost as possible, the enlisted men receiving the benefit of the surplus which had accumulated in the clothing and small-stores fund.

The separate purchasing offices formerly maintained in all navy-yard cities have been in most cases abolished, the purchasing and disbursing duties being assigned, respectively, to the supply and disbursing departments of the yards. The purchasing officer, being at the navy yard, is now in a position to consult with the heads of departments regarding material to be purchased; and much unnecessary correspondence, with consequent loss of time, is avoided.

The commanding officers of Naval Militia organizations remote from a supply yard have been authorized to obtain locally, by purchase after competition, expendable stores which can be economically secured. This has resulted in less cost for handling, packing and shipping supplies formerly furnished from the yards.

The time required to pay a public bill after it reaches the Disbursing Division has been shortened; and this feature of the work at navy yards has been improved. A new form of public bill has been adopted, combining the old form of inspection call and public bill; and the use of this consolidated form causes an appreciable

decrease in clerical work at yards. During the month of July 1915, the daily average of public bills on hand awaiting payment was 978, the daily average payments being 101 bills. On June 30 of this year there were on hand unpaid but 11.

An open competitive examination for the appointment of Assistant Paymasters was held in December 1915. There were 100 applicants, of which 26 made the required average and 15 were commissioned; so that, for the first time since August 1912, the Pay Corps had its full authorized number of officers.

These newly appointed Assistant Paymasters have completed the course of instruction at the Naval Pay Officers' School and are now serving on board seagoing ships.

Under the recent naval appropriation act, officers of the Pay Corps of the Naval Militia are the disbursing and accounting officers for their organizations; and not only have they to keep the accounts and render the returns of the Naval Militia, but in time of stress they would be called into service to augment the Pay Corps of the regular Navy. It is highly essential, therefore, that they receive proper instruction in the duties which they are and will be required to perform.

To accomplish this, two sessions of the Naval Pay Officers' School have been ordered—the first for the instruction of accounting officers and the second for disbursing officers. There are now 13 Naval Militia accounting officers from all parts of the country and 1 from Hawaii undergoing instruction.

In August 1915, a hurry call came for 11 officers of the Pay Corps to go to Haiti to serve as Captains of the Port and Collectors of Customs at various places. Finding these officers was no easy task for, owing to the fact that there were then 13 vacancies in the Corps, every officer was needed just where he was; but, by taking at least 1 from every yard on the Atlantic coast, the 11 were selected and left for Haiti within 72 hours. One of these officers, Passed Assistant Paymaster Byron D. Rogers, died while on duty there.

After these officers had served about nine months in Haiti, all but 3 were relieved by Chief Pay Clerks, it being believed that they could carry on the work which had been begun and systematized by the officers of the Pay Corps whose services were urgently needed for regular Navy duty. The other 3 have since been relieved by civilian officials.

As the result of an examination held in December, 26 chief petty officers have been appointed Acting Pay Clerks under authority of the act of March 3, 1915; and all former Paymaster's Clerks who were entitled to appointment as Acting Pay Clerk, Pay Clerk or Chief Pay Clerk have been examined and, with the exception of the negligible few who failed to qualify, have received their warrants and commissions.

Wherever practicable, those clerks longest at sea have been transferred to shore duty and vice versa; and, whereas formerly one might perform all his duty at sea and another all his duty on shore, they now alternate between sea and shore duty in the same manner as other officers of the Navy.

As pointed out to the Committee on Naval Affairs and the Committee on Appropriations, the civil force is the very backbone of any

permanent organization; and the general plan is to have all work possible performed by responsible civilian experts who stay as the officers come and go and who are just as much interested in the Government's work as is the commissioned personnel. Their work is not spectacular in any respect, but it is an equally important part of the Navy as a whole and is deserving of high appreciation.

Two essential steps have been taken toward completing the new system of cost accounting at Navy yards—inventorying the plants and classifying the operating accounts. The next, which is now being undertaken by critical examination of the records and reports of the past year, is to distribute the overhead expense to the cost of production on the basis of the value of the equipment used and the time employed instead of on the basis of direct wages.

This cost system is independent of the appropriation system, though of necessity interlocking with it—the appropriations being as it were the bank account from which the funds are drawn (each one of which must, of course, be accurately balanced as to its debits and credits) whereas the cost is simply a determination of where the money goes.

The new system is designed to make it possible to know the real production cost separately from the expense due to idle equipment and to furnish information of value to administrative officers.

Logistics has been the subject of constant study during the year. Many of the problems of fleet supply which in time of war would require immediate solution have been thoroughly considered, and plans for meeting the increased demands have been practically completed. The problems as laid down by the General Board have been given the careful attention which their importance demanded. This work has had to be carried on in addition to and in conjunction with the regular daily routine without appreciably increasing the force.

The present opportunity for study of supply problems abroad has been taken advantage of by sending to London on intelligence duty an officer of the Pay Corps who has had wide experience in supply administration.

There has been compiled a 30-day provision list by which it is possible to find out in a moment the quantities of all items of provisions necessary for a given number of men for any length of time. By its use cargo lists of provisions can be made up in a few minutes for the entire complement of a fleet of any size without first canvassing individual vessels and then consolidating the replies into an elaborate tabulation, as was heretofore required. These tables are now in use by supply officers afloat and ashore in meeting the needs of individual ships and of the fleet as a matter of peace-time routine.

A clothing list has also been compiled and printed, showing the requirements for from 1,000 to 100,000 men for 6 months (summer and winter) after they have been originally outfitted. While this, like the provision list, was prepared primarily for logistic purposes, it, too, is in use daily throughout the service and serves as an automatic requisition for the guidance of all concerned.

Both of these lists show the cubic capacity required to stow any given quantity of the articles they cover, making it practicable to readily determine the capacity of merchant ships for delivering these supplies to the fleet.

The stowage capacity of all fighting ships of the Navy has been ascertained, this information also being printed and distributed to the service. It has already proved useful in fitting out vessels for sea; and is a dependable guide for commandants in determining the supplies of all kinds which they would have to furnish in time of war and to commanders-in-chief in estimating the logistic situation of their commands.

Sources of supply of fuel in time of war have been canvassed and plans for collier and tank assignments at loading points have been tentatively adopted. A number of practical tests have been made of existing facilities at the various yards for coaling and oiling battleships and destroyers, war conditions being simulated as far as practicable in order to obtain data for intelligent criticism. The results have shown not only the relative efficiency with which these operations were conducted but also wherein improvements might be made to equipment or in methods.

Obtaining sufficient merchant ships for naval use in time of stress enters very largely into the problem of fuel supply; and the listing of ships suitable for refueling the fleet and for other purposes has steadily progressed in accordance with the general logistic plans.

The most expeditious rail and water routes from supply centers to delivery points and from naval magazines to tidewater have been determined upon. Rail facilities for shipment of heavy guns from the naval gun factory have been inquired into and the rolling stock of all lines capable of carrying the largest guns has been inventoried. Merchant transportation by water from all east coast yards to various points on the Atlantic seaboard and Gulf coast have been investigated with a view to listing ships and recording their schedules.

Instructions were issued to all yards to prepare detailed plans for distributing and increasing the personnel of the supply and disbursing offices in time of emergency to provide for a three-shift schedule. This has been done and the plans submitted by all yards are now being standardized.

As long ago as December 1820, the Honorable John C. Calhoun, Secretary of War, said:

> * * * To prepare the country to meet a state of war with honor and safety, much must depend on the organization of our military peace establishment. * * * To give such an organization, the leading principles in its formation ought to be that at the commencement of hostilities there should be nothing either to new model or to create. The only difference, consequently, between the peace and war formations of the Army ought to be in the increased magnitude of the latter and the only change in passing from the former to the latter should consist in giving to it the augmentation which will then be necessary. * * *

Whether it be Army or Navy and whether in 1820 or 1916, the fact remains the same—the only plans worth while are those made well in advance and put to practical test in every-day use; in other words, to live logistics rather than merely dreaming it.

Every effort is being made to do just that.

SAMUEL MCGOWAN.

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40. Appropriation accounts by titles	534
41. Sales of condemned property	656
42. Purchasers of condemned property	658

CONCRETE SAVINGS.

In February, 1916, bids were invited on a 2-year supply of tin, and by getting quotations direct from Singapore, where this commodity is produced, a saving on the total purchase was effected of about.....	$20,000
Notwithstanding inflated prices on account of war, this tin was procured at 3 cents per pound below the average for the past 6 or 7 years.	
By following a similar procedure, a purchase of 5,000,000 pounds of sodium nitrate was made in Antofagasta, Chile, at a saving of..... over the lowest price obtainable in this country.	60,000
The Portsmouth yard has been able to effect a saving by pigging and remelting into ingot form 937,784 pounds of brass and copper metals of about.....	9,000
Similarly the New York yard has, by utilizing 1,000,000 pounds scrap composition and brass in its foundry instead of new metal, saved.....	100,000
By applying the same principle to the use of carefully selected scrap in making castings, there has been a saving during the past year by the reuse at various yards of 4,000,000 pounds scrap copper and brass of not less than.....	240,000
By utilizing naval colliers which would otherwise have returned comparatively empty from the Philippines, a total of 2,442 tons of hemp have been purchased in Manila during the past year at a total saving of.... over what it would have cost had it been purchased at home.	45,595
By extending the same methods employed in purchasing tin and sodium nitrate 1,500,000 pounds of shellac were purchased in Calcutta, the natural market, at a less cost of..... under the lowest bid quoted in this country for Calcutta delivery.	67,000
I ue to wider competition in the purchase of fuel for the Navy, prices for coal within the past 2 years have been reduced between 20 and 25 cents per ton, and during the last year, on the basis of an annual consumption of 800,000 tons, a saving was made of.....	200,000
I ue to the excessive rates for merchant tonnage for the transportation of coal to West Coast stations and Cavite-Olongapo, periodical trips by naval colliers were inaugurated and a total saving of..... has resulted over what it would have cost via merchant bottoms.	500,000
] epartment of Labor statistics show an average increase of 5 per cent in the cost of foodstuffs during the past 2 years. Due to changes in methods of mess administration, there was a decrease in the cost of the Navy ration during that period of more than half a cent, thus effecting an economy of.....	800,000
By deliveries and fuel-oil storage and arranging a schedule which kept the *Arethusa* and *Kanawha* employed to the greatest extent, we were able to load maximum quantities of fuel oil at Port Arthur, Tex., during the last few months for replenishing storage at such points as Guantanamo, Key West, Norfolk, New York, Newport, and Boston—approximately 300,000 barrels of oil—at a net saving of.....	107,338
	2,149,933

PRINCIPAL ITEMS.

Amount appropriated by Congress for the fiscal year 1916	$152,693,313.53
Total expenditures during 1916	152,821,540.67
Fleet maintenance and operating expenses:	
Operation	47,976,920.82
Repairs to ships	5,195,712.08
Changes	2,761,081.70
Repairs to equipage	599,710.91
Total	56,533,425.51
Expenditures for construction of vessels:	
Battleships	18,334,358.80
Gunboats and fuel ships	780,062.45
Destroyers	4,620,144.65
Submarines	3,192,688.50
Tenders and tugs	1,750,077.67
Total (at navy yards, $7,403,315.56; under contract, $21,274,016.51)	28,677,332.07
Expenditures for pay and allowances of officers and men:	
Navy	45,109,161.88
Marine Corps	4,288,783.27
Total	49,397,945.15
Cost of subsisting the enlisted men of the Navy and marines afloat	6,208,190.71
Average cost of subsisting 1 man for 1 day	.37+
Cost of maintenance of navy yards	23,357,535.79
Cost of output of industrial yards:	
Labor	14,291,398.30
Material	16,247,809.71
Indirect expense	3,670,150.68
Total	34,209,358.69
Value of new and reclaimed materials received into store	68,238,584.46
Value of materials consumed or otherwise finally expended	55,326,583.73
Property investment of Naval Establishment:	
Ships	482,375,799.42
Stations	212,643,627.07
Stores	207,672,299.82
Total	902,691,726.31
Expenditures for Naval Militia	830,524.16
Present value of clothing and small-stores fund:	
Stock	3,530,967.92
Money	1,428,382.88
Total	4,959,350.80
Total expenditures for the Navy 1794 to 1916, inclusive	3,367,160,591.77

Statement 1.—COST OF THE NAVY, 1916.

			Additions and betterments.	Maintenance and operation.
SHIPS.				
Title A. New construction of vessels (see Statement 3)			$28,677,332.07	
Title D. Repairs to vessels (see Statement 5)	$5,195,712.08			
Title K. Changes and additions to vessels (see Statement 6)	2,761,081.70			
Title P. Repairs to ships' equipage (see Statement 7)	599,710.91			
Total repairs, changes, and additions		$8,556,504.69		
Title C. Operating expenses of vessels (see Statement 4)		47,976,920.82		
Total maintenance and operation of vessels				$56,533,425.51
SHORE STATIONS.				
Title E. Improvements to navy yards (industrial) (see Statement 8)		2,509,805.21		
Title R. Improvements to navy yards and stations (military) (see Statement 8)		3,608,117.11		
Total improvements to yards and stations			6,117,922.32	
Title G. Maintenance of navy yards (industrial)		12,844,363.20		
Title S. Maintenance of navy yards (military)		9,535,851.88		
Total maintenance charged to titles G and S (see Statement 9)		22,380,215.08		
Plus amount charged as indirect expense to title Z, Marine Corps, other Government departments, private parties, and expenses of auction sales (see Statement 14)		977,320.71		
Grand total maintenance of yards and stations		23,357,535.79		
Less total amount applied as indirect expense to cost of output of industrial yards (including work done for nonindustrial yards)		3,682,976.44		
MISCELLANEOUS.				19,674,559.35
Title B. Equipage afloat—net increase for year ending June 30, 1916		6,217,720.93		
Title X. Supplies in store—net increase for year ending June 30, 1916		7,919,889.20		
Title Z. Manufacturing work in process—net increase for year ending June 30, 1916		2,009,110.75		
M. C. Marine Corps stores—net decrease for year ending June 30, 1916		*547,003.64*		
Net increase in stores June 30, 1916, over July 1, 1915			15,599,717.24	
Title V. General administration expense (see Statement 10)		20,844,692.43		
M. C. Pay and maintenance of the Marine Corps		6,698,878.84		
Total miscellaneous		27,543,571.27		
Less checkages on pay rolls for ships and stations, including deductions from pay on account of naval hospital fund ($163,666.34) and fines and forfeitures ($708,170.89)		1,324,987.09		
Net total miscellaneous				26,218,584.18
			50,394,971.63 102,426,569.04	102,426,569.04
Total expenditures for the Navy, fiscal year 1916			152,821,540.67	

Statement 2.—TOTAL COST OF THE NEW NAVY.

Fiscal year.	New ships.	Maintenance and operation of the fleet.	Additions to shore station plants.	Gross maintenance of shore stations.	Less amount of yard maintenance charged to new ships, etc., as indirect expense.	Miscellaneous Naval Expenditues (see statement 1).	Marine Corps.	Total expenditures.
1884								$17,292,601.44
1885								16,021,079.67
1886								13,907,887.74
1887								15,141,126.80
1888								16,926,437.65
1889								21,378,809.31
1890	$4,842,140.50	$6,296,735.20	$1,646,106.73	$1,808,708.46		$7,412,515.35		22,006,206.24
1891	8,508,624.65	6,967,700.67	1,612,111.37	2,094,557.08		6,236,384.92	$694,517.77	26,113,896.46
1892	10,841,890.30	7,117,634.42	2,149,141.21	2,198,977.12		6,017,892.28	848,603.65	29,174,138.98
1893	11,164,536.34	7,049,792.53	1,411,661.92	3,551,559.74		6,094,001.56	864,532.34	30,136,084.43
1894	12,549,924.88	7,255,148.77	1,435,902.72	3,608,681.56		6,104,540.17	747,095.69	31,701,293.79
1895	10,459,211.55	7,681,676.50	964,706.17	3,316,861.14		5,573,467.18	801,873.19	28,797,795.73
1896	7,745,957.56	8,317,891.84	1,395,404.33	3,767,827.42		5,186,234.47	732,416.96	27,147,732.58
1897	10,738,549.92	10,012,299.38	1,167,470.66	3,902,306.72		7,908,913.04	832,016.57	34,561,546.29
1898	22,182,326.85	14,952,649.08	1,129,008.04	4,979,549.91		14,600,280.33	980,170.64	58,823,984.80
1899	9,964,456.61	20,740,784.65	3,132,297.87	7,436,438.36		21,224,900.94	1,443,225.82	63,942,104.25
1900	10,659,155.35	15,880,268.91	5,252,054.57	7,841,566.34		14,730,040.41	1,589,992.14	55,953,077.72
1901	10,644,217.87	19,287,285.99	7,756,334.80	7,871,771.18		13,797,182.55	2,364,903.66	61,721,696.05
1902	14,392,921.77	20,204,704.45	8,221,092.05	7,693,127.29		15,532,626.11	2,393,830.17	68,438,301.84
1903	21,807,999.53	24,967,293.38	9,230,294.49	8,229,118.35		16,170,897.31	2,552,038.56	82,977,641.62
1904	31,403,948.81	27,870,477.87	11,461,733.43	9,951,044.13		20,442,308.63	2,996,679.97	104,126,192.84
1905	36,894,266.87	29,378,729.98	13,615,147.79	10,461,298.15		23,016,868.52	3,289,515.48	116,655,826.79
1906	31,764,556.58	29,206,259.42	9,589,183.09	11,111,080.81		24,418,281.80	3,635,697.75	109,725,059.45
1907	17,553,017.20	34,291,094.08	7,459,310.08	11,912,407.16		22,935,618.46	4,240,697.09	98,392,144.07
1908	20,159,911.45	36,989,952.36	9,741,199.95	12,801,840.55		33,022,640.44	4,637,929.96	117,353,474.71
1909	20,109,957.59	45,271,840.71	8,229,274.03	13,848,511.52		27,587,989.04	5,374,005.72	120,421,578.61
1910	24,736,599.47	46,490,042.68	8,614,768.44	15,926,314.83	*3,429,681.62*	23,989,293.33	5,920,027.67	122,247,364.80
1911	19,532,806.20	48,781,692.30	10,504,405.23	16,952,339.81	*2,879,035.85*	13,628,994.81	5,270,777.11	111,791,979.61
1912	24,930,490.79	49,242,628.07	9,862,719.50	17,564,098.81	*3,696,660.76*	28,921,971.05	6,663,814.41	133,559,071.87
1913	24,630,999.06	49,154,008.12	7,443,132.29	17,840,945.94	*3,764,429.58*	28,724,046.02	5,758,531.25	129,787,233.10
1914	26,135,389.42	53,416,710.14	7,918,746.26	18,230,107.21	*3,618,838.22*	27,964,714.93	6,811,465.33	136,858,301.07
1915	31,990,664.22	55,324,768.68	7,191,804.26	21,001,240.74	*3,883,691.18*	24,916,324.52	6,417,980.87	142,959,092.11
1916	28,677,332.07	56 533,425.51	6,117,922.32	23,357,535.79	*3,682,976.44*	35,119,422.58	6,698,878.84	152,821,540.67
Total	505,021,853.41	738,703,485.64	164,252,933.60	269,259,816.12	*24,885,897.65*	481,280,350.75	84,561,218.61	2,318,862,303.09

Statement 3.—NEW CONSTRUCTION.

No.	Ship.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.	Total expenditures to June 30, 1916.	Per cent of completion.
	Total	$3,466,567.19	$932,815.25	$2,938,381.22	$21,274,016.51	$65,548.90	$28,677,332.07	$142,938,291.94	.....
	BATTLESHIPS—FIRST LINE.								
32	Arkansas	30.14	1.02	65.06	.....	.....	96.22	8,376,821.70	100.0
33	Wyoming	718.30	210.38	3.57	.....	.....	932.25	8,242,197.78	100.0
34	New York	8,182.27	2,140.69	12,552.04	130.60	.....	23,005.60	9,780,754.67	100.0
37	Texas	8,293.75	1,837.54	2,606.98	31,391.50	.....	44,129.77	9,521,067.08	100.0
35	Nevada	61,054.82	14,951.15	30 187.46	384,153.36	390.89	490,737.68	9,673,166.72	100.0
36	Oklahoma	22,019.95	5,892.39	13,068.31	68,401.79	.34	109,382.78	9,510,357.93	100.0
38	Pennsylvania	203,403.90	61,988.72	168,050.40	1,547,235.95	10,399.58	1,990,978.55	11,510,244.68	100.0
39	Arizona	1,463,240.96	376,975.41	989,767.17	285,558.81	.....	3,115,542.35	9,767,380.69	93.2
40	New Mexico	352,209.46	90,778.83	378,072.19	2,844,334.68	.....	3,665,395.16	4,070,634.36	35.6
41	Mississippi	491.50	141.79	3,079.73	4,313,416.22	630.09	4,317,759.33	6,819,649.43	47.4
42	Idaho	520.25	172.99	4,196.94	4,554,802.94	1.70	4,559,694.82	7,891,839.80	61.6
43	Tennessee (new)	12,878.11	1,078.54	2,336.44	.....	.....	16,293.09	16,293.09	.0
44	California	489.31	112.19	2.14	.....	.....	603.64	603.64	.0
	DESTROYERS.								
266	Allen	593.30	176.02	529.77	520,500.00	282.52	522,081.61	682,081.61	84.3
246	Aylwin	10,578.81	2,364.57	1.895.00	420.00	.....	15,258.38	795,495.92	100.0
247	Balch	1,503.51	342.59	740.71	.....	.....	2,586.81	780,711.36	100.0
248	Benham	4,679.63	937.59	772.09	.....	.....	6,389.31	780,911.25	100.0
223	Burrows	1.68	.42	20.92	.....	.....	23.02	679,741.78	100.0
269	Caldwell	12,808.49	1,430.76	11,530.48	.....	.....	25,769.73	25,769.73	.0
272	Conner	.....	.....	.....	42,250.00	.....	42,250.00	42,250.00	6.5
255	Conyngham	3,407.44	1,043.76	6,069.82	224,774.50	24.74	235,320.26	852,362.38	100.0
270	Craven	4,552.82	644.60	802.74	.....	.....	6,000.16	6,000.16	.0
250	Cushing	12,430.28	4,281.46	8,514.87	71,821.00	.....	97,047.61	866,423.14	100.0
265	Davis	672.09	190.00	449.50	520,500.00	282.51	522,094.10	682,094.10	85.8
254	Downes	5,415.42	1,705.78	5,994.08	960.50	.....	14,075.78	735,587.93	100.0
242	Duncan	3,035.53	940.27	1,599.15	15,000.00	.....	20,574.95	806,084.38	100.0
256	Ericsson	10,179.64	2,629.90	7,837.09	69,250.28	.....	89,896.91	873,173.37	100.0
257	Jacob Jones	6,105.74	1,907.76	9,208.29	177,290.00	36.51	194,548.30	813,645.64	100.0
227	Jarvis	6.88	2.06	.....	.....	.....	8.94	651,509.74	100.0
228	Jenkins	46.72	12.93	.....	.....	.....	59.65	665,778.73	100.0
245	McDougal	3,872.12	1,036.82	2,566.79	260.81	.....	7,682.54	848,064.17	100.0
274	Manly	.....	.....	.....	87,950.00	.....	87,950.00	87,950.00	13.8
251	Nicholson	5,972.61	2,010.71	3,192.13	12,689.50	.....	23,864.95	846,312.44	100.0
252	O'Brien	1,077.86	377.36	938.35	11,479.32	.....	13,872.89	836,985.01	100.0
249	Parker	2,745.98	662.75	900.28	20,249.83	.....	24,558.84	778,917.70	100.0
233	Patterson	3.27	1.11	.....	.....	.....	4.38	647,707.66	100.0
234	Paulding	.....	.....	685.90	.....	.....	685.90	652,928.16	100.0

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION.

[All expenses of receiving ship organizations including pay and subsistence of men carried on recruit rolls are charged to "The Receiving Ship" and not to the individual vessels acting as such.]

RECAPITULATION.

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Battleships:					
First line	17	467,450	6.04	$7,364,564.87	$860,676.84
Second line	25	340,146	10	11,491,626.96	551,598.09
Armored cruisers	10	140,070	10	5,130,280.08	615,633.61
Cruisers:					
First class	5	46,465	12	1,792,066.85	358,413.37
Second class	4	25,065	6	560,857.74	280,478.87
Third class	16	50,820	10.6	3,522,087.56	249,200.77
Monitors	9	32,944	8.5	1,089,338.50	170,863.94
Destroyers	57	46,876	8.25	4,231,092.07	107,965.18
Coast torpedo vessels	16	6,695	12	1,537,826.56	96,114.16
Torpedo boats	20	3,395	4.2	152,707.42	21,815.34
Submarines	76	.....	5.8	$1,576,616.78	$42,920.60
Tenders and torpedo vessels	8	31,927	10	1,305,685.96	195,852.89
Gunboats	30	26,180	9.25	2,958,721.98	129,944.73
Transports	5	22,235	6.2	751,342.17	290,842.13
Supply ships	5	33,900	9.6	848,213.01	212,053.25
Hospital ship	1	5,700	12	265,515.41	265,515.41
Fuel ships	23	268,430	10.5	2,641,307.42	131,245.09
Converted yachts	16	9,476	4	590,332.79	110,693.64
Tugs	50	20,899	10.2	1,020,403.08	24,009.48
Special type	11	45,904	9	1,771,557.50	35,789.04
Unserviceable for war purposes	22	46,291	6.25	1,516,663.04	132,363.31
Miscellaneous	19	.....	.....	4,414,667.76	.....

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	Total	$30,566,165.62	$1,130,192.55	$16,280,562.65	$47,976,920.82	$8,556,504.69	$56,533,425.51				
	BATTLESHIPS—FIRST LINE.										
	Delaware	474,005.74	8,567.05	218,521.71	701,094.50	157,785.08	858,879.58	20,000	Apr. 4, 1910	12	
	North Dakota	180,917.33	2,138.30	86,587.52	269,643.15	69,524.69	339,167.84	20,000	Apr. 11, 1910		12
	Florida	505,432.34	8,967.39	274,116.31	788,516.04	91,515.82	880,031.86	21,825	July 15, 1911	12	
	Utah	474,925.21	8,784.81	233,110.60	716,820.62	82,210.43	799,031.05	21,825	Aug. 31, 1911	12	
	Wyoming	623,610.66	19,837.45	283,865.13	927,313.24	164,387.76	1,091,701.00	26,000	Sept. 25, 1912	12	
	Arkansas	586,790.49	8,468.87	301,226.08	896,485.44	148,670.40	1,045,155.84	26,000	Sept. 17, 1912	12	
	New York	539,749.35	10,320.59	292,614.91	842,684.85	113,676.86	956,361.71	27,000	Apr. 15, 1914	12	
	[illegible]	535,538.69	14,186.77	280,388.69	830,114.15	125,330.34	955,444.49	27,000	Mar. 12, 1914	12	
	Nevada	163,860.84	3,473.64	91,685.26	259,019.74	4,463.23	263,482.97	27,500	Mar. 11, 1916	4	
	Oklahoma	83,070.81	1,446.37	49,097.95	133,615.13	1,039.22	134,654.35	27,500	May 2, 1916	2	
	Pennsylvania	21,662.52	70.00	16,518.37	38,250.89	1,554.20	39,805.09	31,400	June 12, 1916	.6	
	Arizona					212.91	212.91	31,400	Building		
	New Mexico					204.94	204.94	32,000	do		
	[illegible]					204.92	204.92	32,000	do		
	[illegible]					227.32	227.32	32,000	do		
	[illegible]							32,000	do		
	[illegible]							32,000	do		
	[illegible]	4,189,563.98	86,261.24	2,127,731.53	6,403,556.75	961,008.12	7,364,564.87				
	[illegible]—SECOND LINE.										
	[illegible]					12,285.44	12,285.44	10,288	Nov. 20, 1895		
	[illegible]					11,000.36	11,000.36	10,288	June 10, 1896		
	[illegible]	180,111.97	5,099.92	84,392.73	269,604.62	4,798.54	274,403.16	10,288	July 15, 1896	7	5
	[illegible]					24,962.52	24,962.52	11,346	June 16, 1897		
	[illegible]	208,948.90	25,907.43	90,346.02	325,202.35	24,006.55	349,208.90	11,520	Feb. 20, 1900	9	
	[illegible]	232,457.53	5,761.25	103,232.49	341,451.27	8,952.45	350,403.72	11,520	May 15, 1900	12	
	[illegible]	84,768.60	905.30	36,875.66	122,549.56	21,656.21	144,205.77	11,552	Sept. 16, 1901		6
	[illegible]ama	165,957.28	1,486.96	50,288.77	217,733.01	13,334.50	231,067.51	11,552	Oct. 16, 1900	1	11
	[illegible]sconsin	172,723.27	10,711.62	89,897.10	273,331.99	36,215.38	309,547.37	11,552	Feb. 4, 1901	5	7
11	Maine	135,015.89	1,458.57	61,800.83	198,275.29	26,688.47	224,963.76	12,500	Dec. 29, 1902		12
11	Missouri	205,849.90	5,619.45	111,633.68	323,103.03	43,835.63	366,938.66	12,500	Dec. 1, 1903	5	7
12	Ohio	176,178.81	4,483.62	83,289.61	263,952.04	59,270.06	323,222.10	12,500	Oct. 4, 1904	4	8
19	Virginia	407,582.56	8,490.77	214,967.72	631,041.05	78,639.60	709,680.65	14,948	May 7, 1906	9	3

Statement 3.—NEW CONSTRUCTION—Continued.

No.	Ship.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.	Total expenditures to June 30, 1916.	Per cent of completion.
	DESTROYERS—continued.								
258	Porter	$3,759.97	$1,200.39	$6,920.92	$262,502.00	$24.74	$274,408.02	$847,409.82	100.0
264	Rowan	72.53	12.89	149.72	477,000.00	594.08	477,829.22	716,438.88	90.0
263	Sampson	2,563.09	732.80	2,080.32	437,250.00	614.37	443,240.58	721,600.23	100.0
268	Shaw	101,522.49	24,714.43	148,940.08	2,832.02	.....	278,009.02	321,077.88	86.3
273	Stockton	.....	.....	.....	42,250.00	.....	42,250.00	42,250.00	6.6
239	Trippe	3.76	1.50	.....	.....	.....	5.26	665,843.70	100.0
259	Tucker	3,389.59	1,180.07	6,364.83	267,270.00	294.68	278,499.17	838,592.56	100.0
260	Wadsworth	6,175.78	1,966.52	7,164.80	96,447.75	.....	111,754.85	907,684.66	100.0
261	Wainwright	5,713.63	1,777.43	6,740.69	128,869.00	45.88	143,146.63	762,230.31	100.0
267	Wilkes	76.51	16.35	180.73	528,000.85	298.26	528,572.70	609,803.60	76.3
253	Winslow	5,403.52	1,530.40	7,114.76	75,775.50	.....	89,824.18	841,716.79	100.0
	SUBMARINES.								
323	G-1	.....	.....	275.00	.....	.....	275.00	470,904.29	100.0
324	G-2	6,060.75	1,407.32	1,517.78	1,848.68	.....	10,824.53	475,783.96	92.0
325	G-3	1,333.17	277.97	2,157.67	10,765.39	32	14,534.52	519,883.83	89.5
326	G-4	11,109.17	2,936.24	2,224.39	22,658.89	.....	38,928.69	426,736.24	100.0
329	H-3	24.39	11.43	132.14	.....	.....	167.96	519,134.63	100.0
330	K-1	3,760.09	786.48	986.97	900.00	.....	6,433.54	490,607.99	100.0
331	K-2	4,122.76	889.22	1,260.13	900.00	.....	7,172.11	490,693.09	100.0
332	K-3	4,592.91	1,145.27	1,367.06	15,285.25	.....	22,390.49	521,687.48	100.0
333	K-4	4,485.36	1,107.21	1,427.51	14,185.25	.....	21,205.33	520,941.95	100.0
334	K-5	702.90	170.63	4,923.86	.....	.....	5,797.40	502,450.95	100.0
335	K-6	1,218.17	277.37	198.37	.....	.....	1,297.17	478,706.94	100.0
336	K-7	6,885.82	1,732.16	2,314.14	13,972.80	.....	24,904.92	533,840.76	100.0
337	K-8	6,576.90	1,636.96	2,662.18	13,973.73	.....	24,849.77	533,982.94	100.0
338	L-1	752.07	246.87	11,323.23	22,088.72	9,213.79	43,624.68	526,310.40	100.0
339	L-2	14.39	4.93	12,943.31	4,395.72	9,005.76	26,364.11	509,049.83	99.1
340	L-3	463.03	159.89	2,433.15	4,395.73	9,005.76	16,457.56	499,143.28	100.0
341	L-4	533.04	177.93	2,474.33	5,396.73	9,000.00	17,582.03	499,427.76	100.0
342	L-5	3.76	1.25	.....	214,005.00	277.17	214,287.18	455,057.36	87.3
343	L-6	.....	.....	.....	195,765.00	.....	195,765.00	419,784.84	82.6
344	L-7	.....	.....	.....	195,765.00	.....	195,765.00	391,785.18	81.5
345	L-8	62,161.94	17,736.02	48,106.20	26,360.75	.....	154,364.91	190,006.44	87.5
346	L-9	.....	.....	.....	89,440.00	189.30	89,629.30	490,879.30	99.1
347	L-10	.....	.....	.....	88,810.00	9,199.30	98,009.30	499,259.30	99.1
349	L-11	.....	.....	.....	132,190.00	5,427.78	137,617.78	478,806.78	95.7
348	M-1	.....	.....	553.84	53,425.03	213.79	54,192.66	547,668.83	96.8
350	Schley	13.23	2.65	4.23	236,250.00	.....	236,270.11	236,270.11	20.8
351	N-1	7.64	3.44	2	270,000.00	.....	270,011.08	270,011.08	59.5
352	N-2	7.66	3.44	.....	270,000.00	.....	270,011.10	270,011.10	59.5
353	N-3	7.66	3.44	.....	225,000.00	.....	225,011.10	270,011.10	59.5
354	N-4	.....	.....	.....	128,100.00	.....	128,100.00	170,800.00	66.4

355	N-5				128,100.00	.16	128,100.16	170,800.16	65.6
356	N-6				128,100.00		128,100.00	170,800.00	63.6
357	N-7				128,100.00		128,100.00	170,800.00	66.7
360	O-1	2,690.59	821.43	2,217.91			5,729.93	5,729.93	.0
361	O-2	2,567.28	799.66	1,672.14			5,039.08	5,039.08	.0
370	O-11				54,500.00		54,500.00	54,500.00	22.1
371	O-12				54,500.00		54,500.00	54,500.00	23.0
372	O-13				54,500.00		54,500.00	54,500.00	22.1
373	O-14				27,425.00		27,425.00	27,425.00	15.3
374	O-15				27,425.00		27,425.00	27,425.00	15.0
375	O-16				27,425.00		27,425.00	27,425.00	14.1
	TENDERS TO TORPEDO VESSELS.								
735	Bushnell	9,459.12	3,163.38	8,964.06	58,386.85	94.54	80,067.95	918,423.30	100.0
732	Fulton	8,712.14	1,974.49	6,454.95	10,800.00		27,941.58	525,542.07	100.0
738	Melville	7,580.15	2,575.73	11,550.89	73,217.39	.34	94,924.50	1,275,845.96	100.0
	COAST TORPEDO VESSELS—TORPEDO BOATS.								
717	Dupont			11.60			11.60	165,501.03	100.0
	GUNBOATS.								
401	Monocacy			3,835.63	[1] 269.75 862.77		4,968.15	145,281.74	100.0
402	Palos			3,833.48	[1] 269.76		4,103.24	146,153.99	100.0
426	Sacramento	1,728.75	450.34	5,368.24	45.10		7,592.43	500,667.51	100.0
	TRANSPORTS.								
755	Henderson	256,184.81	81,803.17	301,164.59	9.20		639,161.77	758,646.92	66.5
	SUPPLY SHIPS.								
779	Bridge	236,895.15	79,586.60	190,969.85	4,264.42		511,716.02	630,493.32	71.5
777	Celtic	9.92	3.31				13.23	340,900.00	100.0
	FUEL SHIPS.								
624	Cuyama	218,581.17	51,930.83	200,568.03	13,289.70		484,369.73	484,369.73	69.4
620	Jason	61.63	17.18	453.14			531.95	971,869.99	100.0
616	Kanawha	4,883.17	1,133.23	7,666.74	350.00		14,033.14	973,632.27	100.0
617	Maumee	142,568.85	35,089.47	101,265.52			278,923.84	1,160,629.61	99.7
623	Neptune	*8,075.68*	*4,958.86*	*1,769.36*			*14,803.90*	907,340.65	100.0
621	Orion	3.08	1.08	339.71			343.87	974,823.72	100.0
	TUGS.								
549	Pocahontas	72,303.54	24,052.78	37,975.64			134,331.96	134,331.96	90.0
521	Traffic			1.03			1.03	26,400.00	100.0
548	Wando	30,818.24	8,437.49	39,454.22			78,709.95	78,709.95	75.0
	MISCELLANEOUS.								
998	Target rafts	12,760.52	3,104.21	16,672.23			32,536.96		
999	Airships	164.82		47,062.11	103,434.19		150,661.12		
	Total	3,466,567.19	932,815.25	2,938,384.22	21,274,016.51	65,548.90	28,677,332.07	142,938,291.94	

[1] Payment through claims settled by Auditor for Navy Department.

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION.

[All expenses of receiving ship organizations including pay and subsistence of men carried on recruit rolls are charged to "The Receiving Ship" and not to the individual vessels acting as such.]

RECAPITULATION.

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Battleships:					
First line	17	467,450	6.04	$7,364,564.87	$860,676.84
Second line	25	340,146	10	11,491,626.96	551,598.09
Armored cruisers	10	140,070	10	5,130,280.08	615,633.61
Cruisers:					
First class	5	46,465	12	1,792,066.85	358,413.37
Second class	4	25,065	6	560,857.74	280,478.87
Third class	16	50,820	10.6	3,522,037.56	249,200.77
Monitors	9	32,944	8.5	1,089,338.50	170,863.94
Destroyers	57	46,876	8.25	4,231,092.07	107,965.18
Coast torpedo vessels	16	6,695	12	1,537,826.56	96,114.16
Torpedo boats	20	3,395	4.2	152,707.42	21,815.34

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Submarines	76	.....	5.8	$1,576,616.78	$42,920.60
Tenders and torpedo vessels	8	31,927	10	1,305,685.96	195,852.89
Gunboats	30	26,180	9.25	2,958,721.98	129,944.73
Transports	5	22,235	6.2	751,342.17	290,842.13
Supply ships	5	33,900	9.6	848,213.01	212,053.25
Hospital ship	1	5,700	12	265,515.41	265,515.41
Fuel ships	23	268,430	10.5	2,641,307.42	131,245.09
Converted yachts	16	9,476	4	590,332.79	110,693.64
Tugs	50	20,899	10.2	1,020,403.08	24,009.48
Special type	11	45,904	9	1,771,557.50	35,789.04
Unserviceable for war purposes	22	46,291	6.25	1,516,683.04	132,363.31
Miscellaneous	19	.....	.....	4,414,667.76	.....

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C. Accrued pay.	Title C. Public vouchers (including commuted rations).	Title C. Stores issued (including provisions and medical stores).	Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission. Full commission.	Months in commission. Commission in reserve.
	Total	$30,566,165.62	$1,130,192.55	$16,280,562.65	$47,976,920.82	$8,556,504.69	$56,533,425.51				
	BATTLESHIPS—FIRST LINE.										
28	Delaware	474,005.74	8,567.05	218,521.71	701,094.50	157,785.08	858,879.58	20,000	Apr. 4,1910	12	
29	North Dakota	180,917.33	2,138.30	86,587.52	269,643.15	69,524.69	339,167.84	20,000	Apr. 11,1910		12
30	Florida	505,432.34	8,967.39	274,116.31	788,516.04	91,515.82	880,031.86	21,825	July 15,1911	12	
31	Utah	474,925.21	8,784.81	233,110.60	716,820.62	82,210.43	799,031.05	21,825	Aug. 31,1911	12	
33	Wyoming	623,610.66	19,837.45	283,865.13	927,313.24	164,387.76	1,091,701.00	26,000	Sept. 25,1912	12	
32	Arkansas	586,790.49	8,468.87	301,226.08	896,485.44	148,670.40	1,045,155.84	26,000	Sept. 17,1912	12	
34	New York	539,749.35	10,320.59	292,614.91	842,684.85	113,676.86	956,361.71	27,000	Apr. 15,1914	12	
37	Texas	535,538.69	14,186.77	280,388.69	830,114.15	125,330.34	955,444.49	27,000	Mar. 12,1914	12	
35	Nevada	163,860.84	3,473.64	91,685.26	259,019.74	4,463.23	263,482.97	27,500	Mar. 11,1916	4	
36	Oklahoma	83,070.81	1,446.37	49,097.95	133,615.13	1,039.22	134,654.35	27,500	May 2,1916	2	
38	Pennsylvania	21,662.52	70.00	16,518.37	38,250.89	1,554.20	39,805.09	31,400	June 12,1916	.6	
39	Arizona					212.91	212.91	31,400	Building		
40	New Mexico					204.94	204.94	32,000	do		
41	Mississippi					204.92	204.92	32,000	do		
42	Idaho					227.32	227.32	32,000	do		
43	Tennessee							32,000	do		
44	California							32,000	do		
	Total	4,189,563.98	86,261.24	2,127,731.53	6,403,556.75	961,008.12	7,364,564.87				
	BATTLESHIPS—SECOND LINE.										
1	Indiana					12,285.44	12,285.44	10,288	Nov. 20,1895		
2	Massachusetts					11,000.36	11,000.36	10,288	June 10,1896		
3	Oregon	180,111.97	5,099.92	84,392.73	269,604.62	4,798.54	274,403.16	10,288	July 15,1896	7	5
4	Iowa					24,962.52	24,962.52	11,346	June 16,1897		
5	Kearsarge	208,948.90	25,907.43	90,346.02	325,202.35	24,006.55	349,208.90	11,520	Feb. 20,1900	9	
6	Kentucky	232,457.53	5,761.25	103,232.49	341,451.27	8,952.45	350,403.72	11,520	May 15,1900	12	
8	Illinois	84,768.60	905.30	36,875.66	122,549.56	21,656.21	144,205.77	11,552	Sept. 16,1901		6
7	Alabama	165,957.28	1,486.96	50,288.77	217,733.01	13,334.50	231,067.51	11,552	Oct. 16,1900	1	11
9	Wisconsin	172,723.27	10,711.62	89,897.10	273,331.99	36,215.38	309,547.37	11,552	Feb. 4,1901	5	7
10	Maine	135,015.89	1,458.57	61,800.83	198,275.29	26,688.47	224,963.76	12,500	Dec. 29,1902		12
11	Missouri	205,849.90	5,619.45	111,633.68	323,103.03	43,835.63	366,938.66	12,500	Dec. 1,1903	5	7
12	Ohio	176,178.81	4,483.62	83,289.61	263,952.04	59,270.06	323,222.10	12,500	Oct. 4,1904	4	8
19	Virginia	407,582.56	8,490.77	214,967.72	631,041.05	78,639.60	709,680.65	14,948	May 7,1906	9	3

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	BATTLESHIPS—SECOND LINE—continued.										
16	Nebraska	$419,150.47	$7,402.58	$201,029.77	$627,582.82	$83,804.69	$711,387.51	14,948	July 1,1907	11	1
15	Georgia	326,380.08	5,201.39	122,631.62	454,213.09	71,773.81	525,986.90	14,948	Sept. 24,1906	7	5
17	New Jersey	424,265.16	7,282.21	214,233.14	645,780.51	71,992.98	717,773.49	14,948	May 12,1906	11	1
18	Rhode Island	412,055.26	7,479.54	208,932.04	628,466.84	130,666.91	759,133.75	14,948	Feb. 19,1906	11	1
20	Connecticut	341,377.20	4,605.29	122,312.86	468,295.35	138,638.67	606,934.02	16,000	Sept. 29,1906	11	1
22	Louisiana	480,534.76	9,065.73	274,452.86	764,053.35	102,473.20	866,526.55	16,000	June 2,1906	11	1
27	Vermont	315,050.39	5,135.12	126,780.44	446,965.95	78,613.02	525,578.97	16,000	Mar. 4,1907	12	.....
21	Kansas	350,741.46	8,099.07	189,318.54	548,159.07	100,621.78	648,780.85	16,000	Apr. 18,1907	12	.....
24	Minnesota	355,957.21	6,735.68	142,314.69	505,007.58	142,365.66	647,373.24	16,000	Mar. 9,1907	12	.....
25	New Hampshire	377,207.88	6,193.49	172,761.42	556,162.79	118,615.58	674,778.37	16,000	Mar. 19,1908	12	.....
26	South Carolina	423,049.70	8,931.11	174,738.69	606,719.50	69,790.91	676,510.41	16,000	Mar. 1,1910	12	.....
23	Michigan	441,136.51	9,262.84	188,784.98	639,184.33	159,788.65	798,972.98	16,000	Jan. 4,1910	12	.....
	Total	6,636,500.79	155,318.94	3,065,015.66	9,856,835.39	1,634,791.57	11,491,626.96	.....	.....	.....	.....
	ARMORED CRUISERS.										
126	Colorado	259,476.10	5,470.08	134,312.44	399,258.62	121,942.45	521,201.07	13,680	Jan. 19,1905	3	2
127	Maryland	300,128.29	6,583.24	221,769.44	528,480.97	59,715.01	588,195.98	13,680	Apr. 18,1905	.....	19
133	Memphis	300,790.39	8,618.33	280,385.00	589,793.72	118,678.29	708,472.01	14,500	July 17,1906	.....	.....
131	Montana	312,551.34	2,931.73	142,734.95	458,218.02	71,593.93	529,811.95	14,500	July 21,1908	12	.....
132	North Carolina	242,864.17	6,566.97	124,053.20	373,484.34	59,542.32	433,026.66	14,500	May 7,1908	12	.....
128	Pittsburgh	120,033.95	4,741.30	83,079.74	207,854.99	19,474.54	227,329.53	13,680	Mar. 9,1905	.....	5
125	San Diego	447,152.70	8,141.30	272,016.86	727,310.86	36,043.08	763,353.94	13,680	Aug. 1,1907	3	9
129	South Dakota	126,812.66	6,739.26	147,749.76	281,301.68	40,337.75	321,639.43	13,680	Jan. 27,1908	.....	12
134	Washington	379,989.02	6,832.34	114,016.02	500,837.38	124,856.89	625,694.27	14,500	Aug. 7,1906	9	3
130	West Virginia	131,538.32	2,173.35	71,840.03	205,551.70	206,002.54	411,554.24	13,680	Feb. 23,1905	.....	12
	Total	2,621,336.94	58,797.90	1,591,958.44	4,272,093.28	858,186.80	5,130,280.08	.....	.....	.....	.....
	CRUISERS—FIRST CLASS.										
121	Brooklyn	357,649.91	15,297.53	183,978.56	556,926.00	75,725.08	632,651.08	9,215	Dec. 1,1896	12	.....
122	Charleston	117,815.79	3,105.24	59,407.44	180,328.47	14,518.51	194,846.98	9,700	Oct. 17,1905	.....	12

123	Milwaukee	173,328.52	4,376.13	116,868.02	294,572.67	7,623.57	302,196.24	9,700	May 11, 1906		12
120	Saratoga	274,585.27	9,650.78	92,692.23	376,928.28	19,893.69	396,821.97	8,150	Aug. 1, 1893	8	4
124	St. Louis	127,157.35	5,042.32	74,646.87	206,846.54	58,704.04	265,550.58	9,700	Aug. 18, 1906		12
	Total	1,050,536.84	37,472.00	527,593.12	1,615,601.96	176,464.89	1,792,066.85				
	CRUISERS—SECOND CLASS.										
116	Chicago	46,193.47	347.72	38,469.06	85,010.25	8,382.32	93,392.57	4,500	Apr. 17, 1889		12
118	Columbia	230,225.20	3,441.91	92,198.71	325,860.82	56,572.87	382,433.69	7,350	Apr. 23, 1894	12	
119	Minneapolis					4,974.78	4,974.78	7,350	Dec. 13, 1894		
117	Olympia		45.00	120.38	165.38	79,891.32	80,056.70	5,865	Feb. 5, 1895		
	Total	276,418.67	3,834.63	130,783.15	411,036.45	149,821.29	560,857.74				
	CRUISERS—THIRD CLASS.										
111	Albany	84,689.45	1,635.48	49,838.19	136,163.12	24,409.76	160,572.88	3,430	May 29, 1900	2	10
113	Birmingham	242,351.27	2,169.11	99,941.17	344,461.55	60,147.27	404,608.82	3,750	Apr. 11, 1908	12	
102	Boston	8,746.06	984.02	1,194.09	10,924.17	138.00	11,062.17	3,000	May 2, 1887		
105	Chattanooga	148,152.48	3,764.58	81,334.61	233,251.67	37,954.94	271,206.61	3,200	Oct. 11, 1904	12	
114	Chester	192,624.15	6,463.96	203,847.88	402,935.99	8,981.11	411,917.10	3,750	Apr. 25, 1908	10	2
103	Cincinnati	154,691.27	7,830.46	69,963.89	232,485.62	5,031.50	237,517.12	3,183	June 16, 1894	12	
106	Cleveland	155,785.15	4,417.60	75,015.78	235,218.53	56,045.15	291,263.68	3,200	Nov. 2, 1903	12	
107	Denver	168,243.07	3,404.70	72,897.92	244,545.69	28,227.01	272,772.70	3,200	May 17, 1904	12	
108	Des Moines	160,893.72	4,443.93	91,359.30	256,696.95	601.41	257,298.36	3,200	Mar. 5, 1904	12	
109	Galveston	125,232.61	3,559.83	94,548.95	223,341.39	12,890.71	236,232.10	3,200	Feb. 15, 1905	12	
100	Marblehead	47,347.26	170.03	17,717.06	65,234.35	26,320.28	91,554.63	2,072	Apr. 2, 1894		12
101	Montgomery		138.70	20,991.88	21,130.58	9,298.88	30,429.46	2,072	June 21, 1894		12
112	New Orleans	138,790.14	4,731.88	80,744.64	224,266.66	53,705.10	277,971.76	3,430	Mar. 18, 1898		12
104	Raleigh	107,552.83	3,928.95	91,530.16	203,011.94	47,110.72	250,122.66	3,183	Apr. 17, 1894	12	
115	Salem	92,727.71	1,769.88	41,429.82	135,927.41	65,597.01	201,524.42	3,750	Aug. 1, 1908	2	10
110	Tacoma	34,127.66	100.00	19,176.20	56,403.86	59,579.23	115,983.09	3,200	Jan. 30, 1904		2
	Total	1,861,954.83	49,513.11	1,114,531.54	3,025,999.48	496,038.08	3,522,037.56				
	MONITORS.										
704	Amphitrite	37,030.41	4,464.11	23,418.36	64,912.88	20,160.31	85,073.19	3,990	Apr. 23, 1895		12
700	Cheyenne	132,202.10	1,818.37	77,591.01	211,611.48	19,972.96	231,584.44	3,225	Dec. 8, 1902	12	
705	Miantonomoh					4,818.57	4,818.57	3,990	Oct. 27, 1891		
706	Monadnock	83,396.07	2,247.83	112,800.72	198,444.62	4,499.15	202,943.77	3,990	Feb. 20, 1896	12	
708	Monterey	67,131.68	3,175.85	39,854.48	110,162.01	15,872.86	126,034.87	4,084	Feb. 13, 1893		12
701	Ozark	92,104.93	3,880.26	42,287.91	138,273.10	31,635.01	169,908.11	3,225	Oct. 28, 1902	12	
702	Tallahassee	95,519.61	1,783.43	54,545.55	151,848.59	18,759.57	170,608.16	3,225	June 18, 1903	12	
707	Terror					4,505.11	4,505.11	3,990	Apr. 15, 1895		
703	Tonopah	56,479.71	2,704.70	26,901.21	86,085.62	7,776.66	93,862.28	3,225	Mar. 5, 1903	5	
	Total	563,864.51	20,074.55	377,399.24	961,338.30	128,000.20	1,089,338.50				

No.	Name of vessel.	Accrued pay.									
	DESTROYERS.										
	Ben[illegible]										
	[illegible]man	$49,278.94	[illegible]	[illegible]	[illegible]	[illegible]					
	[illegible]n	37,301.00	[illegible]	[illegible]	[illegible]	[illegible]					
	[illegible]	38,977.97	[illegible]	[illegible]	[illegible]	[illegible]					
	[illegible]	35,089.99	[illegible]	22,751.66	[illegible]	21,[illegible]	[illegible]				
	[illegible]	54,306.16	[illegible]	47,119.39	101,814.64	17,269.42	[illegible]				
	[illegible]	48,227.45	482.96	36,147.44	84,857.85	8,217.59	92,9[illegible]				
	[illegible]	58,474.10	189.07	55,991.68	114,624.85	15,839.96	130,464.81	1,92[illegible]	[illegible]		
	[illegible]	23,725.03	188.28	23,532.51	47,440.82	23.05	47,463.87	1,090	Jan. [illegible] Building		
	[illegible]	56,274.58	154.90	51,959.49	108,388.97	21,778.51	130,167.48	1,020	Sept. 19, 191[illegible]		
	[illegible]	49,614.90	312.07	53,284.73	103,211.70	5,034.51	108,246.21	1,050	Aug. 21, 1915		
	[illegible]					9.42	9.42	1,071	Building		
	[illegible]	28,642.54	326.20	12,265.52	41,234.30	1,912.74	43,147.04	1,072	Feb. 11, 1915		
	[illegible]rton	50,881.15	220.46	35,461.71	86,563.32	28,667.80	115,231.12	742	Oct. 29, 1910	12	
	[illegible]rican	22,789.62	522.50	29,739.98	53,043.10	11,565.56	64,608.66	1,014	Aug. 30, 1913	5	
	[illegible] Ericsson	52,759.75	321.37	59,026.86	112,108.98	3,178.37	115,287.35	1,090	Aug. 14, 1915	10	
	[illegible] Fanning	52,293.15	209.50	40,225.60	92,719.25	22,118.52	114,837.77	742	June 21, 1912	12	
	[illegible] Finnegan	35,930.50	447.44	23,769.28	60,147.22	5,566.90	65,714.12	700	Oct. 28, 1909		1
	[illegible] Owen								Building		
	[illegible] Hardee	40,251.39	208.15	43,579.08	84,038.62	12,369.81	96,408.43	742	Dec. 6, 1912	12	
	[illegible] James Lawrence	21,847.47	5.98	33,271.01	55,124.46	690.20	55,814.66	1,150	Feb. 10, 1916	5	
	[illegible]	49,110.43	1,665.82	38,908.96	89,684.91	20,739.30	110,424.21	742	Oct. 22, 1912	12	
	[illegible]	52,318.56	434.85	34,263.03	87,016.46	19,220.51	106,236.97	742	June 15, 1912	12	
	[illegible]	57,663.73	199.36	20,509.25	77,372.33	23,796.96	101,169.29	742	May 25, 1912	12	
	[illegible]	35,186.54	209.85	34,670.66	70,067.05	17,915.50	87,982.55	700	Feb. 10, 1910		12
	[illegible]	45,137.63	274.07	28,928.66	74,340.36	37,602.92	111,943.28	742	Jan. 23, 1911	12	
	[illegible]	57,343.25	660.44	57,907.22	115,919.91	15,668.28	131,588.19	1,020	June 16, 1914	12	
	[illegible]			1,469.80	1,469.80	13,123.66	14,593.46	742	July 12, 1911		
	[illegible]	35,505.23	426.81	37,474.14	63,406.18	29,904.73	93,310.91	742	June 21, 1911		
	[illegible]rton	57,439.13	691.47	57,290.22	115,356.82	8,688.59	124,045.41	1,050	Apr. 30, 1915	12	12
	[illegible] Porter	58,320.76	98.93	63,029.02	121,448.70	1,801.37	123,250.07	1,050	May 22, 1915	12	
	[illegible] Parker	56,703.08	328.21	59,412.47	116,493.76	19,404.42	135,908.18	1,086	Dec. 30, 1913	12	
	[illegible] Patterson	52,253.25	371.30	41,948.34	94,272.59	24,077.85	118,350.44	742	Oct. 11, 1911	12	

	[illegible]	46,151.62	120.52	26,129.05	72,401.19	21,186.52	93,587.71	742	Sept. 29, 1910	12	
	[illegible]	34,353.42	92.80	30,305.38	64,751.60	21,346.19	86,097.79	742	Nov. 18, 1910		12
	[illegible]	10,047.11	18.60	8,784.36	18,850.07	44.64	18,894.71	1,090	Apr. 17, 1916	2	
	[illegible]	32,685.64	223.88	21,588.97	54,498.49	16,553.36	71,051.85	700	Dec. 24, 1909		12
	[illegible]	37,445.37	260.63	30,122.20	67,848.20	11,007.49	78,855.69	700	Dec. 3, 1909		12
	[illegible]	34,142.92	150.55	23,599.20	57,892.76	18,719.82	76,612.58	742	Sept. 17, 1910		12
	[illegible]							1,111	Building		
	[illegible]n	103.90			103.90	6.35	110.25	1,111	.....do		
	[illegible]							1,110	.....do		
	[illegible]n	35,415.68	30.00	23,266.26	58,711.94	25,034.63	83,746.57	700	Nov. 26, 1909		12
	Sterett	30,965.01	77.81	40,950.17	71,992.99	16,418.45	88,411.44	742	Dec. 15, 1910		12
173	Stockton								Building		
238	Terry	34,306.47	198.77	24,136.71	58,641.95	14,886.72	73,528.67	742	Oct. 18, 1910		12
239	Trippe	32,336.18	199.28	23,013.28	55,548.74	27,114.63	82,663.37	742	Mar. 23, 1911	7	
259	Tucker	11,592.10	33.34	16,151.95	27,777.39	110.16	27,887.55	1,090	Apr. 11, 1916	3	
260	Wadsworth	57,118.66	634.98	44,157.31	101,910.90	1,839.49	103,750.39	1,060	July 23, 1915	11	
261	Wainwright	7,056.01	18.60	5,676.78	12,751.39	11,254.64	24,006.03	1,150	May 12, 1916	2	
240	Walke	35,996.79	83.70	27,451.26	63,531.75	19,345.98	82,877.73	742	July 22, 1911		12
241	Warrington	53,393.11	356.40	36,259.37	90,008.88	34,385.60	124,394.48	742	Mar. 20, 1911	11	1
267	Wilkes							1,110	Building		
253	Winslow	52,213.04	93.37	62,315.44	114,621.85	2,298.38	116,920.23	1,050	Aug. 7, 1915	11	
	Total	1,889,751.46	13,928.60	1,627,292.60	3,530,972.66	700,119.41	4,231,092.07				
	COAST TORPEDO VESSELS.										
204	Bainbridge	44,942.15	2,165.17	46,309.41	93,416.73	3,477.73	96,894.46	420	Nov. 24, 1902	12	
205	Barry	41,309.09	366.32	33,079.86	74,755.27	14,151.89	88,907.16	420	.....do	12	
206	Chauncey	43,387.97	140.95	37,511.67	81,040.59	21,835.63	102,876.22	420	Nov. 29, 1902	12	
207	Dale	46,821.73	291.96	36,632.87	83,746.56	6,264.60	90,011.16	420	Nov. 24, 1902	12	
208	Decatur	41,964.28	466.17	35,336.72	77,767.17	32,839.40	110,606.57	420	May 19, 1902	12	
202	Hopkins	32,931.42	206.76	31,434.13	64,572.31	17,738.60	82,310.91	406	Sept. 23, 1903		12
203	Hull	34,671.43	313.35	36,562.83	68,547.61	14,336.88	82,884.49	406	May 20, 1903		12
200	Lawrence	28,890.28	279.17	21,641.06	50,810.51	1,893.94	52,704.45	400	Apr. 14, 1903		12
201	Macdonough	32,920.92	392.69	23,569.89	56,883.50	15,342.59	72,226.09	400	Sept. 5, 1903		12
209	Paul Jones	52,205.52	729.90	47,920.05	100,855.47	31,488.90	132,344.37	420	July 10, 1902	12	
210	Perry	43,675.55	806.80	42,668.63	87,150.98	24,572.81	111,723.79	420	Sept. 4, 1902	10	
211	Preble	47,350.99	147.45	43,062.74	90,561.18	29,434.94	119,996.12	420	June 21, 1902	12	
212	Stewart	52,433.39	129.00	55,245.75	107,808.14	17,378.71	125,186.85	420	Dec. 17, 1902	2	10
213	Truxtun	33,931.73	288.01	28,483.25	62,702.99	13,248.46	75,951.45	433	Sept. 11, 1902	1	11
214	Whipple	47,689.95	437.92	43,710.72	91,838.59	28,260.34	120,098.93	433	Oct. 21, 1902	12	
215	Worden	34,536.07	52.70	30,726.86	65,315.63	7,787.91	73,103.54	433	Dec. 31, 1902		12
	Total	659,662.47	7,214.32	590,896.44	1,257,773.23	280,053.33	1,537,826.56				
	TORPEDO BOATS.										
719	Bagley					12,830.57	12,830.57	175	Oct. 18, 1901		
728	Bailey	3,882.20		4,573.14	8,455.34	1,477.47	9,932.81	280	June 10, 1901		
720	Barney	2,104.24	11.00	2,445.72	4,560.96	1,358.55	5,919.51	175	Oct. 21, 1901		12
721	Biddle	2,407.21	81.80	2,931.11	5,370.12	414.29	5,784.41	175	Oct. 26, 1901		
722	Blakely			1,957.42	1,957.42	5,172.21	7,129.63	196	Dec. 27, 1904		

Statement 4.—TOTAL [illegible]

	Name of vessel.	Title C.	
		Journal pay.	Public vouchers (including commuted rations).
	TOLEDO SHIPS—contd.		
712	Dahlgren		
712	De Long		
712	Dupont		
712	Farragut		885.00
712	Foote		60.00
712	Fox	867,482.48	2,102.40
712	Goldsborough		600.00
712	Mackenzie		675.00
712	Manley (old)		120.00
712	Morris		2,365.36
712	Hodgson		300.00
712	Hull (old)		
	Lamson		
	Lawton		2,025.30
	Perry		60.00
			885.00
	Total		30.00
		25,885.48	8,240.30
	SUBMARINES.		
300	A-2		
301	A-3	20,468.38	
302	A-4	8,326.30	
303	A-5	8,233.30	7.50
304	A-6	8,885.30	
305	A-7	8,233.30	7.50
306	B-1	8,233.30	
307	B-2	5,301.74	
		8,110.87	
		11,176.16	14.25
		12,696.37	6.05
		14,843.16	
312	C-4	14,007.80	3,004.10
313	C-5	15,171.60	3,008.00
314	D-1	15,400.25	3,008.00
315	D-2	15,000.25	3,008.00
		15,001.25	3,008.00

	D-3	19,145.03		30,052.47	[illegible]	[illegible]	[illegible]		[illegible]		
317	E-1	23,631.49		15,295.40	38,926.89	[illegible]	[illegible]		[illegible]		
318	E-2	12,057.20		1,693.03	13,750.23	31,990.99	[illegible]		[illegible]		
319	F-1	14,625.00		2,661.41	17,286.41	7,703.35	24,989.76		June 25, 1912	9	
320	F-2	13,036.15		2,149.00	15,185.15	7,559.59	22,744.74		Aug. 5, 1912	9	
321	F-3	14,666.77		2,029.92	16,696.69	7,907.88	24,604.57		May 3, 1913	2	
322	F-4	6,242.48	9.00	8,524.26	14,775.74	4,384.62	19,160.36		Oct. 28, 1912	12	
323	G-1	22,380.28		15,152.90	37,533.18	20,847.81	58,380.99		Feb. 6, 1915	12	
324	G-2	27,603.58		14,640.88	42,244.46	12,112.43	54,356.89		Mar. 22, 1915	12	
325	G-3	20,129.79	1,395.00	5,025.50	26,550.29	1,868.11	28,418.40		Jan. 22, 1914	12	
326	G-4	18,466.90		16,286.39	34,753.29	23,260.62	58,013.91		Dec. 1, 1913	12	
327	H-1	20,816.84	15.00	8,842.34	29,674.18	22,448.77	52,122.95		do	12	
328	H-2	17,834.91	50.00	11,603.64	29,488.55	9,043.57	38,532.12		Jan. 16, 1914	12	
329	H-3	20,200.35	50.00	8,321.47	28,571.82	16,443.32	45,015.14		Mar. 17, 1914	12	
330	K-1	25,618.43		18,443.75	44,062.18	17,656.27	61,718.45		Jan. 31, 1914	12	
331	K-2	23,601.88		23,498.83	47,100.71	18,478.40	65,579.11		Oct. 30, 1914	12	
332	K-3	24,573.46		11,036.32	35,609.78	11,914.54	47,524.32		Oct. 24, 1914	12	
333	K-4	25,330.87		6,875.49	32,206.36	17,830.49	50,036.85		Nov. 22, 1914	12	
334	K-5	27,528.51		18,658.26	46,186.77	22,197.67	68,384.44		Sept. 9, 1914	12	
335	K-6	27,337.45		15,837.99	43,175.44	29,756.52	72,931.96		Dec. 11, 1914	12	
336	K-7	23,961.78		8,052.17	32,013.95	11,690.33	43,704.28		Dec. 1, 1914	12	
337	K-8	27,230.94		7,785.95	35,016.89	11,224.70	46,241.59		Apr. 11, 1916	3	
338	L-1	4,970.89	68.10	1,782.19	6,821.18		6,821.18		Building		
339	L-2								Apr. 22, 1916	2	
340	L-3	4,061.27	53.10	1,488.42	5,602.79	64.25	5,667.04		May 4, 1916	2	
341	L-4	3,243.45	50.90	1,442.87	4,737.22		4,737.22		Building		
342	L-5					15.00	15.00		do		
343	L-6					15.00	15.00		do		
344	L-7	2,074.52			2,074.52	15.00	2,089.52		do		
345	L-8					137.89	137.89		do		
346	L-9								do		
347	L-10								do		
348	L-11					28.07	28.07		do		
349	M-1								do		
350	Schley								do		
351	N-1		1.90		1.90	15.00	16.90		do		
352	N-2					15.00	15.00		do		
353	N-3					15.00	15.00		do		
354	N-4								do		
355	N-5								do		
356	N-6								do		
357	N-7								do		
358	Submarine No. 60								do		
359	Submarine No. 61								do		
360	O-1								do		
361	O-2								do		
362	O-3								do		
363	O-4								do		
364	O-5								do		
365	O-6								do		
366	O-7								do		
367	O-8								do		

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	SUBMARINES—continued.										
368	O-9								Building		
369	O-10								do		
370	O-11								do		
371	O-12								do		
372	O-13								do		
373	O-14								do		
374	O-15								do		
375	O-16								do		
	Total	$674,760.19	$22,710.24	$409,100.21	$1,906,570.64	$470,046.14	$1,576,616.78				
	TENDERS TO TORPEDO VESSELS.										
730	Alert	94,619.44	3,892.77	60,489.89	159,602.10	9,101.15	168,103.25	1,110	No record	12	
735	Bushnell	60,710.14	3,067.78	36,324.39	100,102.31	1,446.28	101,548.59	3,580	Nov. 24, 1915	8	
737	Dixie	164,601.72	4,201.48	62,144.99	230,948.19	6,821.24	237,769.43	6,114	Apr. 19, 1898	6	6
732	Fulton	118,565.56	4,473.17	42,048.52	165,187.25	18,809.99	183,997.24	1,408	Dec. 7, 1914	12	
736	Iris	102,052.57	1,608.21	31,935.60	135,596.38	6,894.14	142,490.52	6,100	Apr. 1, 1898	10	
738	Melville	118,620.15	4,316.59	85,920.57	208,857.31	1,730.83	210,588.14	7,150	Dec. 3, 1915	7	
850	Panther	117,029.63	1,779.92	38,835.30	157,644.85	26,134.83	183,779.68	3,380	Apr. 22, 1898		12
734	Pompey	35,078.55	3,627.08	32,090.47	70,796.10	6,613.01	77,409.11	3,085	May 26, 1898	7	
	Total	811,377.76	26,967.00	389,789.72	1,228,134.49	77,551.47	1,305,685.96				
	GUNBOATS.										
412	Annapolis	92,601.11	1,886.14	43,857.94	138,345.19	12,377.48	150,722.67	1,010	July 20, 1897	12	
403	Callao	14,079.06	1,534.36	5,107.48	20,720.90	488.00	21,208.90	243	July 31, 1898	6	
420	Castine	94,741.38	2,236.99	52,944.28	149,922.65	7,895.55	157,818.20	1,177	Oct. 29, 1894	12	
426	Concord					195.59	195.59		Feb. 14, 1891		
427	Dolphin	118,130.93	5,098.03	40,305.67	163,534.63	14,744.50	178,279.13	1,486	Dec. 8, 1885	12	
419	Don Juan de Austria		1,069.80	1,580.07	2,649.87	4,674.16	7,324.03	1,130	Apr. 11, 1900		
417	Dubuque	87,969.55	1,156.68	39,340.96	128,467.19	22,138.51	150,605.70	1,085	June 3, 1905	11	1

408	Elcano	53,216.66	9,141.30	54,171.80	116,529.76	4,430.47	120,960.23	620	Nov. 20, 1902	12	.....
424	Helena	120,213.42	27,543.61	51,491.92	199,248.95	5,811.77	205,060.72	1,392	July 8, 1897	12	.....
416	Isla de Luzon	.....	1,765.38	5,606.70	7,372.08	872.68	8,244.76	1,030	Jan. 31, 1900	.....	.....
421	Machias	94,326.64	1,375.46	46,809.00	142,511.10	4,473.79	146,984.89	1,177	July 20, 1893	12	.....
410	Marietta	94,522.74	1,248.22	46,123.37	141,894.33	743.91	142,638.24	990	Sept. 1, 1897	12	.....
401	Monocacy	30,724.30	7,561.07	12,022.50	50,307.87	7,624.12	57,931.99	190	June 24, 1914	12	.....
423	Nashville	101,453.64	2,331.82	37,330.91	141,116.37	34,561.71	175,678.08	1,371	Aug. 19, 1897	10	.....
413	Newport	.....	.....	.....	.....	6,431.70	6,431.70	1,010	Oct. 5, 1897	.....	.....
418	Paducah	133,500.26	6,596.39	67,292.13	207,388.78	25,800.12	233,188.90	1,085	Sept. 2, 1905	12	.....
402	Palos	32,021.48	5,841.68	11,393.15	49,256.31	338.71	49,595.02	190	June 24, 1914	12	.....
404	Pampanga	6,583.57	808.82	5,468.46	12,860.85	9,388.78	22,249.63	243	June 8, 1899	12	.....
409	Petrel	61,640.24	1,159.45	26,426.52	89,226.21	24,950.72	114,176.93	890	Dec. 10, 1889	7	5
414	Princeton	30,677.94	1,199.62	17,184.27	49,061.83	1,189.99	50,251.82	1,010	May 27, 1898	9	.....
406	Quiros	24,749.50	4,784.55	12,582.61	42,116.66	358.53	42,475.19	350	Mar. 14, 1900	12	.....
422	Ranger	.....	.....	.....	.....	14,072.83	14,072.83	1,261	No record	.....	.....
426	Sacramento	87,455.04	2,674.41	38,594.02	128,723.47	29,578.43	158,301.90	1,425	Apr. 26, 1914	12	.....
405	Samar	27,094.50	4,598.49	10,084.42	41,777.41	3,889.20	45,666.61	243	May 26, 1899	12	.....
400	Sandoval	.....	952.75	466.67	1,419.42	1,133.47	2,552.89	100	Sept. 2, 1898	.....	.....
415	Vicksburg	21,804.88	922.28	19,593.42	42,320.58	55,037.69	97,358.27	1,010	Oct. 23, 1897	.....	12
407	Villalobos	33,118.98	5,420.60	13,359.27	51,898.85	3,574.18	55,473.03	370	Mar. 5, 1900	12	.....
411	Wheeling	70,259.27	1,164.08	34,554.02	105,977.37	23,648.54	129,625.91	990	Aug. 10, 1897	12	.....
425	Wilmington	131,695.70	12,727.06	45,267.52	189,690.28	14,380.76	204,071.04	1,392	May 13, 1897	12	.....
429	Yorktown	110,988.95	1,813.98	64,777.70	177,580.63	31,996.55	209,577.18	1,710	Apr. 23, 1889	12	.....
	Total	1,673,569.74	114,613.02	803,736.78	2,591,919.54	366,802.44	2,958,721.98	.....	.....	.....	.....
	TRANSPORTS.										
752	Buffalo	74,782.12	2,769.50	73,633.23	151,184.85	62,599.67	213,784.52	6,000	July 18, 1898	7	.....
750	General Alava	.....	.....	3,813.72	3,813.72	25,885.94	29,699.66	1,115	Mar. 19, 1900	.....	.....
754	Hancock	111,228.42	4,356.91	53,053.04	168,638.37	87,923.22	256,561.59	8,500	Nov. 20, 1902	12	.....
755	Henderson	.....	.....	.....	.....	.....	.....	10,000	Building	.....	.....
753	Prairie	127,844.17	4,983.66	70,933.93	203,761.76	47,534.64	251,296.40	6,620	Apr. 14, 1898	12	.....
	Total	313,854.71	12,110.07	201,433.92	527,398.70	223,943.47	751,342.17	.....	.....	.....	.....
	SUPPLY SHIPS.										
779	Bridge	.....	.....	.....	.....	.....	.....	8,500	Building	.....	.....
777	Celtic	99,566.72	1,745.09	49,272.02	150,583.83	34,337.70	184,921.53	6,750	May 25, 1898	12	.....
776	Culgoa	92,625.79	3,697.15	48,042.13	144,365.07	41,226.70	185,591.77	6,000	Dec. 3, 1898	12	.....
778	Glacier	94,663.06	4,610.35	78,275.36	177,548.77	49,047.21	226,595.98	8,325	July 5, 1898	12	.....
775	Supply	87,812.07	4,211.69	59,544.63	151,568.39	99,535.34	251,103.73	4,325	1898	12	.....
	Total	374,667.64	14,264.28	235,134.14	624,066.06	224,146.95	848,213.01	.....	.....	.....	.....
	HOSPITAL SHIP.										
801	Solace	102,543.68	8,390.75	47,015.33	157,949.76	107,565.65	265,515.41	5,700	Apr. 14, 1898	12	.....

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	FUEL SHIPS.										
611	Abarenda	$25,901.05	$9,829.31	$26,283.00	$62,013.36	$18,331.34	$80,344.70	6,680	May 20, 1898	12	.....
612	Ajax	29,149.85	13,021.67	33,186.68	75,358.20	9,158.99	84,517.19	9,250	May 21, 1898	12	.....
608	Arethusa	25,640.85	5,408.90	26,644.62	57,689.37	46,827.47	104,516.84	6,160	1898	12	.....
610	Brutus	22,466.33	4,194.08	21,046.30	47,706.71	64,949.68	112,656.39	6,550	May 27, 1898	12	.....
606	Caesar	26,305.71	9,135.99	17,238.24	52,679.94	24,007.61	76,687.55	5,940	May 13, 1898	12	.....
624	Cuyama	.....	.....	.....	.....	.....	.....	14,500	Building	.....	.....
607	Cyclops	50,830.14	5,555.74	46,741.09	103,126.97	46,723.26	149,850.23	19,360	Nov. 7, 1910	12	.....
613	Hector	40,437.54	6,701.77	43,414.29	90,553.60	29,815.06	120,368.66	11,250	Oct. 22, 1909	12	.....
620	Jason	45,460.00	8,657.58	58,311.64	112,429.22	34,166.06	146,595.28	19,250	June 26, 1913	12	.....
622	Jupiter	108,876.12	3,087.56	72,041.75	184,005.43	40,711.01	224,716.44	19,360	Apr. 7, 1913	12	.....
600	Justin	11,751.44	1,905.75	25,359.91	39,017.10	3,269.19	42,286.29	.....	Apr. 27, 1898	7	.....
616	Kanawha	39,246.68	7,580.55	73,821.15	120,648.38	22,685.96	143,334.34	14,500	June 5, 1915	12	.....
614	Mars	42,120.48	19,157.27	49,510.49	110,788.24	45,002.41	155,790.65	11,250	Aug. 26, 1909	12	.....
617	Maumee	.....	692.70	5,310.75	6,003.45	2,330.78	8,334.23	14,500	Building	.....	.....
604	Nanshan	25,076.15	3,879.26	46,988.96	75,944.37	11,798.97	87,743.34	5,140	1898	12	.....
623	Neptune	105,536.62	5,126.14	46,900.27	157,563.03	33,313.85	190,876.88	19,480	Sept. 20, 1911	12	.....
618	Nereus	56,337.20	27,173.23	59,888.42	143,398.85	3,303.98	146,702.83	19,080	Sept. 10, 1913	12	.....
609	Nero	29,804.82	4,402.08	36,326.17	70,532.53	32,238.54	102,771.07	6,100	June 8, 1898	12	.....
621	Orion	41,588.68	4,923.16	67,816.76	114,331.60	45,005.57	159,337.17	19,250	July 29, 1912	12	.....
619	Proteus	50,261.72	61,811.89	47,541.55	159,615.16	13,557.14	173,172.30	19,080	July 9, 1913	12	.....
603	Saturn	26,535.27	6,542.01	34,119.54	67,196.82	83,056.64	150,253.46	4,840	Apr. 11, 1898	12	.....
605	Sterling	10,461.49	11,1[illegible]5.83	12,140.04	33,747.36	16,345.98	50,093.34	5,660	Apr. 16, 1898	5	.....
615	Vulcan	37,108.08	5,457.91	35,890.73	78,456.72	51,901.52	130,358.24	11,250	Oct. 2, 1902	12	.....
	Total	850,895.68	22,388.38	886,522.35	1,962,806.41	678,501.01	2,641,307.42	.....	.....	.....	.....
	CONVERTED YACHTS.										
829	Aileen	.....	597.00	107.72	704.72	95.76	800.48	192	May 14, 1898	.....	.....
834	Dorothea	121.00	1,254.32	2,870.69	4,246.01	4,946.23	9,192.24	504	June 1, 1898	.....	.....
833	Eagle	47,717.98	1,192.55	35,475.75	84,386.28	14,745.77	99,132.05	434	Mar. 26, 1898	12	.....
828	Elfrida	.....	363.80	623.38	987.18	230.85	1,218.03	164	June 30, 1898	.....	.....
837	Gloucester	.....	991.80	3,218.22	4,210.02	5,588.27	9,798.29	786	May 20, 1899	.....	.....
832	Hawk	.....	942.00	390.79	1,332.79	708.83	2,041.62	375	Apr. 5, 1898	.....	.....

825	Huntress		941.44	505.84	1,447.28	7,451.37	8,898.65	82	July 1,1898		
840	Mayflower	123,286.83	6,275.05	31,595.20	161,157.08	19,816.30	180,973.38	2,690	1898	12	
826	Oneida					3,862.64	3,862.64	150	Apr. 30,1898	4	
836	Scorpion	47,659.81	1,817.20	45,141.58	94,648.59	146.17	94,794.76	775	Apr. 11,1898	12	
831	Stranger		544.20	32.95	577.15	955.83	1,532.98	369	June 30,1898		
827	Sylph	60,449.93	7,533.56	6,647.86	74,631.35	3,430.26	78,061.61	152	Aug. 18,1898	12	
830	Sylvia		1,272.60	946.91	2,219.51	3,659.07	5,878.58	302	June 29,1898		
838	Vixen		908.40	716.48	1,624.88	319.49	1,944.37	806	Apr. 11,1898		
835	Wasp		603.00	1,522.56	2,125.56	4,350.22	6,475.83	630	do		
839	Yankton	47,136.87	313.80	20,818.16	68,268.83	16,958.45	85,227.28	975	May 16,1898	12	
	Total	326,402.42	25,550.72	151,114.09	503,067.23	87,265.56	590,332.79				
	TUGS.										
504	Accomac		65.00	1,291.78	1,356.78	4,455.56	5,812.34	187	1898	12	
522	Active			3,583.60	3,583.60	6,566.41	10,150.01	296	1898	12	
524	Alice			490.40	490.40	1,264.01	1,754.41	318	1898	10	
534	Apache		1,672.72	1,936.74	3,609.46	3,217.61	6,827.07	650	1898	12	
545	Arapaho		1,998.26	4,208.50	6,206.76	3,018.35	9,225.11	575	Dec. 2,1914		
519	Choctaw	9,728.22	312.67	3,847.15	13,888.04	1,238.89	15,126.93	274	1898	12	
529	Fortune	30,050.13	125.13	19,995.58	50,170.84	393.00	50,563.84	450	1864	12	
507	Hercules			1,949.74	1,949.74	7,827.44	9,777.18	198	1898	12	
536	Iroquois	18,614.55	241.31	12,867.33	31,723.19	2,858.29	34,581.48	702	1898		
505	Iwana			1,500.88	1,500.88	6,541.86	8,042.74	192	Dec. 20,1891	12	
508	Massasoit			1,108.00	1,108.00	2,292.93	3,400.93	202	1898	12	
516	Modoc			2,665.05	2,665.05	2,725.32	5,390.37	241	1898	12	
546	Mohave	4,888.34	1,533.09	5,438.98	11,860.41	9,213.60	21,074.01	575	1914		
526	Mohawk			2,047.83	2,047.83	11,325.12	13,372.95	368	1898	12	
506	Narkeeta		894.66	2,312.10	3,206.76	7,628.52	10,835.28	192	Dec. 20,1891	12	
541	Navajo	32,123.40	2,135.46	35,386.00	69,644.86	3,568.53	73,213.39	800	Nov. 2,1907	12	
543	Ontario	33,229.46	91.08	19,721.25	53,041.79	12,100.18	65,141.97	1,120	Aug. 24,1912	12	
533	Osceola	21,843.04	32.40	15,108.72	36,984.16	21,637.30	58,621.46	571	1898	12	
537	Patapsco	31,431.97	1.96	18,984.22	50,418.45	10,651.21	61,069.66	755	1908	12	
538	Patuxent	24,129.93	2.56	20,854.23	44,986.72	15,630.47	60,617.19	755	1908	12	
520	Pawnee		1,120.01	1,610.44	2,730.45	3,772.65	6,503.10	275	1898	12	
511	Pawtucket	5,490.81	2,381.97	5,196.27	13,069.05	2,732.16	15,801.21	225	1898	12	
513	Penacook	4,477.57		2,601.42	7,078.99	2,834.22	9,913.21	230	1898	12	
514	Pentucket		1,344.56	2,137.14	3,481.70	7,095.08	10,576.78	230	1903	12	
532	Peoria	24,985.45	744.32	17,120.53	42,850.30	2,764.86	45,615.16	487	1898	12	
542	Piscataqua	20,803.17	200.10	19,040.73	40,044.00	5,106.40	45,150.40	854	1898	12	
549	Pocahontas					19.20	19.20	575	Building		
527	Pontiac		436.77	65.60	502.37	441.96	944.33	401	1898	12	
539	Potomac	30,505.08	2,454.74	12,228.83	45,188.65	1,266.60	46,455.25	785	1898	12	
540	Powhatan		1,547.32	2,565.77	4,113.09	8,992.07	13,105.16	194	1898	12	
503	Rapido			2,743.72	2,743.72	1,825.07	4,568.79	186	1898		
518	Rocket			1,153.48	1,153.48	6,300.35	7,453.83	206	1898	12	
512	Samoset			2,540.22	2,540.22	5,668.94	8,209.16	225	Mar. 20,1897	12	
517	Sebago		203.00	774.17	977.17	2,256.02	3,233.19	243	1898	12	

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public voucher (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	TUGS—continued.										
502	Sioux	.....	$13.00	$1,474.88	$1,487.88	$3,221.97	$4,709.85	155	1898	12	.....
544	Sonoma	$34,362.45	253.68	20,968.21	55,584.34	13,764.04	69,348.38	1,120	Aug. 24, 1912	12	.....
515	Sotoyomo	5,815.89	1,165.32	3,981.79	10,963.00	4,000.89	14,963.89	230	1903	12	.....
530	Standish	.....	.....	4,941.76	4,941.76	2,927.57	7,869.33	450	No record	12	.....
510	Tecumseh	8,198.31	293.84	4,002.81	12,494.96	4,329.34	16,824.30	221	1898	12	.....
547	Tillamook	.....	980.84	3,431.44	4,412.28	4,961.51	9,373.79	575	Dec. 2, 1914	.....	.....
521	Traffic	.....	919.44	1,056.32	1,975.76	5,274.36	7,250.12	280	1898	12	.....
535	Transfer	.....	848.53	2,613.62	3,462.15	2,206.45	5,668.60	684	1905	12	.....
509	Triton	11,139.79	327.90	3,499.34	14,967.03	972.73	15,939.76	212	No record	12	.....
525	Unadilla	.....	824.54	2,420.45	3,244.99	2,147.11	5,392.10	355	1895	12	.....
528	Uncas	19,195.98	882.53	10,154.77	29,733.28	18,231.07	47,964.35	441	1898	12	.....
523	Vigilant	.....	.....	5,140.99	5,140.99	5,632.08	10,773.07	300	1898	12	.....
500	Waban	7,472.27	.....	4,653.92	12,126.19	572.25	12,698.44	150	1898	12	.....
501	Wahneta	.....	.....	3,184.00	3,184.00	11,046.17	14,230.17	152	1891	12	.....
548	Wando	.....	.....	.....	.....	.....	.....	575	Building	.....	.....
561	Wompatuck	12,537.22	154.59	16,514.01	29,205.82	6,044.02	35,249.84	462	1898	12	.....
	Total	391,023.03	25,703.30	333,115.01	749,841.34	270,561.74	1,020,403.08	.....	.....	.....	.....
	SPECIAL TYPE.										
951	Albatross	58,206.64	1,162.43	13,973.10	73,342.17	.....	73,342.17	.....	.....	.....	.....
876	Baltimore	171,806.68	4,167.00	77,167.92	253,141.60	31,329.15	284,470.75	4,413	Jan. 7, 1890	12	.....
958	Fish Hawk	24,569.36	.....	15,021.46	39,590.82	.....	39,590.82	4,000	.....	12	.....
601	Hannibal	101,325.91	2,856.96	43,236.27	147,419.14	35,591.78	183,010.92	4,000	June 7, 1898	12	.....
910	Lebanon	34,131.66	134.90	36,400.12	70,666.68	20,494.73	91,161.41	3,285	Apr. 16, 1898	12	.....
602	Leonidas	102,068.84	4,765.45	39,313.35	146,147.64	27,966.06	174,113.70	4,023	May 21, 1898	12	.....
852	Prometheus	150,357.64	5,635.30	81,725.52	237,718.46	35,283.61	273,002.07	12,585	Jan. 15, 1910	12	.....
875	San Francisco	171,605.44	4,998.50	67,833.20	244,437.14	89,202.10	333,639.24	4,083	Aug. 21, 1911	.....	12
851	Vestal	207,120.09	6,420.78	75,710.13	289,251.00	16,719.81	305,970.81	12,585	Oct. 4, 1909	12	.....
900	Vesuvius	.....	.....	2,650.29	2,650.29	10,605.32	13,255.61	930	June 7, 1890	.....	12
	Total	1,021,192.26	30,141.32	453,031.36	1,504,364.94	267,192.56	1,771,557.50	.....	.....	.....	.....

	UNSERVICEABLE FOR WAR PURPOSES.										
950	Adams		1,244.40	1,258.45	2,502.85	2,808.87	5,311.72	1,400	1876		
953	Boxer		25.00	56,903.03	56,928.03	714.24	57,642.27	346	1905	12	
954	Constellation	422,493.80	6,453.01	252,341.64	681,288.54	6,213.22	687,501.76	1,970	1797	12	
955	Constitution					1,194.39	1,194.39	2,200	1797		
956	Cumberland			2,749.25	2,749.25	1,023.33	3,772.58	1,800	1904	12	
957	Essex		1,128.00	1,081.63	2,209.63	8,321.93	10,531.56	1,375	1876		
959	Franklin					3,989.10	3,989.10		1865	4	
960	Gopher		837.45	1,621.81	2,459.26	5,145.40	7,604.66	840	1871		
961	Granite State		1,243.20	2,899.04	4,142.24	3,207.41	7,349.65	4,150	1818		
962	Hartford	159,552.74		58,186.99	217,739.73	10,034.97	227,774.70	2,790	1858		12
963	Intrepid	2,402.19	15.50	4,682.78	7,100.47	5,487.28	12,587.75	1,800	1904		
733	Mohican	60,476.75	5,674.67	19,469.14	85,620.56	7,238.50	92,859.06	1,900	No record	12	
967	Philadelphia	23,178.87	1,717.04	18,188.83	43,084.74	11,393.21	54,477.95	4,410	1890	6	6
751	Rainbow	13,868.53	279.85	15,660.42	29,808.80	22,974.51	52,783.31	4,360	July 18, 1898		5
969	Reina Mercedes		1,516.57	6,465.66	7,982.23	7,926.80	15,909.03	2,835	Dec. 3, 1909	12	
800	Relief					3,852.02	3,852.02	3,300	1898		
970	Richmond			653.63	653.63	1,413.75	2,067.38	2,700	1858	12	
731	Severn	81,303.84	9,720.00	40,720.18	131,744.02	2,484.69	134,228.71	1,175	Dec. 3, 1899	12	
971	Southery	89,650.11	89.98	31,669.78	121,409.87	3,705.16	125,115.03	3,100	1898	12	
973	Topeka			2,300.26	2,300.26	1,652.77	3,953.03	2,255	1898	12	
974	Wolverine		816.90	955.73	1,772.63	1,621.65	3,394.28	685	1844		
975	Yantic		510.60	1,035.88	1,546.48	1,216.62	2,763.10	900	1864		
	Total	852,926.92	31,272.17	518,844.13	1,403,040.22	113,619.82	1,516,663.04				
	MISCELLANEOUS.										
980	Receiving ship at Portsmouth	10,658.95	168.95		10,827.90		10,827.90				
981	Receiving ship at Boston	419,192.99	29,338.39	26,712.98	475,244.36	105.70	475,350.06				
982	Receiving ship at Newport	65,647.75	3,951.45	10,519.52	80,118.72		80,118.72				
983	Receiving ship at New York	844,117.16	36,258.52	73,591.71	953,967.39	511.05	954,478.44				
984	Receiving ship at Philadelphia	397,186.00	17,904.93	38,580.03	453,668.96	45.21	453,714.17				
985	Receiving ship at Norfolk	836,914.29	23,804.41	235,712.74	1,096,431.44	23.75	1,096,455.19				
986	Receiving ship at Charleston	25,259.43	8,585.24	225.46	34,070.13	5.00	34,075.13				
987	Receiving ship at Mare Island			331.62	331.62		331.62				
988	Receiving ship at San Francisco	247,857.32	1,660.22	166,415.09	415,932.63	335.05	416,267.68				
989	Receiving ship at Puget Sound	173,610.40	9,518.12	31,607.81	214,736.33	1,387.71	216,124.04				
990	Receiving ship at Cavite	26,997.44	237.79	1,242.87	28,478.10		28,478.10				
991	Receiving ship at Olongapo	10,177.49	525.90	3,606.73	14,310.12	70.87	14,380.99				
992	Reserve torpedo division, Annapolis	32,317.40	22.50	6,558.23	38,898.13	5.25	38,903.38				
993	Reserve torpedo division, Charleston	3,785.24	49.50	3,399.24	7,233.98		7,233.98				

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	TORPEDO BOATS—contd.										
714	Dahlgren		$35.00	$219.90	$254.90	$5,193.53	$5,448.43	146	June 16, 1900		12
723	De Long		40.00	260.13	300.13	5,086.53	5,386.66	196	Oct. 27, 1902		
717	Dupont		2,162.42	1,778.04	3,940.46	2,512.24	6,452.70	165	Sept. 23, 1897		
727	Farragut	$17,492.03	453.23	10,782.71	28,727.97	1,664.08	30,392.05	279	Mar. 22, 1899		12
712	Foote		471.94	447.66	919.60	11.50	931.10	142	Aug. 7, 1897		
716	Fox		279.00	303.88	582.88	197.21	780.09	154	July 8, 1899		
726	Goldsborough		1,562.86	2,072.10	3,634.96	1,360.13	4,995.09	255	Apr. 9, 1908		12
710	Mackenzie		558.64	246.43	805.07	1,758.29	2,563.36	65	May 1, 1899		
729	Manley (old)					118.70	118.70	30	1898		
711	Morris			1,358.49	1,358.49	9,022.61	10,381.10	105	May 11, 1898		12
713	Rodgers		2,073.50	1,392.71	3,466.21	11,014.26	14,480.47	142	Apr. 2, 1898		
724	Shubrick		40.00	285.00	325.00	15,144.24	15,469.24	200	Sept. 21, 1905		12
715	Somers		443.50	272.48	715.98	75.00	790.98	150	Mar. 28, 1898	12	
725	Thornton		35.00	231.74	266.74	6,477.40	6,744.14	200	June 9, 1902		
718	Tingey			545.23	545.23	5,631.15	6,176.38	165	Jan. 7, 1904		
	Total	25,885.68	8,197.89	32,103.89	66,187.46	86,519.96	152,707.42				
	SUBMARINES.										
300	A-2	10,469.58		9,791.65	20,261.23	3,096.87	23,358.10		Jan. 12, 1903	12	
301	A-3	9,506.50	7.50	4,571.05	14,085.05	3,346.80	17,431.85		May 28, 1903	12	
302	A-4	9,233.19		6,490.84	15,724.03	2,753.95	18,477.98		Jan. 17, 1903	12	
303	A-5	8,885.20	7.50	14,436.47	23,329.17	5,525.43	28,854.60		May 28, 1903	12	
304	A-6	9,183.27		6,536.35	15,719.62	4,195.79	19,915.41		Sept. 19, 1903	12	
305	A-7	8,560.74		4,632.29	13,193.03	6,053.21	19,246.24		....do.....	12	
306	B-1	9,110.97	14.25	7,368.73	16,493.95	5,733.59	22,227.54		Oct. 18, 1907	12	
307	B-2	11,176.16	6.95	12,536.38	23,719.49	7,976.78	31,696.27		....do.....	12	
308	B-3	12,696.37		6,752.35	19,448.72	5,573.60	25,022.32		Dec. 3, 1907	12	
309	C-1	14,843.16	3,804.04	6,851.01	25,498.21	675.81	26,174.02		June 30, 1908	12	
310	C-2	14,967.80	4,658.97	8,526.24	28,153.01	1,210.53	29,363.54		Nov. 23, 1909	12	
311	C-3	16,171.69	5,425.99	7,657.56	29,255.24	859.37	30,114.61		....do.....	12	
312	C-4	14,460.71	3,782.68	10,354.26	28,597.65	1,031.41	29,629.06		....do.....	12	
313	C-5	16,090.75	3,309.36	22,270.44	41,670.55	1,043.21	42,713.76		Feb. 2, 1910	12	
314	D-1	19,182.13		13,568.85	32,750.98	19,214.99	51,965.97		Nov. 23, 1909	12	
315	D-2	19,851.75		9,574.89	29,426.64	18,979.07	48,405.71		....do.....	12	

316	D-3	19,145.03		30,052.47	49,197.50	14,940.43	64,137.93		Sept. 8, 1910	12	
317	E-1	23,631.49		15,295.40	38,926.89	61,195.11	100,122.00		Feb. 14, 1912	12	
318	E-2	12,057.20		1,693.03	13,750.23	31,990.99	45,741.22		do	9	
319	F-1	14,625.00		2,661.41	17,286.41	7,703.35	24,989.76		June 19, 1912	9	
320	F-2	13,036.15		2,149.00	15,185.15	7,559.59	22,744.74		June 25, 1912	9	
321	F-3	14,666.77		2,029.92	16,696.69	7,907.88	24,604.57		Aug. 5, 1912	9	
322	F-4	6,242.48	9.00	8,524.26	14,775.74	4,384.62	19,160.36		May 3, 1913	2	
323	G-1	22,380.28		15,152.90	37,533.18	20,847.81	58,380.99		Oct. 26, 1912	12	
324	G-2	27,603.58		14,640.88	42,244.46	12,112.43	54,356.89		Feb. 6, 1913	12	
325	G-3	20,129.79	1,395.00	5,025.50	26,550.29	1,868.11	28,418.40		Mar. 22, 1913	12	
326	G-4	18,466.90		16,286.39	34,753.29	23,260.62	58,013.91		Jan. 22, 1914	12	
327	H-1	20,816.84	15.00	8,842.34	29,674.18	22,448.77	52,122.95		Dec. 1, 1913	12	
328	H-2	17,834.91	50.00	11,603.64	29,488.55	9,043.57	38,532.12		do	12	
329	H-3	20,200.35	50.00	8,321.47	28,571.82	16,443.32	45,015.14		Jan. 16, 1914	12	
330	K-1	25,618.43		18,443.75	44,062.18	17,656.27	61,718.45		Mar. 17, 1914	12	
331	K-2	23,601.88		23,498.83	47,100.71	18,478.40	65,579.11		Jan. 31, 1914	12	
332	K-3	24,573.46		11,036.32	35,609.78	11,914.54	47,524.32		Oct. 30, 1914	12	
333	K-4	25,330.87		6,875.49	32,206.36	17,830.49	50,036.85		Oct. 24, 1914	12	
334	K-5	27,528.51		18,658.26	46,186.77	22,197.67	68,384.44		Nov. 22, 1914	12	
335	K-6	27,337.45		15,837.99	43,175.44	29,756.52	72,931.96		Sept. 9, 1914	12	
336	K-7	23,961.78		8,052.17	32,013.95	11,690.53	43,704.28		Dec. 11, 1914	12	
337	K-8	27,230.94		7,785.95	35,016.89	11,224.70	46,241.59		Dec. 1, 1914	12	
338	L-1	4,970.89	68.10	1,782.19	6,821.18		6,821.18		Apr. 11, 1916	8	
339	L-2								Building		
340	L-3	4,061.27	53.10	1,488.42	5,602.79	64.25	5,667.04		Apr. 22, 1916	2	
341	L-4	3,243.45	50.90	1,442.87	4,737.22		4,737.22		May 4, 1916	2	
342	L-5					15.00	15.00		Building		
343	L-6					15.00	15.00		do		
344	L-7	2,074.52			2,074.52	15.00	2,089.52		do		
345	L-8					137.89	137.89		do		
346	L-9								do		
347	L-10								do		
348	L-11					28.07	28.07		do		
349	M-1								do		
350	Schley								do		
351	N-1		1.90		1.90	15.00	16.90		do		
352	N-2					15.00	15.00		do		
353	N-3					15.00	15.00		do		
354	N-4								do		
355	N-5								do		
356	N-6								do		
357	N-7								do		
358	Submarine No. 60								do		
359	Submarine No. 61								do		
360	O-1								do		
361	O-2								do		
362	O-3								do		
363	O-4								do		
364	O-5								do		
365	O-6								do		
366	O-7								do		
367	O-8								do		

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	SUBMARINES—continued.										
368	O-9								Building		
369	O-10								do		
370	O-11								do		
371	O-12								do		
372	O-13								do		
373	O-14								do		
374	O-15								do		
375	O-16								do		
	Total	$674,760.19	$22,710.24	$409,100.21	$1,906,570.64	$470,046.14	$1,576,616.78				
	TENDERS TO TORPEDO VESSELS.										
730	Alert	94,619.44	3,892.77	60,489.89	159,602.10	9,101.15	168,103.25	1,110	No record	12	
735	Bushnell	60,710.14	3,067.78	36,324.39	100,102.31	1,446.28	101,548.59	3,580	Nov. 24, 1915	8	
737	Dixie	164,601.72	4,201.48	62,144.99	230,948.19	6,821.24	237,769.43	6,114	Apr. 19, 1898	6	6
732	Fulton	118,665.56	4,473.17	42,048.52	165,187.25	18,809.99	183,997.24	1,408	Dec. 7, 1914	12	
736	Iris	102,052.57	1,608.21	31,935.60	135,596.38	6,894.14	142,490.52	6,100	Apr. 1, 1898	10	
738	Melville	118,620.15	4,316.59	85,920.57	208,857.31	1,730.83	210,588.14	7,150	Dec. 3, 1915	7	
850	Panther	117,029.63	1,779.92	38,835.30	157,644.85	26,134.83	183,779.68	3,380	Apr. 22, 1898		12
734	Pompey	35,078.55	3,627.08	32,090.47	70,796.10	6,613.01	77,409.11	3,085	May 26, 1898	7	
	Total	811,377.76	26,967.00	389,789.72	1,228,134.49	77,551.47	1,305,685.96				
	GUNBOATS.										
412	Annapolis	92,601.11	1,886.14	43,857.94	138,345.19	12,377.48	150,722.67	1,010	July 20, 1897	12	
403	Callao	14,079.06	1,534.36	5,107.48	20,720.90	488.00	21,208.90	243	July 31, 1898	6	
420	Castine	94,741.38	2,236.99	52,944.28	149,922.65	7,895.55	157,818.20	1,177	Oct. 23, 1894	12	
428	Concord					195.59	195.59		Feb. 14, 1891		
427	Dolphin	118,130.93	5,098.03	40,305.67	163,534.63	14,744.50	178,279.13	1,486	Dec. 8, 1885	12	
419	Don Juan de Austria		1,069.80	1,580.07	2,649.87	4,674.16	7,324.03	1,130	Apr. 11, 1900		
417	Dubuque	87,969.55	1,156.68	39,240.96	128,467.19	22,128.51	150,695.70	1,085	June 8, 1896	11	1

408	Eleano	53,216.66	9,141.30	54,171.80	116,529.76	4,430.47	120,960.23	620	Nov. 20, 1902	12	.....
424	Helena	120,213.42	27,543.61	51,491.92	199,248.95	5,811.77	205,060.72	1,392	July 8, 1897	12	.....
416	Isla de Luzon	.....	1,765.38	5,606.70	7,372.08	872.68	8,244.76	1,030	Jan. 31, 1900	.....	.....
421	Machias	94,326.64	1,375.46	46,809.00	142,511.10	4,473.79	146,984.89	1,177	July 20, 1893	12	.....
410	Marietta	94,522.74	1,248.22	46,123.37	141,894.33	743.91	142,638.24	990	Sept. 1, 1897	12	.....
401	Monocacy	30,724.30	7,561.07	12,022.50	50,307.87	7,624.12	57,931.99	190	June 24, 1914	12	.....
423	Nashville	101,453.64	2,331.82	37,330.91	141,116.37	34,561.71	175,678.08	1,371	Aug. 19, 1897	10	.....
413	Newport	.....	.....	.....	.....	6,431.70	6,431.70	1,010	Oct. 5, 1897	.....	.....
418	Paducah	133,500.26	6,596.39	67,292.13	207,388.78	25,800.12	233,188.90	1,085	Sept. 2, 1905	12	.....
402	Palos	32,021.48	5,841.68	11,393.15	49,256.31	338.71	49,595.02	190	June 24, 1914	12	.....
404	Pampanga	6,583.57	808.82	5,468.46	12,860.85	9,388.78	22,249.63	243	June 8, 1899	12	.....
409	Petrel	61,640.24	1,159.45	26,426.52	89,226.21	24,950.72	114,176.93	890	Dec. 10, 1889	7	5
414	Princeton	30,677.94	1,199.62	17,184.27	49,061.83	1,189.99	50,251.82	1,010	May 27, 1898	9	.....
406	Quiros	24,749.50	4,784.55	12,582.61	42,116.66	358.53	42,475.19	350	Mar. 14, 1900	12	.....
422	Ranger	.....	.....	.....	.....	14,072.83	14,072.83	1,261	No record	.....	.....
426	Sacramento	87,455.04	2,674.41	38,594.02	128,723.47	29,578.43	158,301.90	1,425	Apr. 26, 1914	12	.....
405	Samar	27,094.50	4,598.49	10,084.42	41,777.41	3,889.20	45,666.61	243	May 26, 1899	12	.....
400	Sandoval	.....	952.75	466.67	1,419.42	1,133.47	2,552.89	100	Sept. 2, 1898	.....	.....
415	Vicksburg	21,804.88	922.28	19,593.42	42,320.58	55,037.69	97,358.27	1,010	Oct. 23, 1897	.....	12
407	Villalobos	33,118.98	5,420.60	13,359.27	51,898.85	3,574.18	55,473.03	370	Mar. 5, 1900	12	.....
411	Wheeling	70,259.27	1,164.08	34,554.02	105,977.37	23,648.54	129,625.91	990	Aug. 10, 1897	12	.....
425	Wilmington	131,695.70	12,727.06	45,267.52	189,690.28	14,380.76	204,071.04	1,392	May 13, 1897	12	.....
429	Yorktown	110,988.95	1,813.98	64,777.70	177,580.63	31,996.55	209,577.18	1,710	Apr. 23, 1889	12	.....
	Total	1,673,569.74	114,613.02	803,736.78	2,591,919.54	366,802.44	2,958,721.98	.....	.....	.....	.....
	TRANSPORTS.										
752	Buffalo	74,782.12	2,769.50	73,633.23	151,184.85	62,599.67	213,784.52	6,000	July 18, 1898	7	.....
750	General Alava	.....	.....	3,813.72	3,813.72	25,885.94	29,699.66	1,115	Mar. 19, 1900	.....	.....
754	Hancock	111,228.42	4,356.91	53,053.04	168,638.37	87,923.22	256,561.59	8,500	Nov. 20, 1902	12	.....
755	Henderson	.....	.....	.....	.....	.....	.....	10,000	Building	.....	.....
753	Prairie	127,844.17	4,983.66	70,933.93	203,761.76	47,534.64	251,296.40	6,620	Apr. 14, 1898	12	.....
	Total	313,854.71	12,110.07	201,433.92	527,398.70	223,943.47	751,342.17	.....	.....	.....	.....
	SUPPLY SHIPS.										
779	Bridge	.....	.....	.....	.....	.....	.....	8,500	Building	.....	.....
777	Celtic	99,566.72	1,745.09	49,272.02	150,583.83	34,337.70	184,921.53	6,750	May 25, 1898	12	.....
776	Culgoa	92,625.79	3,697.15	48,042.13	144,365.07	41,226.70	185,591.77	6,000	Dec. 3, 1898	12	.....
778	Glacier	94,663.06	4,610.35	78,275.36	177,548.77	49,047.21	226,595.98	8,325	July 5, 1898	12	.....
775	Supply	87,812.07	4,211.69	59,544.63	151,568.39	99,535.34	251,103.73	4,325	1898	12	.....
	Total	374,667.64	14,264.28	235,134.14	624,066.06	224,146.95	848,213.01	.....	.....	.....	.....
	HOSPITAL SHIP.										
801	Solace	102,543.68	8,390.75	47,015.33	157,949.76	107,565.65	265,515.41	5,700	Apr. 14, 1898	12	.....

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public vouchers (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	FUEL SHIPS.										
611	Abarenda	$25,901.05	$9,829.31	$26,283.00	$62,013.36	$18,331.34	$80,344.70	6,680	May 20, 1898	12	.....
612	Ajax	29,149.85	13,021.67	33,186.68	75,358.20	9,158.99	84,517.19	9,250	May 21, 1898	12	.....
608	Arethusa	25,640.85	5,403.90	26,644.62	57,689.37	46,827.47	104,516.84	6,160	1898	12	.....
610	Brutus	22,466.33	4,194.08	21,046.30	47,706.71	64,949.68	112,656.39	6,550	May 27, 1898	12	.....
606	Caesar	26,305.71	9,135.99	17,238.24	52,679.94	24,007.61	76,687.55	5,940	May 13, 1898	12	.....
624	Cuyama	.....	.....	.....	.....	.....	.....	14,500	Building	.....	.....
607	Cyclops	50,830.14	5,555.74	46,741.09	103,126.97	46,723.26	149,850.23	19,360	Nov. 7, 1910	12	.....
613	Hector	40,437.54	6,701.77	43,414.29	90,553.60	29,815.06	120,368.66	11,250	Oct. 22, 1909	12	.....
620	Jason	45,460.00	8,657.58	58,311.64	112,429.22	34,166.06	146,595.28	19,250	June 26, 1913	12	.....
622	Jupiter	108,876.12	3,087.56	72,041.75	184,005.43	40,711.01	224,716.44	19,360	Apr. 7, 1913	12	.....
600	Justin	11,751.44	1,905.75	25,359.91	39,017.10	3,269.19	42,286.29	.....	Apr. 27, 1898	7	.....
616	Kanawha	39,246.68	7,580.55	73,821.15	120,648.38	22,685.96	143,334.34	14,500	June 5, 1915	12	.....
614	Mars	42,120.48	19,157.27	49,510.49	110,788.24	45,002.41	155,790.65	11,250	Aug. 26, 1909	12	.....
617	Maumee	.....	692.70	5,310.75	6,003.45	2,330.78	8,334.23	14,500	Building	.....	.....
604	Nanshan	25,076.15	3,879.26	46,988.96	75,944.37	11,798.97	87,743.34	5,140	1898	12	.....
623	Neptune	105,536.62	5,126.14	46,900.27	157,563.03	33,313.85	190,876.88	19,480	Sept. 20, 1911	12	.....
618	Nereus	56,337.20	27,173.23	59,888.42	143,398.85	3,303.98	146,702.83	19,080	Sept. 10, 1913	12	.....
609	Nero	29,804.82	4,402.08	36,326.17	70,532.53	32,238.54	102,771.07	6,100	June 8, 1898	12	.....
621	Orion	41,588.68	4,9[illegible].16	67,816.76	114,331.60	45,005.57	159,337.17	19,250	July 29, 1912	12	.....
619	Proteus	50,261.72	61,811.89	47,541.55	159,615.16	13,557.14	173,172.30	19,080	July 9, 1913	12	.....
603	Saturn	26,535.27	6,542.01	34,119.54	67,196.82	83,056.64	150,253.46	4,840	Apr. 11, 1898	12	.....
605	Sterling	10,461.49	11,1[illegible]5.83	12,140.04	33,747.36	16,345.98	50,093.34	5,660	Apr. 16, 1898	5	.....
615	Vulcan	37,108.08	5,457.91	35,890.73	78,456.72	51,901.52	130,358.24	11,250	Oct. 2, 1902	12	.....
	Total	850,895.68	22,388.38	886,522.35	1,962,806.41	678,501.01	2,641,307.42	.....	.....	.....	.....
	CONVERTED YACHTS.										
829	Aileen	.....	597.00	107.72	704.72	95.76	800.48	192	May 14, 1898	.....	.....
834	Dorothea	121.00	1,254.32	2,870.69	4,246.01	4,946.23	9,192.24	594	June 1, 1898	.....	.....
833	Eagle	47,717.98	1,192.55	35,475.75	84,386.28	14,745.77	99,132.05	434	Mar. 26, 1898	12	.....
828	Elfrida	.....	363.80	623.38	987.18	230.85	1,218.03	164	June 30, 1898	.....	.....
837	Gloucester	.....	991.80	3,218.22	4,210.02	5,588.27	9,798.29	786	May 20, 1899	.....	.....
832	Hawk	.....	942.00	890.79	1,832.79	708.83	2,541.62	375	Apr. 5, 1898	.....	.....

825	Huntress		941.44	505.84	1,447.28	7,451.37	8,898.65	82	July 1,1898		
840	Mayflower	123,286.83	6,275.05	31,595.20	161,157.08	19,816.30	180,973.38	2,690	1898	12	
826	Oneida					3,862.64	3,862.64	150	Apr. 30,1898	4	
836	Scorpion	47,659.81	1,817.20	45,141.58	94,648.59	146.17	94,794.76	775	Apr. 11,1898	12	
831	Stranger		544.20	32.95	577.15	955.83	1,532.98	369	June 30,1898		
827	Sylph	60,449.93	7,533.56	6,647.86	74,631.35	3,430.26	78,061.61	152	Aug. 18,1898	12	
830	Sylvia		1,272.60	946.91	2,219.51	3,659.07	5,878.58	302	June 29,1898		
838	Vixen		908.40	716.48	1,624.88	319.49	1,944.37	806	Apr. 11,1898		
835	Wasp		603.00	1,522.56	2,125.56	4,350.22	6,475.83	630	do		
839	Yankton	47,136.87	313.80	20,818.16	68,268.83	16,958.45	85,227.28	975	May 16,1898	12	
	Total	326,402.42	25,550.72	151,114.09	503,067.23	87,265.56	590,332.79				
	TUGS.										
504	Accomac		65.00	1,291.78	1,356.78	4,455.56	5,812.34	187	1898	12	
522	Active			3,583.60	3,583.60	6,566.41	10,150.01	296	1898	12	
524	Alice			490.40	490.40	1,264.01	1,754.41	318	1898	10	
534	Apache		1,672.72	1,936.74	3,609.46	3,217.61	6,827.07	650	1898	12	
545	Arapaho		1,998.26	4,208.50	6,206.76	3,018.35	9,225.11	575	Dec. 2,1914		
519	Choctaw	9,728.22	312.67	3,847.15	13,888.04	1,238.89	15,126.93	274	1898	12	
529	Fortune	30,050.13	125.13	19,995.58	50,170.84	393.00	50,563.84	450	1864	12	
507	Hercules			1,949.74	1,949.74	7,827.44	9,777.18	198	1898	12	
536	Iroquois	18,614.55	241.31	12,867.33	31,723.19	2,858.29	34,581.48	702	1898		
505	Iwana			1,500.88	1,500.88	6,541.86	8,042.74	192	Dec. 20,1891	12	
508	Massasoit			1,108.00	1,108.00	2,292.93	3,400.93	202	1898	12	
516	Modoc			2,665.05	2,665.05	2,725.32	5,390.37	241	1898	12	
546	Mohave	4,888.34	1,533.09	5,438.98	11,860.41	9,213.60	21,074.01	575	1914		
526	Mohawk			2,047.83	2,047.83	11,325.12	13,372.95	368	1898	12	
506	Narkeeta		894.66	2,312.10	3,206.76	7,628.52	10,835.28	192	Dec. 20,1891	12	
541	Navajo	32,123.40	2,135.46	35,386.00	69,644.86	3,568.53	73,213.39	800	Nov. 2,1907	12	
543	Ontario	33,229.46	91.08	19,721.25	53,041.79	12,100.18	65,141.97	1,120	Aug. 24,1912	12	
533	Osceola	21,843.04	32.40	15,108.72	36,984.16	21,637.30	58,621.46	571	1898	12	
537	Patapsco	31,431.97	1.96	18,984.22	50,418.45	10,651.21	61,069.66	755	1908	12	
538	Patuxent	24,129.93	2.56	20,854.23	44,986.72	15,630.47	60,617.19	755	1908	12	
520	Pawnee		1,120.01	1,610.44	2,730.45	3,772.65	6,503.10	275	1898	12	
511	Pawtucket	5,490.81	2,381.97	5,196.27	13,069.05	2,732.16	15,801.21	225	1898	12	
513	Penacook	4,477.57		2,601.42	7,078.99	2,834.22	9,913.21	230	1898	12	
514	Pentucket		1,344.56	2,137.14	3,481.70	7,095.08	10,576.78	230	1903	12	
532	Peoria	24,985.45	744.32	17,120.53	42,850.30	2,764.86	45,615.16	487	1898	12	
542	Piscataqua	20,803.17	200.10	19,040.73	40,044.00	5,106.40	45,150.40	854	1898	12	
549	Pocahontas					19.20	19.20	575	Building		
527	Pontiac		436.77	65.60	502.37	441.96	944.33	401	1898	12	
539	Potomac	30,505.08	2,454.74	12,228.83	45,188.65	1,266.60	46,455.25	785	1898	12	
540	Powhatan		1,547.32	2,565.77	4,113.09	8,992.07	13,105.16	194	1898	12	
503	Rapido			2,743.72	2,743.72	1,825.07	4,568.79	186	1898		
518	Rocket			1,153.48	1,153.48	6,300.35	7,453.83	206	1898	12	
512	Samoset			2,540.22	2,540.22	5,668.94	8,209.16	225	Mar. 20,1897	12	
517	Sebago		203.00	774.17	977.17	2,256.02	3,233.19	243	1898	12	

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public voucher (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	TUGS—continued.										
502	Sioux		$13.00	$1,474.88	$1,487.88	$3,221.97	$4,709.85	155	1898	12	
544	Sonoma	$34,362.45	253.68	20,968.21	55,584.34	13,764.04	69,348.38	1,120	Aug. 24, 1912	12	
515	Sotoyomo	5,815.89	1,165.32	3,981.79	10,963.00	4,000.89	14,963.89	280	1908	12	
530	Standish			4,941.76	4,941.76	2,927.57	7,869.33	450	No record	12	
510	Tecumseh	8,198.31	293.84	4,002.81	12,494.96	4,329.34	16,824.30	221	1898	12	
547	Tillamook		980.84	3,431.44	4,412.28	4,961.51	9,373.79	575	Dec. 2, 1914		
521	Traffic		919.44	1,056.32	1,975.76	5,274.36	7,250.12	280	1898	12	
535	Transfer		848.53	2,613.62	3,462.15	2,206.45	5,668.60	684	1905	12	
509	Triton	11,139.79	327.90	3,499.34	14,967.03	972.73	15,939.76	212	No record	12	
525	Unadilla		824.54	2,420.45	3,244.99	2,147.11	5,392.10	355	1895	12	
528	Uncas	19,195.98	382.53	10,154.77	29,733.28	18,231.07	47,964.35	441	1898	12	
523	Vigilant			5,140.99	5,140.99	5,632.08	10,773.07	300	1898	12	
500	Waban	7,472.27		4,653.92	12,126.19	572.25	12,698.44	150	1898	12	
501	Wahneta			8,184.00	8,184.00	11,046.17	14,230.17	152	1891	12	
548	Wando							575	Building		
531	Wompatuck	12,537.22	154.59	16,514.01	29,205.82	6,044.02	35,249.84	462	1898	12	
	Total	391,023.03	25,703.30	333,115.01	749,841.34	270,561.74	1,020,403.08				
	SPECIAL TYPE.										
951	Albatross	58,206.64	1,162.43	13,973.10	73,342.17		73,342.17				
876	Baltimore	171,806.68	4,167.00	77,167.92	253,141.60	31,329.15	284,470.75	4,413	Jan. 7, 1890	12	
958	Fish Hawk	24,569.36		15,021.46	39,590.82		39,590.82	4,000		12	
601	Hannibal	101,325.91	2,856.96	43,236.27	147,419.14	35,591.78	183,010.92	4,000	June 7, 1898	12	
910	Lebanon	34,131.66	134.90	36,400.12	70,666.68	20,494.73	91,161.41	3,285	Apr. 16, 1898	12	
12	Leonidas	102,068.84	4,765.45	39,313.35	146,147.64	27,966.06	174,113.70	4,023	May 21, 1898	12	
6	Prometheus	150,357.64	5,636.30	81,725.52	237,718.46	35,283.61	273,002.07	12,585	Jan. 15, 1910	12	
	San Francisco	171,605.44	4,998.50	67,833.20	244,437.14	89,202.10	333,639.24	4,083	Aug. 21, 1911		12
	Vestal	207,120.09	6,420.78	75,710.13	289,251.00	16,719.81	305,970.81	12,585	Oct. 4, 1909	12	
	Vesuvius			2,650.29	2,650.29	10,605.32	13,255.61	680	June 7, 1890		12
	Total	1,021,192.26	30,141.32	453,031.36	1,504,364.94	267,192.56	1,771,557.50				

	UNSERVICEABLE FOR WAR PURPOSES.										
	Adams		1,244.40	1,258.45	2,502.85	2,808.87	5,311.72	1,400	1876		
	Boxer		25.00	56,903.03	56,928.03	714.24	57,642.27	346	1905	12	
	Constellation	422,493.89	6,453.01	252,341.64	681,288.54	6,213.22	687,501.76	1,970	1797	12	
	Constitution					1,194.39	1,194.39	2,200	1797		
	Cumberland			2,749.25	2,749.25	1,023.33	3,772.58	1,800	1904	12	
	Essex		1,128.00	1,081.63	2,209.63	8,321.93	10,531.56	1,375	1876		
	Franklin					3,989.10	3,989.10		1865	4	
	Gopher		837.45	1,621.81	2,459.26	5,145.40	7,604.66	840	1871		
	Hartford	159,552.74	1,243.20	2,899.04	4,142.24	3,207.41	7,349.65	4,150	1818		
	Intrepid	2,402.19		58,186.99	217,739.73	10,034.97	227,774.70	2,790	1858		12
	Mohican	60,476.75	15.50	4,682.78	7,100.47	5,487.28	12,587.75	1,800	1904		
	Philadelphia	23,178.87	5,674.67	19,469.14	85,620.56	7,238.50	92,859.06	1,900	No record	12	
	Rainbow	13,868.53	1,717.04	18,188.83	43,084.74	11,393.21	54,477.95	4,410	1890	6	6
	Reina Mercedes		279.85	15,660.42	29,808.80	22,974.51	52,783.31	4,360	July 18, 1898		5
	Relief		1,516.57	6,465.66	7,982.23	7,926.80	15,909.03	2,835	Dec. 3, 1909	12	
970	Richmond					3,852.02	3,852.02	3,300	1898		
731	Severn	81,303.84	9,720.00	653.63	653.63	1,413.75	2,067.38	2,700	1858	12	
971	Southery	89,650.11	89.98	40,720.18	131,744.02	2,484.69	134,228.71	1,175	Dec. 3, 1899	12	
973	Topeka			31,660.78	121,409.87	3,705.16	125,115.03	3,100	1898	12	
974	Wolverine		816.90	2,300.26	2,300.26	1,652.77	3,953.03	2,255	1898	12	
975	Yantic		510.60	955.73	1,772.63	1,621.65	3,394.28	685	1844		
				1,035.88	1,546.48	1,216.62	2,763.10	900	1864		
	Total	852,926.92	31,272.17	518,844.13	1,403,040.22	113,619.82	1,516,663.04				
	MISCELLANEOUS.										
980	Receiving ship at Portsmouth	10,658.95	168.95		10,827.90		10,827.90				
981	Receiving ship at Boston	419,192.99	29,338.39	26,712.98	475,244.36	105.70	475,350.06				
982	Receiving ship at Newport	65,647.75	3,951.45	10,519.52	80,118.72		80,118.72				
983	Receiving ship at New York	844,117.16	36,258.52	73,591.71	953,967.39	511.05	954,478.44				
984	Receiving ship at Philadelphia	397,186.00	17,904.93	38,580.03	453,668.96	45.21	453,714.17				
985	Receiving ship at Norfolk	836,914.29	23,804.41	235,712.74	1,096,431.44	23.75	1,096,455.19				
986	Receiving ship at Charleston	25,259.43	8,585.24	225.46	34,070.13	5.00	34,075.13				
987	Receiving ship at Mare Island			331.62	331.62		331.62				
988	Receiving ship at San Francisco	247,857.32	1,660.22	166,415.09	415,932.63	335.05	416,267.68				
989	Receiving ship at Puget Sound	173,610.40	9,518.12	31,607.81	214,736.33	1,387.71	216,124.04				
990	Receiving ship at Cavite	26,997.44	237.79	1,242.87	28,478.10		28,478.10				
991	Receiving ship at Olongapo	10,177.49	525.90	3,606.73	14,310.12	70.87	14,380.99				
992	Reserve torpedo division, Annapolis	32,317.40	22.50	6,558.23	38,898.13	5.26	38,903.38				
993	Reserve torpedo division, Charleston	3,785.24	49.50	3,399.24	7,233.98		7,233.98				

Statement 4.—TOTAL FLEET MAINTENANCE AND OPERATION—Continued.

No.	Name of vessel.	Title C.			Total operating expenses.	Repairs and alterations to ships, including equipage.	Total maintenance and operation.	Tonnage.	Date of first commission.	Months in commission.	
		Accrued pay.	Public voucher (including commuted rations).	Stores issued (including provisions and medical stores).						Full commission.	Commission in reserve.
	MISCELLANEOUS—contd.										
994	Yard craft	$81,122.30	$12,483.78	$32,970.07	$126,576.15	$49,043.49	$175,619.64				
995	Ships, Naval Academy	172,871.41	1,644.76	31,017.27	205,533.44		205,533.44				
996	Seamen's quarters, Washington	49,759.85	439.09	3,928.62	54,127.56	5.62	54,133.18				
998	Target rafts					89,043.36	89,043.36				
999	Airships		5,874.57		5,874.57	57,722.17	63,596.74				
	Total	3,397,475.42	152,468.12	666,419.99	4,216,363.53	198,304.23	4,414,667.76				
	Grand total	30,566,165.62	1,130,192.55	16,280,562.65	47,976,920.82	8,556,504.69	56,533,425.51				

RECAPITULATION.

Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.	Class.	Number.	Tonnage.	Average months in commission.	Total cost.	Average cost per vessel for 12 months.
Battleships:						Submarines	76		5.8	$1,576,616.78	$42,920.60
First line	17	467,450	6.04	$7,364,564.87	$860,676.84	Tenders and torpedo vessels	8	31,927	10	1,305,685.96	195,852.89
Second line	25	340,146	10	11,491,626.96	551,598.09	Gunboats	30	26,180	9.25	2,958,721.98	129,944.73
Armored cruisers	10	140,070	10	5,130,280.08	615,633.61	Transports	5	22,235	6.2	751,342.17	290,842.13
Cruisers:						Supply ships	5	33,900	9.6	848,213.01	212,053.25
First class	5	46,465	12	1,792,066.85	358,413.37	Hospital ship	1	5,700	12	265,515.41	265,515.41
Second class	4	25,065	6	560,857.74	280,478.87	Fuel ships	23	268,430	10.5	2,641,307.42	131,245.09
Third class	16	50,820	10.6	3,522,037.56	249,200.77	Converted yachts	16	9,476	4	590,332.79	110,693.64
Monitors	9	32,944	8.5	1,089,338.50	170,863.94	Tugs	50	20,899	10.2	1,020,403.08	24,009.48
Destroyers	57	46,876	8.25	4,231,092.07	107,965.18	Special type	11	45,904	9	1,771,557.50	35,789.04
Coast torpedo vessels	16	6,695	12	1,537,826.56	96,114.16	Unserviceable for war purposes	22	46,291	6.25	1,516,663.04	132,363.31
Torpedo boats	20	3,395	4.2	152,707.42	21,815.34	Miscellaneous	19			4,414,667.76	

Statement 5.—FLEET MAINTENANCE—REPAIRS.

COST OF REPAIRS PER TON BY CLASSES.

Class of vessels.	Title D.	Class of vessels.	Title D.
Battleships:		Submarines	21.16
First line	1.45	Tenders to torpedo vessels	1.29
Second line	2.87	Gunboats	9.70
Armored cruisers	3.35	Transports	6.73
Cruisers:		Supply ships	5.08
First class	2.18	Hospital ship	17.32
Second class	4.11	Fuel ships	1.51
Third class	6.47	Converted yachts	5.78
Monitors	2.10	Tugs	12.84
Destroyers	10.60	Special type	2.21
Coast torpedo vessels:		Unserviceable for war purposes	1.40
Destroyers	31.47		
Torpedo boats	19.37	Average for all classes	3.53

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	Total	$2,927,994.15	$797,832.85	$1,319,969.83	$122,217.09	[1] $6,025.56 21,672.60	$5,195,712.08
	BATTLESHIPS—FIRST LINE.						
28	Delaware	43,698.91	13,660.30	38,650.17	1,445.00		97,454.38
29	North Dakota	26,254.83	6,724.93	7,698.96	983.50		41,662.22
30	Florida	21,317.44	5,482.03	7,176.54	3,127.65		37,103.66
31	Utah	16,689.03	3,974.55	7,527.59	2,817.93		31,009.10
33	Wyoming	32,280.21	7,564.74	12,403.10	1,554.04		53,802.09
32	Arkansas	34,208.29	7,920.56	8,926.28	3,835.56	11.60	54,902.29
34	New York	23,627.96	5,656.13	11,682.57	3.20		40,969.86
37	Texas	18,667.72	4,080.42	14,313.15	208.00		37,269.29
35	Nevada	2,218.16	519.75	1,019.44			3,757.35
36	Oklahoma	542.17	170.34	153.18			865.69
38	Pennsylvania	1,066.12	303.65	184.43			1,554.20
	BATTLESHIPS—SECOND LINE.						
1	Indiana	6,843.20	1,927.59	2,203.74			10,974.53
2	Massachusetts	6,186.77	1,760.40	2,256.02			10,203.19
3	Oregon	1,943.86	454.15	1,606.60			4,004.61
4	Iowa	10,343.66	2,999.31	1,696.38			15,039.35

[1] Auditor's settlements.

Statement 5.—FLEET MAINTENANCE—REPAIRS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	BATTLESHIPS—SECOND LINE—continued.						
5	Kearsarge	$9,606.18	$2,926.00	$4,736.32			$17,268.50
6	Kentucky	2,779.90	735.59	1,270.27	$25.00		4,810.76
8	Illinois	4,623.94	1,330.25	1,978.94			7,933.13
7	Alabama	3,409.79	968.90	1,714.51	110.00		6,203.20
9	Wisconsin	10,387.77	3,110.64	3,847.97			17,346.38
10	Maine	5,858.00	1,396.44	1,180.61	5,180.14		13,615.19
11	Missouri	23,598.19	7,045.51	7,098.60			37,742.30
12	Ohio	26,273.99	7,777.47	8,804.48			42,855.94
19	Virginia	31,814.31	10,797.53	13,105.54			55,717.38
16	Nebraska	21,332.87	7,049.08	14,349.49		$2,134.50	44,865.94
15	Georgia	27,909.66	9,354.37	11,916.43	3.00		49,183.46
17	New Jersey	27,697.90	9,262.06	10,315.68	70.00		47,345.64
18	Rhode Island	53,461.34	16,345.38	21,601.48	49.50		91,457.70
20	Connecticut	41,204.92	12,084.73	27,772.12	300.00		81,361.77
22	Louisiana	38,490.15	12,133.73	17,824.61	75.50	25.90	68,529.89
27	Vermont	25,485.38	7,880.38	17,027.71			50,393.47
21	Kansas	23,485.26	6,769.03	7,823.05			38,077.34
24	Minnesota	27,116.68	7,945.93	12,180.72	1,124.05		48,367.38
25	New Hampshire	44,792.11	13,816.82	19,180.98	113.97	282.50	78,136.38
26	South Carolina	20,485.69	6,147.85	10,896.84	4,765.72		42,296.10
23	Michigan	45,966.80	13,561.30	28,704.80	4,627.03		92,859.93
	ARMORED CRUISERS.						
126	Colorado	34,715.65	12,459.24	15,158.40			62,333.29
127	Maryland	20,591.55	5,247.97	14,363.51	3.50		40,206.53
133	Memphis	39,617.86	10,022.29	22,278.55			71,918.70
131	Montana	23,515.77	5,597.96	12,687.48	1,283.25		43,084.46
132	North Carolina	23,230.74	5,593.43	10,134.90			38,959.07
128	Pittsburgh	6,077.21	1,984.68	2,757.63			10,819.52
125	San Diego	5,861.54	1,273.93	6,219.67			13,355.14
129	South Dakota	13,297.07	3,302.45	7,236.57			23,836.69
134	Washington	37,824.03	9,320.02	17,616.27			64,760.32
130	West Virginia	68,325.34	25,202.62	58,303.09			151,831.05
	CRUISERS—FIRST CLASS.						
121	Brooklyn	16,290.94	4,068.77	15,917.35	332.97		36,610.03
122	Charleston	7,596.91	2,507.46	469.80			9,635.17
123	Milwaukee	1,741.62	425.70	1,572.15			3,739.47
120	Saratoga	8,576.53	2,741.15	3,694.75	2,376.94		17,389.37
124	St. Louis	19,190.82	6,478.10	8,276.11			33,945.03

	CRUISERS—SECOND CLASS.						
116	Chicago	1,137.30	362.04	5,371.90			6,871.24
118	Columbia	14,762.96	4,076.75	6,655.01			25,494.72
119	Minneapolis	2,953.71	838.43	1,052.90			4,845.04
117	Olympia	44,823.24	11,487.19	9,324.74	70.00		65,705.17
	CRUISERS—THIRD CLASS.						
111	Albany	6,194.69	2,251.58	2,374.05	532.33		11,352.65
113	Birmingham	18,604.49	5,510.57	10,313.33	22.00		34,450.39
102	Boston				138.00		138.00
105	Chattanooga	11,444.04	3,941.61	5,777.76			21,163.41
114	Chester	3,579.08	946.39	3,381.71			7,907.18
103	Cincinnati	65.14	22.87	11.74	241.20		340.95
106	Cleveland	15,373.71	3,794.27	9,228.57			28,396.55
107	Denver	9,285.89	2,170.43	4,289.24			15,745.56
108	Des Moines	3.98	1.64	22.45	155.85		183.92
109	Galveston	5,889.50	1,469.43	5,043.47	277.71		12,680.11
100	Marblehead	13,950.56	3,531.27	7,103.19			24,585.02
101	Montgomery	5,388.58	1,678.02	1,570.78			8,637.38
112	New Orleans	27,340.89	10,176.86	7,141.84	450.00		45,109.59
104	Raleigh	18,882.43	4,609.58	6,801.65			30,293.66
115	Salem	24,194.45	7,959.45	17,075.83			49,229.73
110	Tacoma	21,355.14	5,070.75	12,430.84			38,856.73
	MONITORS.						
704	Amphitrite	11,308.95	17.31	8,106.66	89.50		19,522.42
700	Cheyenne	4,910.98	1,255.11	2,539.72	307.81		9,013.62
705	Miantonomah	1,756.24	565.81	593.34			2,915.39
706	Monadnock	719.11	122.56	747.16			1,588.43
708	Monterey	10,015.98	2,932.37	1,889.13			14,837.48
701	Ozark	5,242.18	1,300.18	1,971.91			8,414.27
702	Tallahassee	3,583.26	827.22	1,980.42	20.00		6,410.90
707	Terror	2,235.20	702.12	529.95			3,467.27
703	Tonopah	1,058.42	222.66	309.27	110.50	1,275.04	2,975.89
	DESTROYERS.						
221	Ammen	8,457.11	2,795.68	2,529.67	43.75		13,826.21
246	Aylwin	5,331.70	1,437.91	1,314.06	49.75		8,133.42
247	Balch	5,049.45	1,413.20	1,385.14			7,847.79
222	Beale	6,417.26	2,051.99	1,356.36			9,825.61
248	Benham	5,486.94	1,316.87	2,622.65	61.04		9,487.50
223	Burrows	1,511.70	497.18	1,613.72	10.00		3,632.60
243	Cassin	3,175.28	812.70	1,436.36			5,424.34
255	Conyngham	10.32	3.47	.90			14.69
244	Cummings	5,770.10	1,395.70	2,112.92			9,278.72
250	Cushing	1,729.66	529.30	792.19	10.00		3,061.15
254	Downes	1,017.86	330.90	217.30			1,566.06
224	Drayton	9,971.03	2,961.39	5,446.43			18,378.85

Statement 5.—FLEET MAINTENANCE—REPAIRS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	DESTROYERS—continued.						
242	Duncan	$2,800.16	$985.73	$779.73			$4,565.62
256	Ericsson	1,144.38	278.28	395.41			1,818.07
225	Fanning	5,591.33	1,917.53	1,223.31			8,732.17
216	Flusser	1,202.33	316.83	516.68			2,035.84
224	Henley	3,527.31	980.39	3,042.14			7,549.84
267	Jacob Jones	390.94	134.47	128.07			653.48
237	Jarvis	7,794.26	2,435.95	1,779.89			12,010.10
226	Jenkins	6,145.78	1,654.47	1,457.23			9,257.48
229	Jouett	8,553.44	2,759.68	1,713.68			13,026.80
217	Lamson	7,173.85	1,858.91	1,789.41	$8.25		10,830.42
231	McCall	17,144.75	4,269.82	9,171.76			30,586.33
245	McDougal	6,344.33	1,498.95	2,073.69			9,916.97
230	Mayrant	3,743.73	878.19	260.78			4,882.70
232	Monoghan	12,154.65	3,157.29	3,204.24	14.00		18,530.18
251	Nicholson	5,399.10	1,403.55	935.12	10.00		7,747.77
252	O'Brien	685.82	234.38	437.42			1,357.62
249	Parker	5,901.08	1,722.93	1,998.07	780.00		10,402.08
233	Patterson	8,521.48	2,834.48	1,680.34			13,036.30
234	Paulding	6,302.65	2,084.12	1,665.35	62.00		10,114.12
235	Perkins	6,282.37	1,688.70	2,727.08	49.00		10,747.95
258	Porter	2.24	.45				2.69
218	Preston	7,084.70	1,834.99	2,762.64			11,682.33
219	Reid	4,026.79	1,048.81	1,120.88			6,196.48
295	Roe	6,560.34	1,719.91	2,306.51	23.90		10,610.66
220	Smith	11,871.61	3,944.57	2,705.00	10.00		18,531.18
287	Starett	5,934.49	1,537.50	1,929.24	33.10		9,434.33
238	Terry	5,047.21	1,261.56	1,534.41			7,843.18
239	Trippe	12,060.48	4,003.28	3,000.66			19,064.42
259	Tucker	48.04	15.66	5.85			69.55
260	Wadsworth	857.01	202.47	308.17			1,367.65
261	Wainwright	4,060.57	892.63	6,301.44			11,254.64
240	Walke	7,922.23	2,090.56	5,892.39			15,905.18
241	Warrington	13,558.20	3,915.80	4,964.03	15.00		22,453.03
253	Winslow	893.31	246.08	446.28			1,585.67
	COAST TORPEDO VESSELS—DESTROYERS.						
204	Bainbridge	1,064.83	309.68	463.71	180.53		2,018.75
205	Barry	7,397.75	1,770.78	2,061.85	80.66		11,311.04
206	Chauncey	13,258.38	3,895.68	3,225.24			20,379.30
207	Dale	2,314.08	680.60	1,847.49	168.14		5,010.31

208	Decatur	14,628.40	5,570.97	11,829.93	24.97		32,053.37
202	Hopkins	9,586.85	2,542.05	2,360.84			14,489.74
203	Hull	7,773.55	2,014.48	2,170.03			11,958.06
200	Lawrence	5,507.23	99.04	147.08			753.35
201	Macdonough	6,574.64	1,889.38	2,666.13	6.60		11,136.75
209	Paul Jones	13,613.70	3,850.03	11,297.28			28,761.01
210	Perry	12,560.46	3,335.78	4,333.18			20,229.39
211	Preble	14,832.34	4,031.83	5,952.98			24,817.15
212	Stewart	8,863.74	2,525.49	3,880.09			15,269.32
213	Truxtun	6,860.94	1,780.74	2,021.48			10,663.16
214	Whipple	13,828.31	3,533.34	4,356.19			21,717.84
215	Worden	3,366.93	886.76	1,502.35			5,756.04
	COAST TORPEDO VESSELS—TORPEDO BOATS.						
719	Bagley	6,129.58	1,929.06	1,866.05			9,915.69
728	Bailey	872.78	300.48	54.44			1,227.70
720	Barney	799.07	272.42	167.68			1,239.17
721	Biddle	262.16	86.98	65.15			414.29
722	Blakely	3,310.18	752.92	1,096.11			5,159.21
714	Dahlgren	979.61	254.96	333.19			1,567.76
723	De Long	1,118.47	300.77	678.98			2,098.23
717	Dupont	1,649.16	552.17	180.41	24.80		2,406.54
727	Farragut	765.17	189.48	356.48			1,311.20
716	Fox	1.34	.91		190.00		192.25
726	Goldsborough	815.20	292.35	210.74			1,318.29
710	Mackenzie	742.75		262.42	631.74		1,636.91
729	Manley	51.98	29.28	22.44	15.00		118.70
711	Morris	5,291.89	1,234.24	2,288.43			8,814.56
713	Rodgers	7,468.85	1,798.28	1,458.91	24.50		10,750.49
724	Shubrick	8,446.09	2,250.22	571.21			11,267.52
715	Somers				75.00		75.00
725	Thornton	1,179.16	340.58	554.18			2,073.92
718	Tingey	961.11	260.01	286.87			1,507.99
	SUBMARINES.						
300	A-2	1,956.49	499.98	547.38			3,003.85
301	A-3	1,964.69	379.19	830.48			3,174.36
302	A-4	1,694.86	469.38	488.68			2,652.92
303	A-5	2,348.02	487.01	2,503.71			5,338.74
304	A-6	2,513.10	560.55	1,070.88			4,144.53
305	A-7	2,325.43	519.35	2,685.30			5,530.08
[illegible]	B-1	1,812.33	472.39	3,131.91			5,416.63
[illegible]	B-2	4,827.57	1,055.04	2,040.91			7,923.52
[illegible]	B-3	2,348.19	560.46	1,128.10			4,036.75
[illegible]	C-1					[1] $547.54	547.54
[illegible]	C-2					[1] 1,043.30	1,043.30
1	C-3	244.61	49.42	49.36		[1] 371.29	714.68
2	C-4	6.45	1.93			[1] 888.28	896.66
[illegible]	C-5					[1] 833.23	833.23

[1] Auditor's settlements.

Statement 5.—FLEET MAINTENANCE—REPAIRS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	SUBMARINES—continued.						
314	D-1	$7,236.76	$1,701.70	$2,530.61	$1.98	$694.38	$12,165.33
315	D-2	5,405.49	1,195.63	1,106.32	330.00	1,640.99	9,678.43
316	D-3	6,614.98	1,507.70	1,101.87	330.00	644.63	10,099.18
317	E-1	8,687.60	1,993.36	2,107.29	106.00	1,966.83	14,861.08
318	E-2	11,264.43	2,635.49	2,305.21	325.00	2,370.87	18,901.00
319	F-1	2,122.51	274.37	2,293.98	400.00	.....	5,090.86
320	F-2	1,365.86	206.37	2,198.66	1,628.40	.....	5,399.29
321	F-3	1,719.53	293.40	2,438.49	1,440.00	.....	5,891.42
322	F-4	1,692.07	204.58	958.62	1,529.35	.....	4,384.62
323	G-1	10,959.42	2,413.93	2,172.85	31.20	.....	15,577.40
324	G-2	8,586.09	1,913.30	1,041.72	1.72	290.89	11,833.27
325	G-3	487.22	106.99	113.53	.....	721.85	1,429.59
326	G-4	6,671.53	1,508.19	2,845.68	300.00	.....	11,325.50
327	H-1	8,071.58	1,908.97	4,512.72	9.25	.....	14,502.52
328	H-2	2,622.68	626.64	637.24	32.27	.....	3,918.83
329	H-3	7,154.26	1,763.54	1,395.26	312.94	.....	10,626.00
330	K-1	7,780.77	1,690.64	854.86	862.70	1,340.13	12,529.10
331	K-2	8,486.76	1,890.52	957.72	862.71	431.03	12,628.74
332	K-3	2,886.05	641.60	4,761.80	500.00	.....	8,789.45
333	K-4	2,797.24	483.52	4,745.70	400.00	.....	8,426.46
334	K-5	5,889.16	1,290.31	750.62	907.96	979.18	9,817.23
335	K-6	8,335.95	1,842.32	2,686.13	857.96	6,225.72	19,948.08
336	K-7	2,300.64	482.17	4,565.34	400.00	.....	7,748.15
337	K-8	2,902.75	618.39	4,758.45	500.00	.....	8,779.59
340	L-3	38.99	11.53	13.73	.....	.....	64.25
	TENDERS TO TORPEDO VESSELS.						
730	Alert	156.59	4.40	3,782.81	2,584.58	.....	6,528.38
735	Bushnell	203.18	57.15	157.09	.....	.....	417.42
737	Dixie	1,052.94	346.00	926.31	10.00	.....	2,335.25
732	Fulton	1,597.29	358.85	611.93	.....	109.50	2,677.57
736	Iris	2,477.89	477.62	516.99	.....	.....	3,472.50
738	Melville	270.44	69.96	324.45	.....	.....	664.85
850	Panther	8,900.92	2,352.01	6,651.09	117.50	.....	18,021.52
734	Pompey	3,125.23	941.35	1,092.05	.....	.....	5,158.63
	GUNBOATS.						
412	Annapolis	5,765.69	1,306.52	2,458.14	.....	.....	9,530.35
403	Callao	60.56	10.09	12.63	250.03	.....	333.31
420	Castine	4,968.70	2.15	977.55	.....	.....	5,968.43

427	Dolphin	6,128.34	1,975.56	1,301.54			9,405.44
419	Don Juan de Austria				3,804.60		3,804.60
417	Dubuque	6,307.16	1,557.92	2,366.83	8.00		10,239.91
408	Elcano				3,087.26		3,087.26
424	Helena			120.00	3,221.95	158.30	3,500.25
416	Isla de Luzon				487.45		487.45
421	Machias	1,105.32		368.06			1,473.38
401	Monocacy	3.04	.98	.81	7,605.61		7,610.44
423	Nashville	22,795.94		6,222.31		238.00	29,256.25
413	Newport	2,720.81	685.34	977.74			4,383.89
418	Paducah	7,706.49	1,863.48	3,204.96	36.00		12,810.93
402	Palos				269.15		269.15
404	Pampanga	5,990.15	1,868.58	1,505.68			9,364.41
409	Petrel	14,859.48		2,876.48			17,735.96
414	Princeton	561.34	123.77	98.96		48.96	833.03
416	Quiros				267.69		267.69
422	Ranger	6,165.41	2,092.07	2,175.12			10,432.60
426	Sacramento	8,037.05	1,887.76	1,917.96			11,842.77
405	Samar				3,403.71		3,403.71
400	Sandoval				1,131.80		1,131.80
415	Vicksburg	26,134.32	8,752.54	9,812.02			44,698.88
407	Villalobos				2,793.84		2,793.84
411	Wheeling	9,926.47		2,890.13			12,816.60
425	Wilmington	247.46	65.49	588.60	8,584.94		9,486.49
429	Yorktown	14,461.72	3,545.23	5,666.38	795.34		24,468.67
	TRANSPORTS.						
752	Buffalo	34,452.89	7,725.74	10,893.29			53,071.92
750	General Alava	16,354.98	3,993.50	5,292.35			25,640.83
754	Hancock	27,894.59	8,150.71	6,607.55	118.00		42,770.85
753	Prairie	17,172.02	4,836.39	6,148.04			28,156.45
	SUPPLY SHIPS.						
777	Celtic	9,401.41	3,236.24	3,872.81	18.06		16,528.52
776	Culgoa	17,747.84	4,057.99	7,699.81	1,406.45		30,912.09
778	Glacier	15,195.96	3,221.50	9,866.74			28,284.20
775	Supply	49,018.52	17,244.85	17,331.44	175.00		83,769.81
	HOSPITAL SHIP.						
801	Solace	64,416.94	14,970.25	19,355.37	9.55		98,752.11
	FUEL SHIPS.						
611	Abarenda	8,708.50	2,112.89	4,157.80	834.40		15,813.59
612	Ajax	5,086.88	1,718.61	1,712.91			8,518.40
608	Arethusa	19,458.73	5,532.21	5,513.27	55.30		30,559.51
610	Brutus	33,910.02	9,750.32	12,729.69			56,390.03
606	Caesar	11,308.93	2,824.71	4,559.17			18,692.81
607	Cyclops	19,275.36	5,624.50	8,295.65			33,195.51
613	Hector	13,736.55	4,073.53	3,636.36			21,446.44

Statement 5.—FLEET MAINTENANCE—REPAIRS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	FUEL SHIPS—continued.						
620	Jason	$10,973.03	$3,341.34	$4,870.79			$19,185.16
622	Jupiter	11,622.55	3,448.60	3,325.05	$612.07		19,008.27
600	Justin	1,596.51	257.80	323.30			2,171.61
616	Kanawha	4,287.83	1,143.38	1,568.98			7,000.19
614	Mars	15,607.02	3,688.16	6,364.56		[1] $27.43	25,687.17
617	Maumee	2,100.76	96.40	54.48			2,251.64
604	Nanshan	5,329.74	1,228.02	1,819.90			8,377.66
623	Neptune	8,611.55	2,496.75	2,455.84	75.34		13,639.48
618	Nereus	1,251.20	327.58	213.24	375.00		2,167.02
609	Nero	15,066.52	3,622.95	5,347.55			24,037.02
621	Orion	11,544.16	3,310.98	4,620.86			19,476.00
619	Proteus	5,413.44	1,412.84	3,475.28	595.00		10,896.56
608	Saturn	9,632.94	2,516.93	2,864.14		131.89	15,145.81
605	Sterling	5,645.35	1,528.21	2,641.05			9,814.61
615	Vulcan	16,111.23	3,986.44	6,889.33			26,987.00
	CONVERTED YACHTS.						
829	Aileen				53.29		53.29
834	Dorothea			180.00	3,689.02		3,869.02
833	Eagle	5,923.18	1,420.00	1,754.13	20.00		9,117.31
828	Elfrida	21.04	4.89	4.39	123.61		153.93
837	Gloucester	2,404.46	573.94	1,001.36	49.00		4,028.76
832	Hawk	1.00	.20	1.05	706.58		708.83
825	Huntress	69.48	16.88	135.51	7,229.50		7,451.37
840	Mayflower	8,474.14	3,586.94	2,062.14			14,123.22
826	Oneida	2,227.46	576.15	992.99			3,796.60
836	Scorpion				118.19		118.19
831	Stranger	829.26		120.07			949.33
827	Sylph	1,572.54	749.81	306.79			2,629.14
830	Sylvia	1,313.14	385.96	277.27	390.00		2,366.37
838	Vixen	72.42	24.94	27.77			125.13
835	Wasp	2,454.64	567.52	936.62			3,958.78
839	Yankton	7,787.68	1,862.72	2,071.63			11,722.03
	TUGS.						
504	Accomac	2,237.71	735.59	416.14			3,389.44
522	Active	3,952.44	982.66	1,529.04			6,464.13
524	Alice	740.55	211.52	268.43			1,220.50
534	Apache	1,631.23	385.14	802.75			2,819.12

545	Arapaho	1,256.53	309.54	385.31			1,951.38
519	Choctaw	391.94	115.23	731.72			1,238.89
529	Fortune	83.30	14.61	102.31			200.22
507	Hercules	4,964.68	1,521.73	1,123.83			7,610.24
536	Iroquois	1,205.57	233.18	377.40			1,816.15
505	Iwana	4,103.22	1,406.42	622.61			6,132.25
508	Massasoit	1,432.25	412.83	324.57			2,169.65
516	Modoc	1,044.29	289.85	319.72	388.00		2,041.86
546	Mohave	4,152.11	1,761.06	961.49			6,874.66
526	Mohawk	7,534.17	2,174.10	1,482.74			11,191.01
506	Narkeeta	5,047.47	1,212.27	1,274.61			7,534.35
541	Navajo	1,401.17		781.22			2,182.39
543	Ontario	3,778.79	851.44	1,176.89			5,807.12
533	Osceola	8,806.96	2,308.90	3,458.29	4.40		14,578.55
537	Patapsco	5,012.17	1,605.42	1,170.60			7,788.19
538	Patuxent	7,595.37	2,269.64	2,500.74			12,365.75
520	Pawnee	2,250.37	525.84	772.62			3,548.83
511	Pawtucket	1,665.02	660.10	270.47			2,595.59
513	Penacook	2,039.22	499.47	289.09			2,827.78
514	Pentucket	4,514.31	987.63	1,207.39	175.00		6,884.33
532	Peoria	1,785.79		481.51			2,267.30
542	Piscataqua	2,279.66	705.04	1,046.86			4,031.56
549	Pocahontas	14.96	3.50	.74			19.20
527	Pontiac	209.92	59.55	138.52			407.99
539	Potomac	116.10	44.13	48.66		[1] 1,034.85	1,243.74
540	Powhatan	5,960.37	1,293.60	1,425.26			8,679.23
504	Rapido	503.22	223.08	1,031.14			1,757.44
518	Rocket	3,773.26	1,161.74	956.86			5,891.86
512	Samoset	3,226.77	880.88	764.92			4,872.57
517	Sebago	903.78	237.92	1,027.52			2,169.22
502	Sioux	2,039.44	609.05	479.24	1.00		3,128.73
544	Sonoma	3,634.28	820.15	888.52	30.00		5,372.95
515	Sotoyomo	1,850.75	748.13	415.96			3,014.84
530	Standish	1,744.52	521.94	661.11			2,927.57
510	Tecumseh	2,397.66	1,033.82	779.71			4,211.19
547	Tillamook	2,033.92	484.91	396.97			2,915.80
521	Traffic	3,157.69	804.24	1,214.07			5,176.00
535	Transfer	1,266.76	269.77	495.73			2,032.26
509	Triton	515.20	160.87	295.16			971.23
525	Unadilla	1,321.37	336.65	474.47			2,132.49
528	Uncas	7,716.21	2,179.54	3,314.48	5.50		13,215.73
523	Vigilant	3,559.95	906.96	1,161.17			5,628.08
500	Waban	181.56		297.60			479.16
501	Wahneta	6,771.20	2,124.72	1,479.44			10,375.36
531	Wampatuck	3,425.76	1,042.84	1,404.97			5,873.57
	SPECIAL TYPE.						
876	Baltimore	5,618.79	1,536.62	3,151.90			10,307.31
601	Hannibal	6,692.80	1,640.69	3,734.73			12,068.22
910	Lebanon	5,271.89	1,700.96	1,694.90			8,667.75

[1] Auditor's settlements.

Statement A.- FLEET MAINTENANCE REPAIRS (Continued.

No.	Name of vessel.	Labor.	Instrument.	Material.	Public purchase.	Marine hardware material.	Total.
	SPECIAL TYPE (continued).						
602	Leonidas	[illegible]	[illegible]	[illegible]	.....	[illegible]	[illegible]
852	Prometheus	[illegible]	[illegible]	[illegible]	.....		[illegible]
875	San Francisco	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
851	Vestal	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
900	Vesuvius	[illegible]	[illegible]	[illegible]	.....	.....	[illegible]
	UNSERVICEABLE FOR WAR PURPOSES.						
950	Adams	[illegible]	[illegible]	[illegible]	.....	.....	[illegible]
953	Boxer	[illegible]	.....	.....	[illegible]	.....	[illegible]
954	Constellation	[illegible]	.....	.....	[illegible]		[illegible]
955	Constitution	[illegible]	[illegible]	[illegible]	.		[illegible]
956	Cumberland	[illegible]	[illegible]	[illegible]			[illegible]
957	Essex	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
959	Franklin	[illegible]	[illegible]	[illegible]			[illegible]
960	Gopher	.....	.....	.....	[illegible]		[illegible]
961	Granite State	[illegible]	[illegible]	[illegible]	.....		[illegible]
962	Hartford	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
963	Intrepid	[illegible]	[illegible]	[illegible]	.....		[illegible]
733	Mohican	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
967	Philadelphia	[illegible]	[illegible]	[illegible]	.....		[illegible]
751	Rainbow	[illegible]	[illegible]	[illegible]	.....		[illegible]
969	Reina Mercedes	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
800	Relief	[illegible]	[illegible]	[illegible]			[illegible]
970	Richmond	[illegible]	[illegible]	[illegible]			[illegible]
731	Severn	[illegible]	.....	.	.	[illegible]	[illegible]
971	Southery	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
973	Topeka	[illegible]	[illegible]	[illegible]	.		[illegible]
974	Wolverine	.....	.....	.....	[illegible]		[illegible]
975	Yantic	[illegible]	[illegible]	.....	[illegible]		[illegible]
	MISCELLANEOUS.						
	[illegible]rd Craft	[illegible]	[illegible]	[illegible]	.....	.....	[illegible]
	[illegible]rget rafts	[illegible]	[illegible]	[illegible]	.....	.....	[illegible]
	[illegible]ships	[illegible]	.	[illegible]	[illegible]	.	[illegible]
	Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[1] Auditor's settlements.

COST OF REPAIRS PER TON BY CLASSES.

Class of vessels.	Title D.	Class of vessels.	Title D.
s:		Submarines	21.16
line	1.45	Tenders to torpedo vessels	1.23
d line	2.87	Gunboats	9.79
cruisers	3.35	Transports	6.73
		Supply ships	5.98
class	2.18	Hospital ship	17.32
nd class	4.11	Fuel ships	1.51
rd class	6.47	Converted yachts	5.78
s	2.10	Tugs	12.84
ers	10.60	Special type	2.21
orpedo vessels:		Unserviceable for war purposes	1.40
Destroyers	31.47		
Torpedo boats	19.37	Average for all classes	3.53

Statement 6.—FLEET MAINTENANCE—ALTERATIONS.

COST OF ALTERATIONS PER TON, BY CLASSES.

Class of vessels.	Title K.	Class of vessels.	Title K.
Battleships:		Submarines	$11.07
First line	$1.70	Tenders to torpedo vessels	9.88
Second line	1.47	Gunboats	3.65
Armored cruisers	1.80	Transports	3.19
Cruisers:		Supply ships	1.99
First class	1.19	Hospital ship	.95
Second class	1.67	Fuel ships	1.02
Third class	2.91	Converted yachts	2.06
Monitors	1.61	Tugs	3.29
Destroyers	6.65	Special types	3.19
Coast torpedo vessels:		Unserviceable for war purposes	.43
Destroyers	4.28		
Torpedo boats	9.64	Average for all classes	1.87

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	Total	$1,213,166.07	$339,345.68	$990,882.95	$31,154.84	$186,532.16	$2,761,081.70
	BATTLESHIPS—FIRST LINE.						
28	Delaware	28,709.21	8,849.40	11,251.13	248.25	3,551.30	52,609.29
29	North Dakota	9,604.85	3,219.38	4,095.14		4,508.26	21,427.63
30	Florida	19,787.13	5,000.60	11,469.53	235.89		36,493.15
31	Utah	18,306.49	4,517.29	19,253.92		98.00	42,175.70
33	Wyoming	49,569.38	12,094.07	34,983.69	300.00		96,947.14
32	Arkansas	42,849.89	10,472.17	28,303.47	458.36	264.00	82,347.89
34	New York	37,676.04	9,619.18	17,705.05	110.00	458.10	65,568.37
37	Texas	45,635.74	11,557.04	20,558.39	300.00	717.02	78,768.19
36	Oklahoma			*2.53*			*2.53*
39	Arizona			196.50			196.50
42	Idaho	15.88	6.52				22.40
	BATTLESHIPS—SECOND LINE.						
1	Indiana	403.10	116.08	639.08			1,158.26
2	Massachusetts	340.16	101.26	355.75			797.17
3	Oregon	*1.08*	*.31*			1.21	*.18*
4	Iowa	7,046.11	2,150.35	698.02			9,894.48
5	Kearsarge	1,581.78	509.55	2,267.69		2,160.73	6,519.75
6	Kentucky	307.06	106.23	343.26		2,967.13	3,723.68
8	Illinois	2,960.45	998.48	7,310.69		5.00	11,274.62
7	Alabama	3,611.85	1,033.97	1,613.49			6,259.31
9	Wisconsin	5,318.78	1,653.90	3,309.74		1,231.36	11,513.78
10	Maine	1,150.48	306.50	752.89		8,170.73	10,380.60
11	Missouri	1,019.22	313.83	556.21			1,889.26
12	Ohio	6,580.19	2,054.35	4,656.57			13,291.11
19	Virginia	4,340.01	1,359.84	2,958.00		2,043.07	10,700.92
16	Nebraska	10,236.01	3,455.40	13,774.06		1,401.55	28,867.02
15	Georgia	6,844.44	2,044.86	2,697.38			11,586.68
17	New Jersey	8,448.05	2,860.63	3,334.36			14,643.04
18	Rhode Island	10,742.19	3,848.09	7,352.93			21,943.21
20	Connecticut	14,450.84	4,622.01	25,553.25			44,626.10
22	Louisiana	12,936.25	3,899.27	7,254.46	106.00		24,195.98
27	Vermont	9,981.12	2,710.90	5,326.84	106.00	5,313.72	23,438.58
21	Kansas	21,293.80	6,768.25	18,060.36	300.00		46,422.41
24	Minnesota	30,246.27	9,376.01	33,627.20		14,961.57	88,211.05
25	New Hampshire	9,589.69	2,823.29	16,692.06	106.00	1,093.19	30,304.23
26	South Carolina	10,319.86	3,100.25	6,960.03	129.50	2,669.03	23,178.67
23	Michigan	22,759.48	6,777.30	10,656.29		16,704.23	56,897.30

Statement 6.—FLEET MAINTENANCE—ALTERATIONS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	ARMORED CRUISERS.						
126	Colorado	$9,458.97	$3,626.37	$30,779.18			$43,864.52
127	Maryland	6,922.77	1,585.07	2,663.40		$234.81	11,406.05
133	Memphis	15,441.38	4,087.32	15,221.52	$128.89		34,879.11
131	Montana	10,057.11	2,671.63	5,053.51		1,095.90	18,878.15
132	North Carolina	9,850.93	2,705.48	3,492.38	94.74	1,583.07	17,726.60
128	Pittsburgh	1,698.81	616.32	700.07		2,261.20	5,276.40
125	San Diego	1,980.41	311.02	539.61		15,409.10	18,240.14
129	South Dakota	5,656.23	1,423.73	2,929.72		114.53	10,124.21
134	Washington	21,269.56	5,270.00	21,230.89		3,859.23	51,629.68
130	West Virginia	18,471.85	7,168.07	16,607.08			42,247.00
	CRUISERS—FIRST CLASS.						
121	Brooklyn	12,744.00	4,074.13	17,205.69			34,023.82
122	Charleston	884.48	326.85	1,159.59			2,370.92
123	Milwaukee	268.43	36.24	507.45		2,206.04	3,018.16
120	Saratoga	274.15	57.57	5.47		149.40	486.59
124	St. Louis	5,175.38	1,728.16	5,915.62		2,556.71	15,375.87
	CRUISERS—SECOND CLASS.						
116	Chicago	38.49	15.79				54.28
118	Columbia	11,320.33	3,811.98	14,224.00		556.84	29,913.15
119	Minneapolis	100.53	29.16	.05			129.74
117	Olympia	6,098.33	1,678.93	4,009.22			11,786.48
	CRUISERS—THIRD CLASS.						
111	Albany	2,959.52	1,190.37	2,709.80		4,438.39	11,298.08
113	Birmingham	5,793.45	1,924.05	13,621.48		779.18	22,118.16
105	Chattanooga	4,559.64	1,778.90	6,204.04		604.67	13,147.25
114	Chester	345.10	115.57	129.51			590.18
103	Cincinnati	2.64	.63			4,488.08	4,491.35
106	Cleveland	6,913.13	1,581.10	13,570.86		3,643.76	25,708.85
107	Denver	3,764.41	875.98	5,430.99		100.00	10,171.38
108	Des Moines					160.28	160.28
109	Galveston	74.45	17.91				92.36
100	Marblehead	289.18	45.62	71.95			406.75
101	Montgomery	167.06	50.79	110.99			328.84
112	New Orleans	3,134.92	1,154.25	1,931.97		1,195.57	7,416.71
104	Raleigh	5,938.51	1,434.30	4,176.81		3,234.05	14,783.67
115	Salem	4,554.12	1,551.57	3,810.54		1,630.70	11,546.93
110	Tacoma	6,409.85	1,650.64	8,983.59			17,043.48

	MONITORS.						
700	Cheyenne	3,400.47	911.98	2,040.29	2,275.18		8,627.92
705	Miantonomoh	1,418.54	390.23	94.41			1,903.18
706	Monadnock	430.23	137.62	377.01		12.00	956.86
708	Monterey	32.21	11.28	1.06		225.00	269.55
701	Ozark	7,438.13	1,877.86	8,514.13	60.00	1,019.58	18,909.70
702	Tallahassee	4,489.00	1,000.41	6,560.93	20.00		12,070.34
707	Terror	814.60	222.87	.37			1,037.84
703	Tonopah	1,146.29	467.10	1,305.14			2,918.53
	DESTROYERS.						
221	Ammen	2,853.62	964.06	1,657.17			5,474.85
246	Aylwin	2,915.48	765.40	1,678.45			5,359.33
247	Balch	3,488.00	992.19	2,242.34		595.90	7,318.43
222	Beale	5,953.34	1,822.45	3,457.43			11,233.22
248	Benham	3,660.26	941.36	2,158.86			6,760.48
223	Burrows	1,640.10	563.16	1,352.36		46.10	3,601.72
243	Cassin	5,644.64	1,272.44	2,731.91			9,648.99
255	Conyngham			3.20			3.20
244	Cummings	6,441.96	1,561.81	3,392.26			11,396.03
250	Cushing	1,049.97	366.87	236.57			1,653.41
254	Downes	158.57	62.22	72.56			293.35
224	Drayton	5,307.59	1,604.57	1,721.33			8,633.49
242	Duncan	3,029.48	1,040.76	2,528.43			6,598.67
256	Ericsson	440.19	86.45	375.81			902.45
225	Fanning	3,305.67	1,101.44	1,838.11		6,848.74	13,093.96
216	Flusser	368.95	96.97	2,874.17			3,340.09
226	Henley	2,292.12	657.06	1,270.82	30.60		4,250.60
257	Jacob Jones	2.25	.90				3.15
227	Jarvis	3,145.75	1,041.48	3,524.94			7,712.17
228	Jenkins	2,984.77	975.13	4,931.08			8,890.98
229	Jouett	3,881.16	1,288.01	3,640.10		710.00	9,519.27
217	Lamson	1,995.51	565.11	3,874.89			6,435.51
231	McCall	3,983.14	1,060.87	1,153.63			6,197.64
245	McDougal	2,489.74	625.42	1,716.50			4,831.66
230	Mayrant	2,208.33	687.87	1,059.76		3,386.91	7,342.87
232	Monaghan	4,301.43	1,213.24	5,783.87			11,298.54
251	Nicholson	323.92	69.99	241.22			635.13
252	O'Brien	125.91	35.51	98.99			260.41
249	Parker	4,223.18	1,180.11	2,326.16			7,729.45
233	Patterson	4,169.21	1,459.83	2,861.03			8,490.07
234	Paulding	4,465.57	1,519.51	1,937.20		2,096.64	10,018.92
235	Perkins	3,302.58	927.89	4,050.84		99.82	8,381.13
218	Preston	817.78	214.40	3,155.58			4,187.76
219	Reid	968.55	249.02	3,354.73			4,572.30
236	Roe	2,198.91	625.08	3,053.50			5,877.49
220	Smith	1,415.35	485.28	2,395.25			4,295.88
237	Sterett	2,325.10	661.61	1,638.95			4,625.66
238	Terry	1,365.79	378.00	2,789.84			4,533.63
239	Trippe	3,578.79	1,236.11	1,914.66			6,729.56
260	Wadsworth	174.50	55.31	32.02			261.83

Statement 6.—FLEET MAINTENANCE—ALTERATIONS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	DESTROYERS—continued.						
240	Walke	$1,389.66	$373.63	$1,320.38			$3,083.67
241	Warrington	5,385.59	1,473.64	2,806.51			9,665.74
253	Winslow	273.08	81.17	200.06			554.31
	COAST TORPEDO VESSELS—DESTROYERS.						
204	Bainbridge	417.00	113.07	186.55			716.62
205	Barry	1,327.67	353.30	912.82			2,593.79
206	Chauncey	468.22	149.90	502.73			1,120.85
207	Dale	256.27	72.60	778.36			1,107.23
208	Decatur	281.39	100.07	150.44			531.90
202	Hopkins	1,079.43	258.60	447.11			1,785.14
203	Hull	936.74	192.60	432.82			1,562.16
200	Lawrence	143.80	12.83	76.72			233.35
201	Macdonough	2,398.15	643.50	880.10			3,921.75
209	Paul Jones	913.88	184.20	375.17			1,473.25
210	Perry	1,019.56	146.79	566.29			1,732.64
211	Preble	963.36	160.70	888.26			2,012.32
212	Stewart	770.47	165.18	355.84			1,291.49
213	Truxtun	1,210.82	250.80	499.05			1,960.67
214	Whipple	1,120.71	235.71	733.90		$2,876.77	4,967.09
215	Worden	692.29	154.86	754.49			1,601.64
	COAST TORPEDO VESSELS—TORPEDO BOATS.						
719	Bagley	1,754.35	409.96	744.22			2,908.53
720	Barney	33.71	9.11	2.46			45.28
722	Blakeley	8.15	1.50	3.35			13.00
714	Dahlgren	2,229.37	672.23	704.14			3,605.74
723	De Long	1,802.53	540.14	539.96			2,882.63
717	Dupont	22.59	7.91	1.26			29.24
716	Fox	4.00	.96				4.96
726	Goldsborough			2.58			2.58
711	Morris	139.58	35.45	18.02			193.05
713	Rodgers	77.67	28.78	33.80			140.25
724	Shubrick	2,240.79	655.56	893.69			3,790.04
725	Thornton	2,577.50	772.37	950.57			4,300.44
718	Tingey	2,519.50	750.67	765.99			4,036.16
	SUBMARINES.						
300	A-2	5.59	.92				6.51
301	A-3	77.19	17.49	77.76			172.44
302	A-4	8.60	1.43	13.28			23.31

303	A-5	74.95	31.28	56.49			162.72
304	A-6	3.60	.60				4.20
305	A-7	3.77	.63			99.56	103.96
306	B-1	121.58	34.28	156.50			312.36
307	B-2	11.67	3.39			21.85	36.91
308	B-3	158.44	50.36	76.24			285.04
309	C-1			122.89			122.89
310	C-2			122.89		44.25	167.14
311	C-3			122.89			122.89
312	C-4			122.89			122.89
313	C-5			122.89		74.50	197.39
314	D-1	2,185.86	487.93	2,063.57		2,168.52	6,905.88
315	D-2	2,178.44	559.79	2,104.26		4,296.99	9,139.48
316	D-3	1,502.19	389.43	1,881.13		1,040.80	4,813.55
317	E-1	9,805.03	2,374.16	32,031.71	850.00	1,972.55	46,233.45
318	E-2	5,375.46	1,223.79	6,185.23		242.92	13,027.40
319	F-1	809.79	104.93	430.70	1,262.03		2,607.45
320	F-2	539.24	42.66	244.62	1,262.03		2,088.55
321	F-3	404.88	40.59	243.42	1,262.03		1,950.92
323	G-1	3,078.92	790.83	1,309.56			5,179.31
324	G-2	24.56	1.43	88.30			114.29
325	G-3	76.24	12.08	5.36	285.00		378.68
326	G-4	6,839.71	1,506.52	2,687.18	775.00		11,808.41
327	H-1	3,592.88	859.99	2,381.31			6,834.18
328	H-2	2,276.41	592.36	1,391.81			4,260.58
329	H-3	3,149.52	808.19	1,070.67			5,028.38
330	K-1	2,952.55	698.95	1,095.10		242.55	4,989.15
331	K-2	3,347.79	839.12	1,283.43		356.69	5,767.03
332	K-3	1,628.24	382.03	670.97			2,681.24
333	K-4	1,965.60	463.39	786.55			3,215.54
334	K-5	6,517.94	1,492.05	4,194.60		101.00	12,305.59
335	K-6	5,791.01	1,297.57	2,152.67		463.50	9,704.75
336	K-7	1,891.06	428.19	1,405.54			3,724.81
337	K-8	1,280.80	312.78	555.76			2,149.34
342	L-5			15.00			15.00
343	L-6			15.00			15.00
344	L-7			15.00			15.00
345	L-8			137.89			137.89
351	N-1			15.00			15.00
352	N-2			15.00			15.00
353	N-3			15.00			15.00
	TENDERS TO TORPEDO VESSELS.						
730	Alert			311.14	15.00	218.93	545.07
735	Bushnell	42.63	15.96	12.24			70.85
737	Dixie	472.52	157.52	89.10		3,113.53	3,832.67
732	Fulton	8,613.39	1,926.53	5,504.27			16,044.19
736	Iris	1,214.22	306.24	634.18			2,154.64
738	Melville	256.52	15.61	49.89		507.98	830.00
850	Panther	3,758.39	1,104.68	2,352.99			7,216.06
734	Pompey	201.55	63.88	92.30		476.17	833.90

Statement 6.—FLEET MAINTENANCE—ALTERATIONS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	GUNBOATS.						
412	Annapolis	$387.07	$79.16	$395.50			$861.73
420	Castine	1,203.26	2.49	221.11			1,426.86
427	Dolphin	1,078.53	357.60	610.10	$15.00		2,061.23
419	Don Juan de Austria	6.56	1.31	861.69			869.56
417	Dubuque	5,372.54	1,615.53	1,710.93		$248.75	8,947.75
408	Elcano					1,295.00	1,295.00
424	Helena				614.56	1,643.64	2,258.20
416	Isla de Luzon				365.00		365.00
421	Machias	277.10		2,589.08			2,866.18
410	Marietta	.56		.60		702.58	702.54
423	Nashville	1,796.86		540.80		1,095.90	3,433.56
413	Newport	75.88	25.04	10.13			111.05
418	Paducah	1,619.91	437.41	719.91		4,856.93	7,634.16
402	Palos				18.17		18.17
404	Pampanga	7.69	2.42	.26			10.37
409	Petrel	3,012.27		1,233.21			4,245.48
406	Quiros				54.29		54.29
422	Ranger	1,099.81	382.09	608.41			2,090.31
426	Sacramento	9,492.24	2,618.03	3,469.83			15,580.10
405	Samar				400.22		400.22
415	Vicksburg	1,884.34	616.84	4,547.93		1,263.78	8,312.89
407	Villalobos				780.16		780.16
411	Wheeling	3,271.14		929.47		5,586.36	9,786.97
425	Wilmington					4,395.89	4,395.89
429	Yorktown	3,019.29	770.62	2,401.84			6,191.75
	TRANSPORTS.						
752	Buffalo	4,661.18	1,083.26	1,973.40			7,717.79
754	Hancock	19,490.82	6,299.08	15,914.15			41,704.00
753	Prairie	6,568.42	2,052.82	6,966.44		2,360.93	17,948.81
	SUPPLY SHIPS.						
777	Celtic	8,681.68	3,081.99	5,475.13		276.50	17,515.30
776	Culgoa	3,233.25	828.59	1,180.00		2,357.76	7,594.60
778	Glacier	7,303.57	1,738.32	10,393.26		40.00	19,475.15
775	Supply	3,762.03	1,306.94	3,449.93		13.83	8,532.73
	HOSPITAL SHIP.						
801	Solace	2,715.06	630.01	2,086.68			5,431.75

	FUEL SHIPS.						
611	Abarenda	620.44	159.44	395.65			1,175.53
612	Ajax	238.30	92.96	73.32			404.58
608	Arethusa	8,763.81	2,592.09	4,498.31			15,854.21
610	Brutus	2,664.66	838.34	4,711.72			8,214.72
606	Caesar	1,519.46	408.95	2,946.51			4,874.92
607	Cyclops	7,348.01	2,210.30	2,820.99			12,379.30
613	Hector	4,087.10	1,201.55	2,016.34			7,304.99
620	Jason	7,818.74	2,730.93	2,819.12		500.00	13,868.79
622	Jupiter	10,667.32	3,253.61	4,245.99		84.24	18,251.16
600	Justin	122.41	14.11	8.42			144.94
616	Kanawha	9,301.17	2,980.57	3,369.03			15,650.77
614	Mars	9,712.08	2,548.48	6,576.92			18,837.48
617	Maumee	24.72	6.92				31.64
604	Nanshan	1,956.64	491.66	755.95			3,204.25
623	Neptune	10,602.79	3,245.84	3,532.92		22.72	17,404.27
618	Nereus	488.00	177.90	305.20			971.10
609	Nero	3,417.20	750.73	2,940.23			7,108.16
621	Orion	12,091.37	3,685.41	5,627.76			21,404.54
619	Proteus	430.87	140.89	1,840.81			2,412.57
603	Saturn	32,081.46	8,205.48	23,134.05			63,420.99
605	Sterling	2,130.78	620.62	3,330.62			6,082.02
615	Vulcan	12,371.15	3,384.75	8,956.75			24,712.65
	CONVERTED YACHTS.						
829	Aileen			7.03			7.03
834	Dorothea	3.52	.70	365.87		320.32	690.41
833	Eagle	2,234.09	610.20	653.04		158.80	3,656.13
828	Elfrida	11.52	3.00	2.06			16.58
837	Gloucester	634.67	188.69	266.41			1,089.77
840	Mayflower	1,198.87	364.16	2,279.97	3.84		3,846.84
826	Oneida	19.71	5.97	40.36			66.04
830	Sylvia	701.15	217.98	373.57			1,292.70
835	Wasp	145.19	30.92	188.08			364.19
839	Yankton	1,787.05	451.41	1,041.32			3,279.78
	TUGS.						
504	Accomac	629.02	219.68	199.68			1,048.38
522	Active	.84	.24	.68			1.76
524	Alice	34.71	8.80				43.51
534	Apache	260.45	65.56	72.48			398.49
545	Arapaho	619.63	140.66	291.28			1,051.57
529	Fortune	19.34	5.37	25.45			50.16
507	Hercules	133.54	44.94	32.43			210.91
536	Iroquois			910.33			910.33
505	Iwana	233.88	82.02	86.65			402.55
508	Massasoit	39.97	13.28	20.59			73.84
516	Modoc	411.36	114.69	144.09			670.14
546	Mohave	1,209.36	471.85	567.74			2,248.95
526	Mohawk	61.00	14.25	7.60			82.85
506	Narkeeta	54.50	12.25	2.99			69.74
541	Navajo	1,042.26		316.64			1,358.90

Statement 6.—FLEET MAINTENANCE—ALTERATIONS—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	TUGS—continued.						
543	Ontario	$3,427.30	$918.57	$1,636.07			$5,981.94
533	Osceola	3,214.94	942.98	2,722.58			6,880.50
537	Patapsco	1,438.80	496.76	695.32			2,630.88
538	Patuxent	1,810.24	631.23	469.48			2,910.95
520	Pawnee	95.25	35.68	8.84			139.77
511	Pawtucket	79.88	29.06	9.51			118.45
513	Penacook	5.28	1.16				6.44
514	Pentucket	74.18	20.24	10.59			105.01
532	Peoria	261.17		98.04			359.21
542	Piscataqua	61.13	30.77	23.86		$743.93	859.69
527	Pontiac	17.66	4.21	4.17			26.04
540	Powhatan	239.51	56.10	5.19			300.80
518	Rocket	255.28	82.24	31.60			369.12
512	Samoset	438.07	172.69	164.53			775.29
517	Sebago	12.85	4.30	.47			17.62
502	Sioux	36.84	11.22	35.41			83.47
544	Sonoma	4,399.23	1,109.45	2,588.22			8,096.90
515	Sotoyomo	498.53	216.01	116.16			830.70
547	Tillamook	1,236.45	323.57	419.47			1,979.49
521	Traffic	68.02	13.35	7.08			88.45
535	Transfer	97.74	19.79	49.97			167.50
525	Unadilla			6.02			6.02
528	Uncas	2,230.57	609.23	1,921.46			4,761.26
523	Vigilant			4.00			4.00
501	Wahneta	460.41	104.41	38.68			603.50
531	Wompatuck	20.38	7.13				27.51
	SPECIAL TYPE.						
876	Baltimore	4,432.24	1,438.73	2,640.07	$9,290.00	1,238.07	19,039.11
601	Hannibal	10,728.07	2,801.24	5,814.55			19,343.86
910	Lebanon	5,044.78	1,538.33	4,978.08			11,561.19
602	Leonidas	8,096.56	2,217.27	3,816.13			14,129.96
852	Prometheus	8,748.53	1,857.84	12,661.31			23,267.68
875	San Francisco	13,622.15	3,643.10	17,569.90	9,546.24	3,202.41	47,583.80
851	Vestal	4,729.25	1,608.42	4,926.05		178.49	11,442.21
900	Vesuvius	1.50					1.50
	UNSERVICEABLE FOR WAR PURPOSES.						
960	Adams	256.33	70.71	225.66			552.70
953	Boxer	4.00					4.00
954	Constellation	87.20					87.20
955	Constitution	3.20	1.01	16.20			20.41

956	Cumberland	66.84	15.01	.85			82.70
957	Essex	39.85	7.97	905.15			952.97
959	Franklin	1,205.74	289.97	350.10			1,845.81
960	Gopher	84.28	6.64	599.91			690.83
962	Hartford	1,982.07	467.96	2,200.04			4,650.07
963	Intrepid	.58					.58
733	Mohican	17.28					17.28
967	Philadelphia	1,898.98	512.68	1,160.17		72.11	3,643.14
781	Hamlow	57.76	5.06	13.19			76.01
969	Reina Mercedes	50.69	17.41	7.55			75.65
731	Severn					1,802.76	1,802.76
971	Southery	580.26	91.54	193.18			864.98
974	Wolverine	108.80	18.86	996.49			1,123.65
976	Yantic	185.48	24.21	961.25			1,194.94
	MISCELLANEOUS.						
984	Yard craft	12,034.71	3,197.05	3,791.89			19,013.65
988	Target rafts	66.47	14.87				81.34
990	Airships	3,837.01		29,284.67	146.86		32,768.54
	Total	1,213,166.07	339,345.68	900,882.05	31,154.84	186,532.16	2,761,081.70

COST OF ALTERATIONS PER TON, BY CLASSES.

Class of vessels.	Title K.
Battleships	
First line	$1.70
Second line	1.47
Armored cruisers	1.80
Cruisers	
First class	1.19
Second class	1.67
Third class	2.91
Monitors	1.61
Destroyers	0.65
Coast torpedo vessels	
Destroyers	4.28
Torpedo boats	9.64

Class of vessels.	Title K.
Submarines	$11.07
Tenders to torpedo vessels	9.88
Gunboats	3.65
Transports	3.19
Supply ships	1.99
Hospital ship	.95
Fuel ships	1.02
Converted yachts	2.06
Tugs	3.29
Special types	3.19
Unserviceable for war purposes	.43
Average for all classes	1.87

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	Total	$337,597.78	$102,290.40	$126,807.90	$32,616.44	$398.39	$599,710.91
	BATTLESHIPS—FIRST LINE.						
28	Delaware	4,518.64	1,558.30	1,329.80	314.67	.....	7,721.41
29	North Dakota	3,817.31	1,404.98	1,032.31	180.24	.....	6,434.84
30	Florida	10,890.84	3,596.72	3,184.84	246.61	.....	17,919.01
31	Utah	5,075.30	1,509.62	1,930.10	510.61	.....	9,025.63
33	Wyoming	6,838.04	2,222.19	2,912.18	1,606.12	.....	13,638.53
32	Arkansas	6,211.41	2,115.77	2,775.94	317.10	.....	11,420.22
34	New York	4,246.19	1,512.65	1,154.66	225.11	.....	7,138.61
37	Texas	5,226.34	1,754.65	1,872.78	339.09	.....	9,192.86
35	Nevada	329.13	110.38	266.37	.....	.....	705.88
36	Oklahoma	47.46	12.56	87.57	28.47	.....	176.06
39	Arizona	12.69	3.72	.....	.....	.....	16.41
40	New Mexico	153.71	43.00	8.23	.....	.....	204.94
41	Mississippi	153.70	42.99	8.23	.....	.....	204.92
42	Idaho	153.71	42.99	8.22	.....	.....	204.92
	BATTLESHIPS—SECOND LINE.						
1	Indiana	49.84	13.46	9.10	80.25	.....	152.65
3	Oregon	393.03	109.03	243.60	48.45	.....	794.11
4	Iowa	20.44	7.97	.28	.....	.....	28.69
5	Kearsarge	129.61	41.15	36.84	10.70	.....	218.30
6	Kentucky	193.15	73.61	131.50	19.75	.....	418.01
8	Illinois	1,652.76	457.20	241.00	97.50	.....	2,448.46
7	Alabama	485.17	135.40	157.17	94.25	.....	871.99
9	Wisconsin	4,444.93	1,537.67	1,362.62	10.00	.....	7,355.22
10	Maine	922.02	284.65	1,432.01	54.00	.....	2,692.68
11	Missouri	2,545.40	869.92	600.35	188.40	.....	4,204.07
12	Ohio	1,785.13	570.13	621.99	145.76	.....	3,123.01
19	Virginia	7,215.63	2,484.54	2,132.39	388.32	.42	12,221.30
16	Nebraska	6,006.46	2,063.87	1,847.10	154.30	.....	10,071.73
15	Georgia	6,984.41	2,327.47	1,489.34	202.45	.....	11,003.67
17	New Jersey	5,484.23	1,913.02	2,290.53	316.52	.....	10,004.30
18	Rhode Island	10,453.64	3,569.32	2,553.87	689.17	.....	17,266.00
20	Connecticut	5,299.12	1,727.30	1,194.36	4,430.02	.....	12,650.80
22	Louisiana	5,694.30	1,386.75	2,118.53	64.75	33.00	9,747.33
27	Vermont	2,746.65	907.36	1,034.78	92.18	.....	4,780.97
21	Kansas	10,435.46	3,041.59	2,537.29	107.69	.....	16,122.03
24	Minnesota	3,491.98	1,063.26	1,036.39	195.60	.....	5,787.23
25	New Hampshire	6,064.14	1,777.13	2,256.74	76.96	.....	10,174.97
26	South Carolina	2,095.60	739.94	963.25	517.35	.....	4,316.14
23	Michigan	4,690.78	1,597.65	3,238.49	504.50	.....	10,031.42
	ARMORED CRUISERS.						
126	Colorado	8,875.19	3,757.68	2,846.62	265.15	.....	15,744.64
127	Maryland	3,940.57	1,484.44	2,368.73	308.69	.....	8,102.43
133	Memphis	7,706.04	1,756.01	2,024.03	394.40	.....	11,880.48
131	Montana	5,792.63	1,522.90	1,636.11	679.68	.....	9,631.32
132	North Carolina	1,792.66	401.72	475.67	186.60	.....	2,856.65
128	Pittsburg	1,754.63	674.15	934.09	15.75	.....	3,378.62
125	San Diego	2,126.22	663.15	1,538.21	120.22	.....	4,447.80
129	South Dakota	3,887.66	1,255.48	1,223.81	10.50	.....	6,377.45
134	Washington	5,202.02	1,122.93	2,131.29	10.65	.....	8,466.89
130	West Virginia	6,213.35	2,503.91	3,168.23	39.00	.....	11,924.49
	CRUISERS—FIRST CLASS.						
121	Brooklyn	2,572.01	646.00	1,845.12	28.10	.....	5,091.23
122	Charleston	1,287.77	525.64	623.63	75.38	.....	2,512.42
123	Milwaukee	277.23	75.23	504.08	9.40	.....	865.94
120	Saratoga	1,061.25	376.21	503.48	76.79	.....	2,017.73
124	St. Louis	4,199.26	1,716.54	3,376.47	90.87	.....	9,383.14
	CRUISERS—SECOND CLASS.						
116	Chicago	888.53	312.52	133.75	122.00	.....	1,456.80
118	Columbia	428.13	150.94	553.43	32.50	.....	1,165.00
117	Olympia	1,301.78	309.60	759.79	28.50	.....	2,399.67
	CRUISERS—THIRD CLASS.						
111	Albany	933.64	381.51	407.38	36.50	.....	1,759.03
113	Birmingham	2,231.95	745.62	450.40	150.75	.....	3,578.72
105	Chattanooga	2,243.92	910.04	490.32	.....	.....	3,644.28
114	Chester	249.45	82.10	74.80	77.40	.....	483.75
108	Cincinnati	78.75	15.87	34.44	70.14	.....	199.20

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	CRUISERS—THIRD CLASS—continued.						
106	Cleveland	$1,200.66	$375.97	$271.62	$1.50		$1,939.75
107	Denver	1,505.02	440.34	362.81	1.90		2,310.07
108	Des Moines	189.72	48.36	19.13			257.21
109	Galveston	85.12	22.27	3.09	7.76		118.24
100	Marblehead	758.86	193.81	361.59	14.25		1,328.51
101	Montgomery	182.52	73.45	38.94	37.75		332.66
112	New Orleans	673.52	275.88	215.90	13.50		1,178.80
104	Raleigh	1,213.01	353.99	398.89	67.50		2,033.39
115	Salem	2,921.10	997.94	814.49	86.82		4,820.35
110	Tacoma	2,597.29	390.74	652.44	38.55		3,679.02
	MONITORS.						
704	Amphitrite	174.56		43.33	420.00		637.89
700	Cheyenne	1,271.17	368.97	658.30	32.98		2,331.42
706	Monadnock	1,036.10	216.58	696.28	4.50		1,953.46
708	Monterey	447.50	152.04	166.29			765.83
701	Ozark	1,725.59	579.80	1,927.50	78.15		4,311.04
702	Tallahassee	103.21	30.00	30.97	114.15		278.33
703	Tonopah	1,001.43	335.77	250.80	294.24		1,882.24
	DESTROYERS.						
221	Ammen	507.82	138.56	215.02	146.08		1,007.48
246	Aylwin	260.44	64.45	88.39			413.28
247	Balch	706.96	120.74	370.73	19.00		1,217.43
248	Benham	889.86	32.20	54.88	44.50		1,021.44
223	Burrows	465.54	150.93	186.30	90.50		893.27
222	Beale	458.58	133.77	188.81	31.70		812.86
243	Cassin	591.17	110.97	40.99	23.50		766.63
255	Conyngham	5.16					5.16
244	Cummings	698.29	211.93	179.04	14.50		1,103.76
250	Cushing	220.52	50.64	48.79			319.95
265	Davis	9.42					9.42
254	Downes	34.58	11.10	7.65			53.33
224	Drayton	1,029.26	272.27	248.93	105.00		1,655.46
242	Duncan	234.56	9.18	119.03	38.50		401.27
256	Ericsson	262.46	76.24	103.15	16.00		457.85
225	Fanning	188.57	52.95	35.37	15.50		292.39
216	Flusser	146.22		44.75			190.97
226	Henley	312.75	101.34	116.28	39.00		569.37
257	Jacob Jones	30.80		2.77			33.57
227	Jarvis	644.40	210.12	153.71	8.80		1,017.03
228	Jenkins	768.98	157.02	116.46	29.59		1,072.05
229	Jouett	874.31	298.17	68.13	10.28		1,250.89
217	Lamson	393.81	86.84	166.17	2.75		649.57
231	McCall	431.37	142.28	190.80	54.50		818.95
245	McDougal	610.13	188.79	117.03	3.70		919.65
230	Mayrant	453.96	129.71	120.05	194.37		898.09
232	Monaghan	55.07	12.17	8.77			76.01
251	Nicholson	208.31	51.97	41.31	4.10		305.69
252	O'Brien	89.83	29.88	7.88	55.75		183.34
249	Parker	779.83	208.78	260.58	23.70		1,272.89
233	Patterson	1,639.98	431.84	474.40	5.31		2,551.48
234	Paulding	678.31	219.20	144.36	11.61		1,053.48
235	Perkins	315.41	45.93	84.02	1,771.75		2,217.11
258	Porter	22.81	3.33	15.81			41.95
218	Preston	430.79	29.88	219.60	3.00		683.27
219	Reid	173.59	25.85	29.17	10.10		238.71
236	Roe	265.41	56.55	166.25	1,743.46		2,231.67
263	Sampson	6.35					6.35
220	Smith	322.15	98.80	52.62	1,734.00		2,207.57
237	Sterett	364.03	91.90	168.53	1,734.00		2,358.46
238	Terry	414.76	104.81	82.84	1,907.50		2,509.91
239	Trippe	786.23	265.92	237.46	31.04		1,320.65
259	Tucker	29.22	9.85	1.54			40.61
260	Wadsworth	151.67	36.83	21.51			210.01
240	Walke	236.25	61.06	59.82			357.13
241	Warrington	1,443.93	393.40	312.00	117.50		2,266.83
263	Winslow	106,86	29.47	22.07			158.40
	COAST TORPEDO VESSELS—DESTROYERS.						
204	Bainbridge	278.60	56.01	254.19	153.56		742.36
205	Barry	146.74	37.59	27.98	34.75		247.06
206	Chauncey	234.49	72.82	28.17			335.48
207	Dale	107.08	25.99	13.99			147.06

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	COAST TORPEDO VESSELS—DESTROYERS—contd.						
208	Decatur	$172.37	$35.09	$46.67			$254.13
202	Hopkins	1,012.09	284.93	166.70			1,463.72
203	Hull	575.39	157.72	74.55	$9.00		816.66
200	Lawrence	537.94	182.33	151.47	35.50		907.24
201	Macdonough	191.97	45.95	23.29	22.88		284.09
209	Paul Jones	821.01	267.61	128.27	37.75		1,254.64
210	Perry	1,844.41	556.35	203.02	7.00		2,610.78
211	Preble	1,637.26	487.60	414.91	65.70		2,605.47
212	Stewart	563.11	153.14	101.65			817.90
213	Truxtun	482.56	88.49	53.58			624.63
214	Whipple	1,116.76	306.90	119.25	32.50		1,575.41
215	Worden	234.90	60.46	72.87	62.00		430.23
	COAST TORPEDO VESSELS—TORPEDO BOATS.						
719	Bagley	5.00	1.35				6.35
728	Bailey	171.73	64.59	13.45			249.77
720	Barney	39.62	22.81	11.67			74.10
714	Dahlgren	1.64	.39	18.00			20.03
723	De Long	80.56	18.20	6.92			105.68
717	Dupont	54.95	18.24	3.27			76.46
727	Farragut	231.52	68.41	40.45	12.50		352.88
712	Foote				11.50		11.50
726	Goldsborough	24.48	11.50	3.28			39.26
710	Mackenzie	96.95		24.43			121.38
711	Morris				15.00		15.00
713	Rodgers	41.90	14.08	67.54			123.52
724	Shubrick	67.24	15.17	4.27			86.68
725	Thornton	76.55	17.78	8.71			103.04
718	Tingey	65.22	15.08	6.70			87.00
	SUBMARINES.						
300	A-2	35.37	5.88	45.26			86.51
302	A-4	47.36	7.86	17.50	5.00		77.72
303	A-5	18.36	5.61				23.97
304	A-6	36.07	5.99		5.00		47.06
305	A-7	329.80	61.78	27.59			419.17
306	B-1	3.68	.92				4.60
307	B-2	9.08	2.27		5.00		16.35
308	B-3	883.25	165.69	185.87	17.00		1,251.81
309	C-1	4.21	1.17				5.38
311	C-3	17.44	4.36				21.80
312	C-4	8.76		3.10			11.86
313	C-5	7.38	.95	4.26			12.59
314	D-1	130.36	7.72	5.70			143.78
315	D-2	82.57	19.86	58.73			161.16
316	D-3	23.53	3.72	.45			27.70
317	E-1	84.82	1.13	.13	14.50		100.58
318	E-2	40.14	9.15	.80	12.50		62.59
319	F-1	5.04					5.04
320	F-2	8.50	2.11	61.14			71.75
321	F-3	38.43	14.69	2.42	10.00		65.54
323	G-1	63.50	13.36	10.24	4.00		91.10
324	G-2	150.11	10.20	4.56			164.87
325	G-3	44.88	10.24	4.72			59.84
326	G-4	28.24	8.47				36.71
327	H-1	633.35	169.75	203.21	105.76		1,112.07
328	H-2	323.27	84.20	143.86	312.83		864.16
329	H-3	502.81	136.97	27.18	121.98		788.94
330	K-1	93.67	26.81	17.54			138.02
331	K-2	61.35	17.70	3.58			82.63
332	K-3	283.53	78.57	10.35	71.40		443.85
333	K-4	239.24	68.71	5,872.54	8.00		6,188.49
334	K-5	56.14	15.45	3.26			74.85
335	K-6	79.84	21.38	2.47			103.69
336	K-7	170.14	40.33	6.90			217.37
337	K-8	205.38	57.18	19.71	13.50		295.77
348	M-1	28.07					28.07
	TENDERS TO TORPEDO VESSELS.						
730	Alert	1,246.60	6.68	639.57	134.85		2,027.70
735	Bushnell	325.64	138.60	488.77	5.00		958.01
737	Dixie	246.07	78.20	214.01	115.04		653.32
732	Fulton	61.32	11.64	15.27			88.23

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	TENDERS TO TORPEDO VESSELS—continued.						
736	Iris	$737.03	$209.41	$320.56			$1,267.00
738	Melville	32.75	6.78	7.45	$189.00		235.98
850	Panther	571.10	142.34	173.26	10.55		897.25
734	Pompey	356.06	68.97	173.95	21.50		620.48
	GUNBOATS.						
412	Annapolis	1,042.19	340.45	525.26	77.50		1,985.40
403	Callao	111.92	20.80	7.64	14.33		154.69
420	Castine	152.37	15.22	293.17	39.50		500.26
428	Concord	132.60	46.67	16.32			195.59
427	Dolphin	2,012.73	718.76	415.84	130.50		3,277.83
417	Dubuque	1,951.19	476.59	487.71	35.36		2,950.85
408	Elcano	10.36	1.72		36.13		48.21
424	Helena	11.13	2.28	3.65	36.26		53.32
416	Isla de Luzon	8.36	3.77		8.10		20.23
421	Machias	99.78	23.92	2.28	8.25		134.23
410	Marietta				41.37		41.37
401	Monocacy	6.48	1.13	6.07			13.68
423	Nashville	1,524.82	.98	240.10	106.00		1,871.90
413	Newport	1,256.57	460.10	220.09			1,936.76
418	Paducah	3,256.78	755.97	1,297.82	44.46		5,355.03
402	Palos	20.70	5.92	24.77			51.39
404	Pampanga	11.56	1.91	.53			14.00
409	Petrel	2,362.88	1.27	574.79	30.34		2,969.28
414	Princeton	207.54	75.91	31.51	42.00		356.96
406	Quiros	8.52	2.13	25.90			36.55
422	Ranger	1,047.43	351.34	148.74	2.41		1,549.92
426	Sacramento	1,517.39	354.69	267.82	15.66		2,155.56
405	Samar	40.90	8.33	36.04			85.27
400	Sandoval				1.67		1.67
415	Vicksburg	1,321.43	429.51	274.98			2,025.92
407	Villalobos			.18			.18
411	Wheeling	757.88	15.15	85.94	186.00		1,044.97
425	Wilmington	215.91	84.16	80.47	117.84		498.38
429	Yorktown	670.01	227.16	438.96			1,336.13
	TRANSPORTS.						
752	Buffalo	1,078.57	292.53	389.86	49.00		1,809.96
750	General Alava	145.11	49.59	50.41			245.11
754	Hancock	2,074.27	739.50	634.60			3,448.37
753	Prairie	763.88	222.96	435.21	7.83		1,429.88
	SUPPLY SHIPS.						
777	Celtic	128.45	46.64	89.79	29.00		293.88
776	Culgoa	1,466.27	486.44	637.84	129.46		2,720.01
778	Glacier	681.79	205.62	275.20	125.25		1,287.86
775	Supply	4,451.89	1,596.46	1,146.41	38.04		7,232.80
	HOSPITAL SHIP.						
801	Solace	2,014.29	688.41	604.61	74.48		3,381.79
	FUEL SHIPS.						
611	Abarenda	828.69	263.32	213.66	36.55		1,342.22
612	Ajax	156.15	59.13	20.73			236.01
608	Arethusa	297.32	77.40	39.03			413.75
610	Brutus	139.40	49.81	155.72			344.93
606	Caesar	354.89	62.50	80.49	42.00		439.88
607	Cyclops	677.34	234.51	138.60	98.00		1,148.45
613	Hector	686.58	226.24	135.81	15.00		1,063.63
620	Jason	653.37	216.75	241.99			1,112.11
622	Jupiter	1,348.93	470.41	1,472.39	159.85		3,451.58
600	Justin	514.97	143.81	223.86	70.00		952.64
616	Kanawha				35.00		35.00
614	Mars	296.37	96.11	85.28			477.76
617	Maumee				47.50		47.50
604	Nanshan	142.52	37.30	37.24			217.06
623	Neptune	1,357.48	518.78	310.34	83.50		2,270.10
618	Nereus	123.33	29.72	10.31	2.50		165.86
609	Nero	703.30	204.59	185.47			1,093.36
621	Orion	1,992.52	721.86	1,410.65			4,125.03
619	Proteus	121.58	38.17	88.26			248.01
603	Saturn	1,158.73	404.76	2,909.35	17.00		4,489.84
605	Sterling	192.38	55.59	201.38			449.35
615	Vulcan	127.83	38.04	36.00			201.87

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	CONVERTED YACHTS.						
829	Aileen				$49.50		$49.50
834	Dorothea	$125.70	$23.79	$31.31	196.00		386.80
833	Eagle	1,040.87	222.53	664.43	44.50		1,972.33
828	Elfrida	45.27	13.73	1.34			60.34
837	Gloucester	83.97	27.24	358.53			469.74
840	Mayflower	822.87	311.32	651.85	60.20		1,846.24
836	Scorpion				27.98		27.98
831	Stranger				6.50		6.50
827	Sylph	510.25	206.96	38.91	45.00		801.12
838	Vixen	106.42	38.67	49.27			194.36
835	Wasp	21.41	5.89				27.30
839	Yankton	1,286.20	343.49	267.45	59.50		1,956.64
	TUGS.						
504	Accomac	12.53	4.09	1.12			17.74
522	Active	65.54	20.70	14.28			100.52
545	Arapaho			15.40			15.40
529	Fortune	22.04	5.84	65.24	49.50		142.62
507	Hercules	4.52	1.77				6.29
536	Iroquois	70.28	18.72	26.81	16.00		131.81
505	Iwana	4.55	1.51	1.00			7.06
508	Massasoit	29.74	9.68	10.02			49.44
516	Modoc	8.57	2.85	1.90			13.32
546	Mohave	45.06	20.63	24.30			89.99
526	Mohawk	29.49	8.48	10.79	2.50		51.26
506	Narkeeta	13.21	3.70	7.52			24.43
541	Navajo	20.31	.14	6.79			27.24
543	Ontario	166.72	37.41	60.49	46.50		311.12
533	Osceola	133.00	30.86	14.39			178.25
537	Patapsco	161.01	54.08	17.05			232.14
538	Patuxent	151.31	48.09	35.62	118.75		353.77
520	Pawnee	47.79	13.07	23.19			84.05
511	Pawtucket	12.26	4.10	1.76			18.12
514	Pentucket	56.48	16.34	32.92			105.74
532	Peoria	73.84		10.01	54.50		138.35
542	Piscataqua	113.59	38.79	62.77			215.15
527	Pontiac	4.58	1.55		1.80		7.93
539	Potomac				3.00	$19.86	22.86
540	Powhatan	9.99	2.05				12.04
503	Rapido	34.32	10.30	23.01			67.63
518	Rocket	27.46	9.12	2.79			39.37
512	Samoset	16.68	4.40				21.08
517	Sebago	53.67	12.54	2.97			69.18
502	Sioux	7.48	2.29				9.77
544	Sonoma	180.40	69.20	41.59	3.00		294.19
515	Sotoyomo	87.00	35.01	33.34			155.35
510	Tecumseh	52.84	31.71	33.60			118.15
547	Tillamook	21.23	3.75	41.24			66.22
521	Traffic	6.17	1.66	2.08			9.91
535	Transfer	4.09	1.20	1.40			6.69
509	Triton			1.50			1.50
525	Unadilla	5.69	1.75	1.16			8.60
528	Uncas	117.97	23.92	14.69	97.50		254.08
500	Waban	25.76		34.83	32.50		93.09
501	Wahneta	21.10	5.69	40.52			67.31
531	Wompatuck	98.29	38.17	6.48			142.94
	SPECIAL TYPE.						
951	Albatross				40.00		40.00
876	Baltimore	1,100.77	346.13	492.53	3.30		1,942.73
601	Hannibal	2,517.76	578.11	813.25	270.58		4,179.70
910	Lebanon	137.98	48.44	76.37	3.00		265.79
602	Leonidas	1,589.08	337.82	426.88			2,353.78
852	Prometheus	1,400.30	570.16	1,612.51	20.24		3,603.21
875	San Francisco	1,752.22	447.69	619.03	176.80		2,995.74
851	Vestal	848.08	282.74	284.56	140.20		1,555.58
900	Vesuvius	1,894.57	518.14	254.25			2,666.96
	UNSERVICEABLE FOR WAR PURPOSES.						
950	Adams	716.77	277.62	300.77			1,295.16
953	Boxer	81.86	6.97	1.05	31.00		120.88
954	Constellation	5,334.96	2.19		45.57		5,382.74
955	Constitution	12.44	5.17				17.61
956	Cumberland	197.52	51.09	25.58	19.50	139.67	433.36

Statement 7.—FLEET MAINTENANCE—REPAIRS TO EQUIPAGE—Continued.

No.	Name of vessel.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Total.
	UNSERVICEABLE FOR WAR PURPOSES—continued.						
957	Essex	$2.00	$0.80				$2.80
959	Franklin	10.48	2.97	$2.41			15.86
960	Gopher	.94	.38				1.32
961	Granite State	1,585.26	528.73	341.35			2,455.34
962	Hartford	799.38	197.86	263.70	$36.50		1,297.44
963	Intrepid	40.26	11.65	15.23			67.14
733	Mohican	2,582.67	463.08	1,531.15	44.00		4,620.90
967	Philadelphia	1,426.04	502.78	195.45			2,124.27
751	Rainbow	2,203.90	606.84	487.90			3,298.64
969	Reina Mercedes	513.81	190.24	254.50			958.55
970	Richmond	242.59	90.35	47.55			380.49
731	Severn				37.00	$205.44	242.44
971	Southery	533.66	103.98	305.95			943.59
975	Yantic				18.00		18.00
	MISCELLANEOUS.						
981	Receiving ship, Boston				105.70		105.70
983	Receiving ship, New York	171.57	60.29	36.57	242.62		511.05
984	Receiving ship, Philadelphia				45.21		45.21
985	Receiving ship, Norfolk				23.75		23.75
986	Receiving ship, Charleston				5.00		5.00
988	Receiving ship, San Francisco	155.58	63.51	94.46	21.50		335.05
989	Receiving ship, Puget Sound	827.82	333.72	217.67	8.50		1,387.71
991	Reserve torpedo division, Annapolis				5.25		5.25
993	Receiving ship, Olongapo				70.87		70.87
994	Yard craft	193.00	45.35	113.32			351.67
996	Seamen's quarters, Washington	4.60	1.02				5.62
999	Airships	124.43		3.25	231.93		359.61
	Total	337,597.78	102,290.40	126,807.90	32,616.44	398.39	599,710.91

Statement 8.—SHORE STATION IMPROVEMENTS.

Station.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Total.
Frenchman Bay, Me				$16,160.82			$16,160.82
Portsmouth, N. H	$27,719.38	$5,734.01	$19,631.20	12,127.05			65,211.64
Hospital, Portsmouth				3,397.55			3,397.55
Boston, Mass	45,971.00	13,214.42	62,042.19	106,165.56		$825.00	228,218.17
Hospital, Boston			8,727.73	6,839.83			15,567.56
Magazine, Hingham	17,213.57		12,634.86	609.70			30,458.13
Training Station, Rhode Island	1,424.86		3,637.19	2,018.47	$6.51		7,087.03
Torpedo Station, Rhode Island	11,093.03		3,437.39	182,628.56	254.54		190,538.74
Narragansett Bay, R. I	34,442.12		31,838.37	6,433.03			72,713.52
War College, Newport				1,717.25	42.25		1,759.50
Fuel Station, Melville				2,774.07			2,774.07
Fuel Station, New London				7,698.18	58.50	1,289.32	9,046.00
Purchasing office, New York				57.00			57.00
New York, N. Y	47,002.67	9,512.61	47,065.75	137,584.87	244.77	23.40	241,434.07
Provisions and clothing depot				3,658.70			3,658.70
Magazine, Fort Lafayette			121.92				121.92
Magazine, Iona Island			1,188.46				1,188.46
Magazine, Dover, N. J			690.80				690.80
Hospital, New York				18,645.68			18,645.68
Philadelphia, Pa	37,755.74	8,359.85	31,321.90	36,745.63	586.67	152.39	114,913.18
Magazine, Fort Mifflin			3,843.94	40,312.13			44,156.07
Naval Home, Philadelphia				1,509.52	31.45		1,540.97
Hospital, Philadelphia				2,344.25	225.73	111.00	2,680.98
Purchasing office, Baltimore				480.00			480.00
Academy, Annapolis	4,547.46		42,807.79	24,159.98			71,515.23
Washington, D. C	62,193.47	16,750.80	78,278.99	322,880.57			480,103.83
Observatory, Washington				685.00			685.00
Marine Corps rifle range, Winthrop				6,716.91			6,716.91
Proving ground, Indianhead	104,316.83		184,008.73	286,330.48			574,656.04
Hospital, Washington				7,896.23	122.41		8,018.64
Purchasing office, Norfolk				38.73			38.73
Norfolk, Va	96,923.95	25,884.96	93,305.21	455,303.82	906.22		672,324.16
Magazine, St. Juliens	6,857.89		11,919.75	25,579.86			44,357.50
Hospital, Norfolk				1,083.53			1,083.53
Charleston, S. C	52,792.12	10,975.76	81,416.48	170,731.71			315,916.07
Hospital, Port Royal			9,515.18	37,497.44			47,012.62
Key West, Fla	12.32		2,366.32	11,984.80			14,363.44
Aeronautic station, Pensacola	16,624.99		37,638.80	129,486.87	110,450.94		294,201.60
New Orleans, La	3,927.33		6,327.02	2,256.25		76.96	12,587.56
Training Station, Illinois			3.00	3,091.57			3,094.57
Hospital, Las Animas				2,256.02	336.72		2,592.74
Mare Island, Cal	87,719.54	18,196.57	70,109.56	110,795.92			286,821.59
Magazine, Mare Island	1,501.87		2,841.40				4,343.27

Training Station, California			7,866.02	14,569.44	9.50		22,444.96
Fuel station, Tiburon			1,443.49	360.85	87.44		1,891.78
Fuel station, San Diego			208.67	8,697.94	619.36		9,525.97
Hospital, Mare Island				6,615.85	2,402.70		9,018.55
Puget Sound, Wash	54,654.61	16,384.45	72,435.19	89,888.07			233,362.32
Magazine, Puget Sound	8,962.93		14,809.44	14,991.39			38,763.76
Pacific coast torpedo station	6,546.43		47,219.17	34,769.73			88,535.33
Hospital, Puget Sound			468.17	9,126.24			9,594.41
Guantanamo, Cuba	25,741.54		39,048.05	2,855.49			67,645.08
Pearl Harbor, Hawaii	128,850.74		158,321.17	854,367.09			1,141,539.00
Cavite, P. I.	1,071.00	240.50	6,696.29	4,412.70			12,420.49
Olongapo, P. I.	9,912.51	3,576.48	18,325.96	3,623.92			35,438.87
Magazines, Philippine Islands	16.80		1,004.19				1,020.99
Hospital, Canacao						95.00	95.00
Hospital, Olongapo				60.00			60.00
Tutuila, Samoa			24.87	1,634.50			1,659.37
Guam, Marianas Island	7,609.18		18,738.20	315.15	340.20		27,002.73
Fuel station, Pichilinque Bay	2.16	.58	159.74		373.57		536.05
Radio stations	27,550.52	4,060.14	71,539.29	377,761.16	23,522.96		504,434.07
Total	930,958.56	132,882.13	1,298,153.06	3,612,733.06	140,622.44	2,573.07	6,117,922.32

Statement 9.—SHORE STATION MAINTENANCE.

Station.	Labor.	Indirect on title S work.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Indirect at industrial yards charged to Title Z, Marine Corps, O.D., S. D., and expenses of auction sales.	Total.
Purchasing office, Portsmouth, N. H. (abolished Sept. 30, 1915)				$929.39					$929.39
Coal depot, Frenchman Bay, Me	$2,843.96		$220.47	691.07					3,755.50
Navy yard, Portsmouth, N. H	427,126.82	$118.52	113,605.68	25,637.66	$746.48		$131,494.58	$46,112.32	744,842.06
Hospital, Portsmouth, N. H	5,018.63		9,294.53	20,625.02			10,770.04		45,708.22
Purchasing office, Boston, Mass. (abolished Apr. 1, 1916)				6,418.65			3,080.87		9,499.52
Navy yard, Boston, Mass	977,222.90	210.27	210,558.21	48,117.18			171,574.34	92,423.78	1,500,106.68
Hospital, Boston, Mass	16,770.48		15,605.85	44,928.65			21,881.53		99,186.51
Magazine, Hingham, Mass	60,632.39		14,432.17	9,189.99			6,815.38		91,069.93
Purchasing office, Newport, R. I				4,956.42	5.10		3,107.08		8,068.60
Training station, Newport, R. I	32,939.26		55,970.23	12,725.76	252.20		431,269.06		533,156.51
Torpedo station, Newport, R. I	225,900.63		111,475.26	16,790.44	316.94		118,656.97		473,140.24
Narragansett Bay, R. I	58,190.30		13,244.41	63,259.16	297.14		155,850.63		290,841.64
War College, Newport, R. I	16,710.99		657.56	7,500.44	463.59		38,767.85		64,100.43
Fuel station, Melville, R. I	26,157.00		5,777.54	4,401.19	29.41		639.17		37,004.31
Fuel station, New London, Conn	4,587.44		396.91	7,587.79	379.53	$84.00	2,968.21		16,003.88
Purchasing office, New York, N. Y. (abolished Mar. 23, 1916)				18,779.70	165.42		1,502.00		20,447.12
Navy yard, New York, N. Y	2,120,037.29	942.89	503,390.91	88,557.47	798.56	5.28	287,019.91	97,793.75	3,098,546.06
Clothing factory, New York, N. Y			1,368.81						1,368.81
Provisions and clothing depot, New York, N. Y	51,882.24		11,121.90	6,341.20					69,285.34
Magazine, Fort Lafayette, N. Y	10,344.08		767.03	38.55			2,781.66		13,931.32
Magazine, Iona Island, N. Y	86,914.64		21,877.93	166.40			10,418.66		119,377.63
Magazine, Dover, N. J	43,024.04		11,283.56	136.00			2,338.45		56,782.05
Hospital, New York, N. Y	23,868.29		14,833.08	73,850.63			69,070.36		181,622.36
Medical supply depot, New York, N. Y	835.00			17,578.11			2,518.48		20,931.59
Purchasing office, Philadelphia, Pa. (abolished Apr. 15, 1915)				467.60					467.60
Navy yard, Philadelphia, Pa	946,664.33	269.96	214,557.61	11,631.66	150.70		185,019.56	40,899.64	1,399,193.46
Magazine, Fort Mifflin, Pa	42,253.52		9,037.60	3,364.19			2,864.89		57,520.20
Naval Home, Philadelphia, Pa	32,393.58		2,752.19	47,278.98	833.35		16,981.92		100,240.02
Hospital, Philadelphia, Pa	8,537.10		9,064.54	43,938.68	1,974.02	146.50	32,052.30		95,713.14
Purchasing office, Baltimore, Md				2,436.08	9.93		4,138.89		6,584.90
Naval Academy, Annapolis, Md	466,151.53		146,074.75	26,229.78			1,011,802.30		1,650,258.36

Purchasing office, Washington, D. C.				3,376.91					3,376.91
Navy yard, Washington, D. C.	1,230,797.36	313.17	291,894.83	42,449.77			209,190.82	389,660.55	2,164,306.50
Naval Observatory, Washington, D. C.				438.45			27,632.34		28,070.79
Marine Corps rifle range, Winthrop, Md.	90.75			4,292.39			124.38		4,507.52
Proving ground, Indianhead, Md.	157,562.18		35,581.26	677.34		11.00	39,208.83		233,040.61
Hospital, Washington, D. C.	32,271.02		2,255.85	59,905.88	98.22		31,008.80		125,539.77
Purchasing office, Norfolk, Va. (abolished Oct. 1, 1915)				2,155.44					2,155.44
Navy yard, Norfolk, Va.	1,116,396.93	2,529.55	260,071.31	38,714.24	15,483.86	4.52	152,371.80	155,579.94	1,741,152.15
Magazine, St. Juliens Creek, Va.	48,099.11		11,226.86	3,177.06			9,527.36		72,030.39
Hospital, Norfolk, Va.	24,808.21		14,475.94	64,469.51	2,041.71		41,735.18		147,530.55
Navy yard, Charleston, S. C.	374,751.84	98.38	93,499.10	9,178.32	1,002.62		93,076.36	15,000.09	586,606.71
Hospital, Port Royal, S. C.	1,563.42		18,109.03	7,742.75	1,443.72	2,645.81	19,786.96		51,291.69
Key West, Fla.	95,672.31		41,714.10	1,607.40	89.76		42,508.93		181,592.50
Aeronautic station, Pensacola, Fla.	74,146.81		59,023.88	14,569.41			191,400.10		339,140.20
New Orleans, La.	127,401.92		47,081.34	20,713.43	456.10		69,348.79		265,001.58
Training station, Great Lakes, Ill.	60,155.40		62,617.50	23,955.75	488.56		271,421.80		418,639.01
Hospital, Las Animas, Colo.	36,600.03		5,544.38	106,872.35	1,679.28		146,839.18		297,535.22
Purchasing office, San Francisco, Cal.				11,821.37	6.01		929.36		12,756.74
Navy yard, Mare Island, Cal.	1,048,180.50	908.58	194,565.47	16,728.64	24.74	507.96	249,006.05	48,508.61	1,558,430.55
Magazine, Mare Island, Cal.	63,983.64		15,100.03	133.00					79,216.67
Training station, San Francisco, Cal.	48,900.36		48,462.92	10,404.61	.64		206,448.63		314,217.16
Fuel station, Tiburon, Cal.	44,448.85		8,101.61	7,014.18	89.99		2,225.74		61,880.37
Fuel station, San Diego, Cal.	8,623.95		666.51	7,639.32	528.40		1,459.00		18,917.18
Hospital, Mare Island, Cal.	17,301.49		17,180.37	59,286.76	1,109.17		65,958.15		160,835.94
Purchasing office, Seattle, Wash.			57.28	7,689.91	2.20		7,717.28		15,466.67
Navy yard, Puget Sound, Wash.	661,366.81	365.04	142,012.73	2,679.35	68.81		125,872.70	32,289.05	964,654.49
Magazine, Puget Sound, Wash.	27,560.68		14,039.53	73.34			4,325.28		45,998.83
Pacific coast torpedo station	20,465.79		6,859.18	44.30			4,533.83		31,903.10
Hospital, Puget Sound, Wash.	10,021.32		8,490.61	18,901.90	604.77		36,980.43		74,999.03
Guantanamo Bay, Cuba.	132,129.72		61,632.43	873.80	26.31	117.23	65,335.14		260,114.63
Pearl Harbor, Hawaii.	149,879.75		27,383.16	17,460.84	*16.86*		35,124.30		229,831.19
Purchasing office, Manila, P. I.				5,868.25			3,702.64		9,570.89
Naval station, Cavite, P. I.	188,948.41	207.91	104,373.39	4,075.09	76.74		145,243.04	7,767.98	450,692.56
Naval station, Olongapo, P. I.	286,396.77	597.17	105,284.17	253.57	794.73		142,519.70	51,285.00	587,131.11
Magazines, Philippine Islands	21,014.05		8,506.55				4,242.29		33,762.89
Hospital, Canacao, P. I.	13,658.69		10,422.92	17,049.66	409.58	46.08	33,988.93		75,575.86
Hospital, Olongapo, P. I.	4,373.72		3,114.77	8,022.17			19,481.04		34,991.70
Hospital, Yokohama, Japan				6,580.68	699.96		3,304.04		10,584.68
Tutuila, Samoa	25,007.89		30,148.73	2,564.04	77.08		85,888.80		143,686.54
Guam, Marianas Islands	80,610.91		31,342.47	8,528.87	5,282.29		140,261.02		266,025.56
Fuel station, Pichilinque Bay	207.06	63.53	265.10	3,824.14	24.78				4,384.61
Radio stations	82,656.60	8,701.51	162,773.06	105,623.99	1,663.53	66,095.83	13,191.40		440,705.92
Total	12,003,000.69	15,326.48	3,441,247.10	1,341,992.02	40,679.07	69,664.21	5,468,305.51	977,320.71	23,357,535.79

Charged to title G	$12,844,363.20
Charged to title S	9,535,851.88
Charged to title Z and miscellaneous	977,320.71
	23,357,535.79

Statement 10.—GENERAL ADMINISTRATION.

Account No. and Name—Title V.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay.	Total.
1. Advertising			$873.53	$10,287.99				$11,161.52
2. Telegrams and cables	$809.80		1.05	55,507.70		$1,142.54		57,461.09
3. Telephones				29,562.18				29,562.18
4. Printing	63.20	$16.34	6.23	3,395.45		121,626.77		125,107.99
5. Care, transportation, and burial of the dead	55.30	11.84	270.09	18,391.94	$524.22	1,724.79		20,978.18
6. Rent and care of buildings (except when chargeable to G and S)				7,583.06		109.50		7,692.56
7. Freight	3,041.48			612,942.17		229,642.76		845,626.41
8. Traveling expenses (including mileage) of officers				265,751.26		1,260.36		267,011.62
9 Traveling expenses of civilian employees				39,819.56		3,608.73		43,428.29
10. Traveling expenses of female nurses				2,007.80		883.20		2,891.00
11. Pay of officers while traveling							$48,932.28	48,932.28
12. Pay of officers on duty in Washington							654,447.71	654,447.71
13. Pay of officers on special duty						14.81	839,397.13	839,411.94
14. Models, tests and experiments	339,524.42	78,269.50	393,309.20	43,595.54	400.68	3,253.15		858,352.49
15. Naval Militia	3,609.24	718.19	1,442.14	198,892.85	347,477.68	23,856.09	4,373.98	580,370.17
16. Naval Reserves				5,092.17		2,168.29	7,321.04	14,581.50
17. Retired pay, officers							2,316,728.67	2,316,728.67
18. Retired pay, enlisted men						110.82	427,175.31	427,286.13
19. Pay of personnel unassigned							163,382.63	163,382.63
20. Commissions and interest				2,747.26				2,747.26
21. Cost of exchange				119,594.32				119,594.32
22. Transportation of funds	9.12			2,292.18				2,301.30
23. Expenses of boards and courts	1,026.72	20.78	193.69	20,095.83	244.72		23,220.78	44,802.52
24. Purchase of books (for students and Navy Department)			47.97	1,208.89		43.20		1,300.06
25. Relief of merchant vessels in distress				260.00	50.93			310.93
26. Cost of special instruction			38.94	7,911.44			553,693.11	561,643.49
27. Maintenance of naval attachés				29,753.83			8,549.94	38,303.77
28. Ice for cooling drinking water on shore	1,879.44		13,746.18	328.72	901.13	331.42		17,186.89
29. Inspection offices	367,791.92	427.74	883.20	23,646.10	6,025.86		290,723.41	689,498.23
30. Miscellaneous	349,131.53	5,493.98	45,983.18	1,052,333.37	827,351.04	455,675.12	4,391,947.61	7,127,915.83
31. Repairs and alterations to ordnance equipage (not attributable to a specific ship) and to ordnance supplies ashore	478,132.20	101,863.00	401,053.74	57,643.70	16,430.77			1,055,123.41
32. Prisoners				59,392.48	16,913.72	1,874.22	97,838.79	176,019.21
33. Loss by missing survey or appraisal of ordnance stores ashore				105.34	1,333,431.66			1,333,537.00
34. Loss by missing survey or appraisal of stores ashore (other than ordnance)	51.05	11.60	11.23		2,344,892.12			2,344,403.94
35. Repairs to title X stores	6,329.74	2,478.95	3,720.06	3,061.16				15,589.91
Total	1,551,455.16	189,311.92	861,580.43	2,673,204.29	4,894,082.47	847,325.77	9,827,732.39	20,844,692.43

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES.

RECAPITULATION.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
RECAPITULATION OF EXPENDITURES BY PHYSICAL CLASSES.									
Account 0—Miscellaneous labor and consumable supplies (exclusive of direct labor and material title Z shops)	$311,669	$612,827	$1,098,529	$614,311	$505,462	$248,380	$509,885	$407,160	$4,308,223
1—Losses and gratuities	123,115	237,344	514,903	208,282	260,101	88,004	229,165	126,402	1,782,316
2—Land and appurtenances	27,594	71,299	84,085	53,709	65,003	20,879	93,957	34,659	451,185
3—Buildings and structures	27,320	54,683	141,887	49,387	70,167	15,176	50,621	60,459	469,700
4—Miscellaneous equipment	13,356	45,771	75,842	54,450	49,160	14,559	26,469	23,305	302,912
5—Plant appliances	15,440	41,832	62,857	41,146	80,368	19,040	71,816	40,732	373,231
6—Machinery and machine tools	19,714	82,500	119,088	37,603	100,179	18,664	52,352	30,195	460,295
7—Portable power tools	5,258	36,229	65,838	15,830	30,463	4,613	26,701	9,384	194,316
8—Loose and hand tools	6,934	21,001	54,129	14,308	51,901	10,389	19,962	9,718	188,342
9—Supervision	183,605	376,028	759,653	412,408	435,291	142,926	345,286	280,857	2,936,054
Total yard expense	734,005	1,579,514	2,976,811	1,496,434	1,648,095	582,630	1,426,214	1,022,871	11,466,574
RECAPITULATION OF EXPENDITURES BY PURPOSE GROUPS.									
Group 00—Grounds and miscellaneous	47,693	86,917	109,690	68,665	79,845	32,686	105,911	45,593	577,000
01—Supply	82,189	161,946	428,793	143,863	186,887	61,516	182,368	131,105	1,378,667
02—Transportation (see A)	55,791	86,955	225,890	89,006	154,772	34,658	135,058	103,053	885,183
03—Power (see B)	95,041	126,562	253,945	191,708	149,840	59,145	92,366	112,615	1,081,222
04—Administration (see C)	176,201	396,191	678,917	424,803	355,603	174,689	343,352	294,773	2,844,529
05—Building ways	208	2,796	28,421	.....	.....	.....	2,402	.....	33,827
06—Tool shop	4,169	20,682	.....	.....	4,494	1,915	.....	4,367	35,627
Total general departments	461,292	882,049	1,725,656	918,045	931,441	364,609	861,457	691,506	6,836,055
10—Structural department	38,752	145,018	365,881	83,932	157,854	32,817	104,395	51,250	979,909
20—Smith and special hull	24,953	69,054	81,422	22,828	74,912	10,342	48,568	25,840	357,919
30—Machinists	53,653	154,764	257,803	126,469	225,369	57,427	144,918	82,819	1,103,222
40—Boilermakers	8,546	20,015	46,248	19,910	45,727	11,801	19,182	18,070	189,499
50—Electrical and pipe	41,585	38,907	173,684	85,521	60,295	16,632	65,949	41,311	523,884
60—Woodwork	40,487	53,775	104,667	51,591	66,081	18,711	53,354	37,184	425,850
70—Laborers and miscellaneous	19,217	58,281	102,826	60,839	62,782	16,031	47,489	37,294	404,759
80—Building trades	13,027	22,033	39,621	23,675	26,423	11,494	35,973	18,852	191,098
90—Foundries	92,688	70,970	414,730	153,740	207,629	42,298	123,504	48,911	1,154,470

Statement 11.—INDUSTRIAL YARD EXPENSE BY ACCOUNTS AND ACTIVITIES [illegible]

[illegible]

Account and group	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RECAPITULATION OF EXPENSES PER [illegible]									
Group 04 Pattern shop	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
06 Dry dock	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Special shops	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total producing departments	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
General total [illegible] departments	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Deduct [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total yard expense	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,072,871	11,498,571
A Includes transportation charges [illegible]	[illegible]		[illegible]		[illegible]			2,866	14,000
B Includes power charges [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[Exclusive of Washington, Cavite, and Olongapo.]

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 0.—Direct labor and material, title Z shops and miscellaneous labor and consumable supplies.									
Group 00—Grounds and miscellaneous	$22,834	$23,874	$44,012	$38,341	$22,472	$15,962	$24,954	$21,900	$214,349
01—Supply	48,442	121,506	217,932	101,127	111,858	53,356	118,095	49,654	821,970
02—Transportation	34,626	46,415	137,516	49,025	66,582	17,647	63,690	57,261	472,762
03—Power	70,937	80,665	190,559	125,392	95,965	44,476	54,417	86,663	749,074
04—Administration	65,761	148,182	270,463	154,461	133,281	72,815	145,205	126,068	1,116,236
05—Building ways	.....	1,672	12,522	.....	.....	.....	442	.....	14,636
06—Tool shop	3,949	8,409	.....	.....	4,491	1,915	.....	1,276	20,040
Total general expense under this account	246,549	430,723	873,004	468,346	434,649	206,171	406,803	342,822	3,409,067
10—Structural department	4,720	31,865	70,663	13,418	15,758	2,979	22,288	10,018	171,709
20—Smith and special hull	15,834	27,634	29,628	10,674	42,860	5,020	15,498	12,766	159,914
30—Machinists	10,271	34,724	52,743	24,311	41,926	12,174	34,553	18,851	229,553
40—Boiler makers	1,908	4,095	6,088	2,740	8,629	949	3,181	2,732	30,322
50—Electrical and pipe	10,125	6,248	33,741	11,475	6,983	3,545	10,032	8,753	90,902
60—Woodwork	7,371	8,323	21,897	13,414	5,760	1,711	7,554	7,805	73,835
70—Laborers and miscellaneous	3,686	7,630	9,576	8,485	4,520	2,183	5,807	6,428	48,315
80—Building trades	830	844	3,757	2,229	1,393	1,991	4,785	905	16,734
90—Foundries	78,742	60,686	365,813	135,742	177,768	32,862	96,063	40,823	988,499
94—Pattern shop	1,721	2,809	3,359	928	3,408	1,556	4,770	1,090	19,641
95—Dry docks	4,267	10,191	12,271	13,242	4,937	1,486	4,127	6,031	56,552
Special shops	11	396,462	182,361	120,100	185,011	6,515	74,076	26,153	990,689
Total shop expense under this account	139,486	591,511	791,897	356,758	498,953	72,971	282,734	142,355	2,876,665
Grand total	386,035	1,022,234	1,664,901	825,104	933,602	279,142	689,537	485,177	6,285,732
Analysis of above charges:									
Direct labor and material, title Z shops	74,366	409,407	566,372	210,793	428,140	30,762	179,652	78,017	1,977,509
Miscellaneous labor and consumable supplies	311,669	612,827	1,098,529	614,311	505,462	248,380	509,885	407,160	4,308,223
Annual productive labor	692,700	1,082,500	3,284,500	1,183,200	1,404,900	455,400	1,235,000	542,400	9,880,600
Ratio of miscellaneous labor and consumable supplies to productive labor ... per cent	45.0	57.5	33.1	51.9	36.0	54.5	41.3	75.1	43.8
Ratio of miscellaneous labor and consumable supplies to total yard expense ... per cent	42.5	38.9	36.9	41.1	30.7	42.6	35.8	39.8	37.5
Account 1.—Losses and gratuities.									
Group 00—Grounds and miscellaneous	.....	$126	$1,011	$140	$831	$734	$610	$1,047	$4,549
01—Supply	$11,020	13,808	41,788	11,812	11,682	5,942	16,248	7,560	119,860
02—Transportation	2,140	2,220	7,625	89	5,819	1,297	344	4,994	24,528

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 1.—Losses and gratuities—Continued.									
Group 03—Power	$3,005	$3,928	$5,103	$3,852	$3,166	$1,522	$2,525	$2,264	$27,365
04—Administration	7,480	22,341	44,071	20,370	25,399	9,780	24,294	17,600	171,145
05—Building ways	.....	4	12	.....	.....	.....	.....	.....	16
06—Tool shop	104	4,023	.....	.....	.....	.....	.....	154	4,283
Total general expense under this account	23,749	48,352	99,610	36,263	46,857	19,275	44,021	33,619	351,746
10—Structural department	17,297	32,921	90,990	21,900	25,019	5,973	28,922	13,920	249,912
20—Smith and special hull	4,317	12,354	11,435	3,087	5,401	2,536	8,476	4,369	55,175
30—Machinist	20,187	40,027	90,776	30,175	62,536	15,063	43,288	17,949	329,003
40—Boiler makers	3,652	9,018	17,453	7,344	12,758	4,705	5,911	5,097	65,938
50—Electrical and pipe	13,415	13,546	67,304	33,434	22,154	5,773	27,383	12,045	195,054
60—Woodwork	15,897	17,990	33,930	14,524	19,916	5,492	19,672	11,044	138,465
70—Laborers and miscellaneous	10,344	28,547	50,176	19,002	24,004	5,852	20,562	15,678	174,165
80—Building trades	6,650	14,027	21,805	13,617	15,249	4,466	15,112	10,074	101,002
90—Foundries	5,811	4,615	26,549	9,505	9,770	5,983	10,854	1,343	74,430
94—Pattern shop	1,540	3,151	5,969	2,135	3,045	1,511	3,760	836	21,947
95—Dry docks	.....	6	1,167	1,003	176	171	285	295	3,103
Special shops	256	12,790	2,281	2,293	14	8,202	919	133	22,376
Total shop expense under this account	99,366	188,992	415,293	167,019	213,244	68,729	185,144	92,783	1,430,570
Grand total	123,115	237,344	514,903	203,282	260,101	88,004	229,165	126,402	1,782,316
Analysis of above charges:									
Damage and waste	$5,948	$7,836	$18,615	$330	$7,276	$8,573	$12,790	$4,909	$65,617
Ratio of damage and waste to productive labor ..... per cent	0.8	0.7	0.6	.....	0.5	1.9	1.0	0.9	0.7
Leave pay	$50,081	$91,633	$238,880	$92,146	$119,724	$40,178	$105,235	$57,506	$795,383
Ratio of leave pay to productive labor ..... per cent	7.2	8.5	7.2	7.8	8.5	8.8	8.5	10.6	8.1
Holiday pay	$49,281	$92,276	$216,697	$92,704	$113,902	$36,755	$95,124	$52,511	$749,250
Ratio of holiday pay to productive labor ..... per cent	7.1	8.5	6.6	7.8	8.1	8.1	7.1	9.7	7.6
Disability pay	$17,805	$45,599	$40,711	$18,762	$19,199	$2,498	$16,016	$11,476	$172,066
Ratio of disability pay to productive labor ..... per cent	2.5	4.2	1.2	1.6	1.4	0.5	1.3	2.1	1.7
Ratio of total charges to account 1—Losses and gratuities—to total yard expense ..... per cent	16.8	14.5	16.1	13.6	15.8	15.1	16.1	12.5	15.5
Account 2.—Land and appurtenances.									
Group 00—Grounds and miscellaneous	$16,784	$56,750	$37,678	$15,560	$36,336	$14,882	$55,590	$19,242	$252,822
First cost	$3,032,100	$7,538,300	$21,265,000	$10,364,000	$2,974,234	$874,900	$1,666,700	$704,800	$47,420,034
Ratio of annual expenditures to first cost ..... per cent	0.55	0.75	0.13	0.15	1.2	1.7	3.3	2.7	0.6

Group 01—Supply	.....	$37	$822	.....	$213	.....	$542	$60	$1,674
First cost	.....	.....	$2,300	.....	$102,000	.....	$6,200	$94,100	$204,600
Ratio of annual expenditures to first cost.....per cent	.....	.....	36.0	.....	0.2	.....	8.7	0.64	0.8
Group 02—Transportation	$2,301	$3,586	$22,549	$8,395	$9,687	$2,533	$16,517	$3,199	$68,767
First cost	$157,100	$139,000	$263,200	$195,800	$232,631	$113,000	$162,000	$73,500	$1,336,231
Ratio of annual expenditures to first cost.....per cent	1.5	2.5	8.6	4.3	4.1	2.2	11.9	4.4	5.1
Group 03—Power	$8,509	$10,926	$23,036	$29,754	$18,767	$3,464	$21,308	$12,158	$127,922
First cost	$78,950	$242,900	$278,000	$238,000	$281,750	$87,800	$88,100	$154,500	$1,450,000
Ratio of annual expenditures to first cost.....per cent	10.8	4.5	8.3	12.5	6.7	3.9	24.2	7.9	8.8
Total expenditures on account of land and appurtenances	$27,594	$71,299	$84,085	$53,709	$65,003	$20,879	$93,957	$34,659	$451,185
Total first cost	$3,268,150	$7,920,200	$21,808,500	$10,797,800	$3,590,615	$1,075,700	$1,923,000	$1,026,900	$51,410,865
Ratio of total annual expenditures to total first cost, per cent	0.84	0.9	0.4	0.5	1.8	1.9	4.9	3.3	0.9
Number of acres of hard land	208	80	122	489	263	411	1,342	225	3,140
Ratio of total charges to account 2—land and appurtenances—to total yard expense.....per cent	3.8	4.5	2.8	3.6	3.9	3.6	6.5	3.3	3.9
Account 3.—Buildings and structures.									
Group 00—Grounds and Miscellaneous	$3,708	$3,246	$8,038	$8,499	$4,888	$530	$12,723	$1,270	$42,902
First cost	$231,700	$193,600	$102,200	$74,700	$23,375	$7,400	$211,900	$60,300	$905,175
Ratio of annual expenditures to first cost.....per cent	1.6	1.7	7.9	11.4	20.9	7.2	6.0	2.1	4.7
Group 01—Supply	$5,558	$9,138	$22,815	$5,274	$11,408	$1,806	$6,457	$40,045	$102,496
First cost	$726,000	$1,384,300	$1,429,000	$662,400	$877,903	$325,800	$852,200	$688,500	$6,946,103
Ratio of annual expenditures to first cost.....per cent	0.77	0.66	1.6	0.78	1.3	0.55	0.76	5.8	1.5
Group 02—Transportation	$435	$2,291	$2,194	$1,709	$1,189	$243	$1,091	$378	$9,530
First cost	$40,100	$39,300	$97,400	$14,500	$12,083	$14,600	$70,500	$8,900	$297,383
Ratio of annual expenditures to first cost.....per cent	1.1	5.8	2.2	11.8	9.9	1.7	1.6	4.2	3.2
Group 03—Power	$901	$871	$4,847	$729	$805	$655	$1,373	$330	$10,511
First cost	$77,300	$231,400	$163,900	$138,000	$103,071	$148,300	$148,900	$121,600	$1,132,471
Ratio of annual expenditures to first cost....per cent	1.2	0.38	2.9	0.53	0.8	0.44	0.9	0.3	0.9
Group 04—Administration	$4,417	$11,966	$28,450	$12,257	$13,461	$4,877	$8,444	$10,853	$94,725
First cost	$178,300	$251,600	$480,600	$340,500	$223,845	$143,000	$335,800	$190,400	$2,144,045
Ratio of annual expenditures to first cost.....per cent	2.5	4.8	5.9	3.6	6.0	3.4	2.5	5.7	4.4
Group 05—Building ways	$208	$112	$14,132	.....	.....	.....	$8	.....	$14,460
First cost	$57,100	$164,300	$66,600	$67,000	.....	$24,600	$34,000	$20,000	$433,600
Ratio of annual expenditures to first cost.....per cent	0.4	0.07	21.2	.....	.....	.....	.....	.....	3.3
Group 06—Tool shop	.....	$274	.....	.....	.....	.....	.....	$45	$319
First cost	.....	$47,000	$15,900	.....	$3,215	.....	.....	.....	$66,115
Ratio of annual expenditures to first cost.....per cent	.....	0.6	.....	.....	.....	.....	.....	.....	0.5
Total general expense under this account	$15,222	$27,898	$80,476	$28,468	$31,751	$8,111	$30,096	$52,921	$274,943
Total cost of property under this class used by general departments	$1,310,500	$2,311,500	$2,355,600	$1,297,100	$1,243,492	$663,700	$1,653,300	$1,089,700	$11,924,892
Ratio of total annual expenditures to total first cost (general departments).....per cent	1.2	1.2	3.4	2.3	2.6	1.2	1.8	4.8	2.3
Group 10—Structural department	$189	$4,943	$22,116	$2,283	$14,656	$2,908	$3,361	$119	$50,575
First cost	$154,400	$220,400	$339,300	$150,000	$41,650	$124,300	$171,200	$228,400	$1,429,650
Ratio of annual expenditures to first cost.....per cent	0.12	2.3	6.5	1.5	35.2	2.4	2.0	0.5	3.5

Statement II.—INDUSTRIAL YARD EXPENSE BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 7.—Buildings and structures—Continued.									
Group 20—Smith and special hull	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
First cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.3	[illegible]	1.3	[illegible]
Group 21—Machinists	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
First cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.4	0.56	1.4	1.1
Group 22—Boilermakers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
First cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.3	0.17	0.3	1.1
Group 23—Electrical and pipe	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$52	$2,205	$1,135	$19,413
First cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$74,000	$165,000	$78,800	$931,000
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.1	1.3	1.5	2.1
Group 24—Woodwork	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
First cost	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.0	0.5	0.3	1.0
Group 25—Laborers and miscellaneous	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$322	$588	$503	[illegible]
First cost	[illegible]	[illegible]	[illegible]	[illegible]	$89,000	$8,700	$67,400	$84,300	$722,100
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	[illegible]	[illegible]	1.6	4.7	0.9	0.0	1.0
Group 26—Building trades	$942	[illegible]	$57	$3	$60	$132	$520	$130	[illegible]
First cost	[illegible]	[illegible]	$65,900	$67,300	.....	[illegible]	$35,400	$10,900	$249,000
Ratio of annual expenditures to first cost.....per cent	[illegible]	[illegible]	0.12	0.06	.....	0.9	1.5	1.4	1.3
Group 27—Foundries	[illegible]	$555	$6,392	$800	$2,998	$241	$2,084	$170	$14,867
First cost	$139,000	$239,900	$147,200	$119,900	$52,[illegible]	$84,500	$259,900	$171,700	$1,213,375
Ratio of annual expenditures to first cost.....per cent	1.3	0.15	4.3	0.72	[illegible]	0.3	0.1	0.1	1.2
Group 28—Pattern shop	$75	$680	$1,619	$280	$702	$45	$164	$242	$3,787
First cost	$107,600	$6,400	$145,100	$61,500	$27,000	$34,700	$90,000	$57,400	$519,300
Ratio of annual expenditures to first cost.....per cent	0.07	1.2	1.1	0.5	2.6	0.3	0.2	0.4	1.7
Group 29—Dry docks	$2,268	$2,014	$1,598	$9,144	$1,354	$320	$166	$1,026	$17,900
First cost	$1,250,000	$2,136,500	$6,668,000	$1,767,800	$2,940,000	$1,220,000	$4,497,000	$2,773,400	$23,250,000
Ratio of annual expenditures to first cost.....per cent	0.2	0.1	0.02	0.5	0.05	0.02	0.004	0.04	0.08
Group —Special shops	.....	$1,519	$260	$338	$30	$653	$[illegible]	[illegible]	[illegible]
First cost	.....	$460,100	$19,900	$19,500	.....	$80,300	$8,300	$16,300	$[illegible]
Ratio of annual expenditures to first cost.....per cent	.....	0.33	1.4	1.7	.....	0.8	0.2	.....	0.8
Total shop expense under this account	$12,098	$26,785	$61,411	$20,919	$38,416	$7,005	$20,525	$7,538	$194,757
Total cost of property under this class used by producing departments	$2,871,600	$4,448,100	$8,685,600	$3,022,700	$3,901,405	$1,989,200	$6,800,000	$3,052,500	$34,041,005
Ratio of total annual expenditures to total first cost (producing departments).....per cent	0.6	0.6	0.7	0.7	0.9	0.4	0.4	0.22	0.8

Grand total general and shop expense under this account	$27,320	$54,683	$141,887	$49,387	$70,167	$15,176	$50,621	$60,459	$469,700
Total first cost of buildings and structures	$3,682,100	$6,759,600	$11,041,200	$4,319,800	$5,144,897	$2,652,900	$8,223,200	$5,042,200	$46,865,897
Ratio of total annual expenditures to total first cost of buildings and structures.....per cent	0.8	0.8	1.3	1.1	1.4	0.6	0.6	1.2	1.0
Ratio of total charges to account 3—buildings and structures—to total yard expense.....per cent	3.7	3.5	4.8	3.3	4.3	2.6	3.5	5.9	4.1
Account 4.—Miscellaneous equipment.									
Group 00—Grounds and Miscellaneous	$156	$959	$3,844	$1,789	$4,740	$217	$959	$795	$13,459
First cost	$29,400	$16,100	$52,500	$33,500	$40,907	$15,500	$11,700	$11,600	$211,207
Ratio of annual expenditures to first cost.....per cent	0.4	6.0	7.3	5.3	11.5	1.4	8.2	6.9	6.4
Group 01—Supply	$3,825	$2,699	$8,623	$6,549	$5,862	$219	$2,077	$3,358	$33,212
First cost	$15,100	$17,000	$138,200	$34,800	$21,399	$9,400	$20,200	$83,800	$330,899
Ratio of annual expenditures to first cost.....per cent	25.3	15.9	6.2	18.9	27.4	2.3	10.2	3.8	9.7
Group 02—Transportation	$458	$775	$1,466	$588	$460	$250	$567	$400	$4,964
First cost	$870	$1,550	$4,200	$2,900	$185	$260	$5,200	$640	$15,805
Ratio of annual expenditures to first cost.....per cent	52.6	50.0	34.9	20.3	248.7	96.1	10.9	62.5	31.4
Group 03—Power	$3,449	$13,180	$18,318	$21,738	$9,035	$4,144	$3,027	$4,552	$77,443
First cost	$1,930	$1,600	$1,490	$760	$3,000	$830	.....	$1,270	$10,880
Ratio of annual expenditures to first cost.....per cent	178.5	823.7	1,229.4	2,860	301.2	499.4	.....	358.4	711.8
Group 04—Administration	$1,080	$6,552	$12,312	$7,223	$7,324	$2,518	$4,008	$2,636	$43,653
First cost	$177,300	$158,800	$2,627,600	$42,500	$25,372	$29,500	$42,600	$44,300	$3,147,972
Ratio of annual expenditures to first cost.....per cent	0.6	4.2	0.5	17.0	28.4	8.5	9.4	6.0	1.7
Group 05—Building ways	.....	$896	$1,666	.....	.....	.....	$1,408	.....	$3,970
First cost	.....	.....	$19,200	$625	.....	.....	$4,200	.....	$24,025
Ratio of annual expenditures to first cost.....per cent	.....	.....	8.7	.....	.....	.....	33.5	.....	16.5
Group 06—Tool shop	$15	$69	.....	.....	.....	.....	.....	$56	$140
First cost	.....	$2,820	$1,200	.....	$2,000	.....	.....	.....	$6,020
Ratio of annual expenditures to first cost.....per cent	.....	2.4	.....	.....	.....	.....	.....	.....	2.3
Total general expense under this account	$8,983	$25,130	$46,229	$37,887	$27,421	$7,348	$12,046	$11,797	$176,841
Total cost of property under this class used by general departments	$224,600	$197,870	$2,844,390	$115,085	$92,863	$55,490	$83,900	$141,610	$3,755,808
Ratio of total annual expenditures to total first cost (general departments).....per cent	4.0	12.2	1.6	32.9	29.5	13.2	14.4	8.3	4.7
Group 10—Structural department	$92	$1,947	$6,833	$2,280	$3,459	$1,197	$3,496	$433	$19,737
First cost	$8,300	$13,400	$33,500	$25,700	$30,600	$2,300	$17,400	$6,300	$137,500
Ratio of annual expenditures to first cost.....per cent	0.1	14.5	20.4	8.9	11.3	52.0	20.1	7.0	14.4
Group 20—Smith and special hull	$747	$2,211	$2,300	$505	$1,350	$553	$627	$1,142	$9,435
First cost	$3,660	$35,500	$146,200	$13,200	$52,300	$2,800	$82,700	$23,800	$360,160
Ratio of annual expenditures to first cost.....per cent	20.4	6.2	1.6	3.8	2.6	19.7	0.8	4.8	2.6
Group 30—Machinists	$106	$2,580	$4,334	$7,217	$3,943	$2,137	$1,512	$968	$22,797
First cost	$6,490	$17,000	$58,900	$29,000	$54,200	$7,400	$26,600	$7,000	$206,590
Ratio of annual expenditures to first cost.....per cent	1.7	15.2	7.4	24.9	7.3	28.9	5.7	13.8	11.0
Group 40—Boilermakers	$8	$81	$1,294	$41	$354	$105	$213	$245	$2,341
First cost	$5,740	$3,000	$3,300	$2,900	$2,100	$360	$3,100	$1,740	$22,240
Ratio of annual expenditures to first cost.....per cent	0.14	2.7	39.2	1.4	16.9	28.4	7.0	14.1	10.5

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

	Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Pearl Harbor.
	4.—Miscellaneous equipment—Continued.									
	Metal and pipe	$479	$561	$2,923	$2,652	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	First cost	$2,850	$9,160	$30,300	$17,350	[illegible]	$2,130	[illegible]	[illegible]	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	16.8	9.2	9.6	11.7	1.9	[illegible]	[illegible]	[illegible]	[illegible]
	Glass work	$751	$2,768	$3,130	$802	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	First cost	$9,700	$6,600	$36,000	$9,300	$13,000	$2,300	[illegible]	[illegible]	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	7.8	41.9	12.0	6.5	2.8	[illegible]	[illegible]	[illegible]	[illegible]
	Painters and miscellaneous	$581	$1,896	$1,466	$1,703	$2,318	$176	$2,[illegible]	$1,[illegible]	[illegible]
	First cost	$4,900	$16,500	$41,900	$11,400	$2,700	$1,570	$17,300	$21,000	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	11.9	11.5	35	14.9	83.3	11.2	14.4	[illegible]	[illegible]
Group 89	Building trades	$5	$35	$101	.....	$192	$24	$243	[illegible]	[illegible]
	First cost	$550	$3,760	$2,580	.....	$675	$570	$300	$1,000	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	0.1	0.1	0.4	.....	28.4	4.2	81.0	[illegible]	[illegible]
Group 90	Foundries	$897	$744	$2,781	$368	$1,752	$587	$1,146	$973	[illegible]
	First cost	$2,100	$3,540	$36,800	$11,600	$35,035	$1,160	$14,800	$61,400	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	42.7	21.0	7.6	3.2	7.0	50.6	7.7	1.6	[illegible]
Group 94	Pattern shop	$28	$473	$414	$4	$1,170	$17	$87	$2,636	[illegible]
	First cost	$192,100	$51,800	$39,400	$5,800	$80,000	$350	$1,000	$11,400	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	0.01	0.9	1.1	0.07	1.5	7.0	8.7	31.9	[illegible]
Group 95	Dry docks	$679	$2,401	$3,986	$1,549	$6,072	$1,038	$3,441	$1,166	$19,[illegible]
	First cost	$110	$2,130	$71,500	$520	.....	$1,660	$10,800	$8,500	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	617.3	112.7	5.6	298	.....	62.5	31.7	13.7	[illegible]
	Special shops	.....	$4,949	$51	$262	$107	$396	$14	$49	[illegible]
	First cost	.....	$15,000	$4,400	$5,300	.....	$3,800	$1,170	$460	[illegible]
	Ratio of annual expenditures to first cost.....per cent..	.....	33	11.6	5	.....	12.9	1.3	6.7	[illegible]
	Total shop expense under this account	$4,373	$20,641	$29,613	$16,563	$21,730	$7,211	$14,428	$11,808	$196,071
	Total cost of property under this class used by producing departments	$236,500	$174,330	$494,780	$132,070	$284,400	$23,730	$189,870	$159,550	$1,[illegible]
	Ratio of total annual expenditures to total first cost (producing departments).....per cent..	1.9	11.8	6.0	12.5	7.7	30.4	7.6	7.8	7.5
	Grand total general and shop expense under this account	$13,356	$45,771	$75,842	$54,450	$49,160	$14,559	$26,469	$23,806	$309,919
	Total first cost of miscellaneous equipment	$461,100	$372,200	$3,339,170	$247,155	$377,263	$79,210	$273,270	$294,960	$8,444,[illegible]
	Ratio of total annual expenditures to total first cost of miscellaneous equipment.....per cent..	2.9	12.3	2.3	22	13.0	18.4	9.7	7.9	3.6
	Ratio of total charges to account 4—miscellaneous equipment—to total yard expense.....per cent..	1.8	2.9	2.5	3.6	3.0	2.5	1.9	2.8	2.6

Account 5.—Plant appliances.

Group 00—Grounds and miscellaneous	$1,240	$1,805	$9,335	$2,632	$4,801	$339	$457	$949	$21,558
First cost	$13,300	$7,000	$8,200	$75,000	$21,165	$10,600	$21,300	$3,600	$160,165
Ratio of annual expenditures to first cost.....per cent	9.3	25.8	113.7	3.5	22.7	3.2	2.1	26.3	13.5
Group 01—Supply	$5	$1,122	$1,951	$180	$933	$156	$1,512	$567	$6,426
First cost	$2,700	$23,100	$40,300	$11,200	$11,847	$4,200	$60,800	$12,200	$166,347
Ratio of annual expenditures to first cost.....per cent	0.2	4.9	4.8	1.6	7.9	3.7	2.5	4.6	3.9
Group 02—Transportation	$11,636	$25,531	$34,165	$24,927	$58,036	$12,412	$50,486	$31,354	$248,547
First cost	$357,000	$654,700	$1,270,400	$144,000	$1,344,702	$79,200	$797,800	$813,800	$5,461,602
Ratio of annual expenditures to first cost.....per cent	3.3	3.9	2.7	17.3	4.3	15.7	6.3	3.8	4.6
Group 03—Power	$178	$89	$22	$1,850	$624	$530	$1,030	$302	$4,625
First cost	$111,700	$505,900	$331,800	$278,000	$138,512	$165,800	$179,600	$141,400	$1,852,712
Ratio of annual expenditures to first cost.....per cent	0.1	0.02	0.01	0.6	0.4	0.3	0.6	0.2	0.3
Group 04—Administration	$2	$269	$315	$667	$1,140	$560	$928	$1,043	$4,924
First cost	$7,900	$34,900	$28,000	$20,200	$15,091	$11,700	$18,100	$15,100	$150,991
Ratio of annual expenditures to first cost.....per cent	0.1	0.7	1.1	3.3	7.5	4.8	5.1	7.0	3.3
Group 05—Building ways	.....	$112	$89	.....	.....	.....	$473	.....	$674
First cost	.....	.....	$179,500	$55,400	.....	.....	$67,600	.....	$302,500
Ratio of annual expenditures to first cost.....per cent	.....	.....	0.05	.....	.....	.....	0.7	.....	0.2
Group 06—Tool shop	.....	$41	.....	.....	$3	.....	.....	$72	$116
First cost	.....	$400	.....	.....	.....	.....	.....	.....	$400
Ratio of annual expenditures to first cost.....per cent	.....	10.0	.....	.....	.....	.....	.....	.....	29.0
Total general expense under this account	$13,061	$28,969	$45,877	$30,256	$65,537	$13,997	$54,886	$34,287	$286,870
Total cost of property under this class used by general departments	$492,600	$1,226,000	$1,858,200	$583,800	$1,531,317	$271,500	$1,145,200	$986,100	$8,094,717
Ratio of total annual expenditures to total first cost (general departments).....per cent	2.7	2.4	2.5	5.2	4.3	5.2	4.8	3.5	3.5
Group 10—Structural department	$140	$2,244	$2,719	$1,392	$1,063	$840	$1,248	$450	$10,096
First cost	$7,100	$12,800	$38,300	$6,700	$4,168	$4,900	$5,700	$21,600	$101,268
Ratio of annual expenditures to first cost.....per cent	2.0	17.5	7.1	20.8	25.5	17.1	21.9	2.1	9.9
Group 20—Smith and special hull	$36	$1,480	$536	$280	$742	$257	$230	$210	$3,771
First cost	$3,600	$4,400	$900	$4,000	$2,562	$3,500	$1,500	$5,400	$25,862
Ratio of annual expenditures to first cost.....per cent	1.0	33.6	59.5	7.0	29.0	7.3	15.3	3.9	14.6
Group 30—Machinists	$606	$2,385	$2,023	$1,485	$3,379	$997	$1,392	$651	$12,918
First cost	$9,600	$21,400	$46,600	$41,200	$24,400	$9,300	$30,400	$23,900	$206,800
Ratio of annual expenditures to first cost.....per cent	6.3	11.1	4.3	3.6	13.9	10.7	4.6	2.8	6.3
Group 40—Boilermakers	$73	$56	$1,027	$282	$642	$50	$283	$147	$2,560
First cost	$18,000	$8,200	$17,200	$4,000	$4,102	$2,500	$17,600	$25,600	$97,202
Ratio of annual expenditures to first cost.....per cent	0.4	0.7	6.0	7.0	15.7	2.0	1.6	0.6	2.6
Group 50—Electrical and pipe	$166	$223	$1,630	$1,005	$1,018	$32	$419	$222	$4,715
First cost	$2,700	$8,000	$12,700	$9,700	$6,472	$1,300	$7,000	$2,200	$50,072
Ratio of annual expenditures to first cost.....per cent	6.0	2.8	12.8	10.4	15.8	2.4	6.0	10.0	9.4
Group 60—Woodwork	$168	$666	$716	$680	$440	$17	$538	$257	$3,482
First cost	$15,500	$2,200	$44,300	$19,600	$62	$5,300	$18,500	$30,300	$135,762
Ratio of annual expenditures to first cost ....per cent	1.1	30.3	1.6	3.5	708.4	0.3	2.9	0.8	2.6

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 5.—Plant appliances—Continued.									
Group 70—Laborers and miscellaneous	$30	$718	$2,467	$2,375	$607	$141	$1,153	$1,133	$8,624
First cost	.....	$600	$6,000	$200	$226	$1,500	$8,900	$600	$18,026
Ratio of annual expenditures to first cost.....per cent	.....	119.7	61.1	1,187.5	268.6	9.4	13.0	188.8	47.8
Group 80—Building trades	$134	$497	$87	$343	$225	$1,517	$5,084	$1,075	$8,962
First cost	$200	$500	.....	$13,600	$9,720	$42,500	$52,600	$3,000	$122,120
Ratio of annual expenditures to first cost.....per cent	67.0	99.4	.....	2.5	2.3	3.6	9.7	35.8	7.3
Group 90—Foundries	$409	$702	$1,760	$782	$3,184	$38	$3,586	$1,154	$11,715
First cost	$13,200	$22,100	$39,400	$20,000	$10,062	$5,000	$15,400	$27,100	$152,262
Ratio of annual expenditures to first cost.....per cent	3.1	3.2	4.5	3.9	31.6	0.8	23.9	4.2	7.7
Group 94—Pattern shop	.....	$1,554	$26	$2	$3	.....	$12	$2	$1,599
First cost	$100	$1,200	$4,900	$900	.....	.....	$100	$2,200	$9,400
Ratio of annual expenditures to first cost.....per cent	.....	129.5	0.5	0.2	.....	.....	12.0	0.1	17.0
Group 95—Dry docks	$617	$1,048	$3,989	$2,255	$3,528	$1,125	$2,869	$1,144	$16,575
First cost	$23,300	$41,300	$28,200	$24,600	$3,187	$31,700	$1,700	$41,100	$195,087
Ratio of annual expenditures to first cost.....per cent	2.7	2.5	14.2	9.2	110.7	3.6	168.8	2.8	8.5
Special shops	.....	$1,290	.....	$9	.....	$29	$16	.....	$1,344
First cost	.....	$800	$900	$100	.....	$300	.....	.....	$2,100
Ratio of annual expenditures to first cost.....per cent	.....	161.2	.....	9.0	.....	9.3	.....	.....	64.0
Total shop expense under this account	$2,379	$12,863	$16,980	$10,890	$14,831	$5,043	$16,930	$6,445	$86,361
Total cost of property under this class used by producing departments	$93,300	$123,500	$239,400	$144,600	$64,961	$107,800	$159,400	$183,000	$1,115,961
Ratio of total annual expenditures to total first cost (producing departments).....per cent	2.5	10.4	7.1	7.5	12.8	4.7	10.6	3.5	7.7
Grand total general and shop expense under this account	$15,440	$41,832	$62,857	$41,146	$80,368	$19,040	$71,816	$40,732	$373,231
Total first cost of plant appliances	$585,900	$1,349,500	$2,097,600	$728,400	$1,596,278	$379,300	$1,304,600	$1,169,100	$9,210,678
Ratio of total annual expenditures to total first cost of plant appliances.....per cent	2.6	3.1	3.0	5.7	5.0	5.0	5.5	3.5	4.1
Ratio of total charges to account 5—plant appliances—to total yard expense.....per cent	2.1	2.7	2.1	2.7	4.9	3.3	5.0	4.0	3.3
Account 6.—Machinery and machine tools.									
Group 00—Grounds and miscellaneous	.....	$23	$17	$17	$82	.....	$140	$69	$348
First cost	$2,900	$13,200	$7,400	.....	.....	$800	.....	.....	$24,300
Ratio of annual expenditures to first cost.....per cent	.....	0.2	0.2	.....	.....	.....	.....	.....	1.4
Group 01—Supply	.....	$45	$164	$544	$438	$10	$262	$10	$1,473
First cost	$1,500	$2,800	$67,800	$12,200	.....	$4,600	$4,300	$2,300	$95,500
Ratio of annual expenditures to first cost.....per cent	.....	1.6	0.2	4.5	.....	0.2	6.1	0.4	1.5

Group 02—Transportation		$22	$77		$23	$8	$25	$899	$1,054
First cost							$100		$100
Ratio of annual expenditures to first cost.....per cent							25.0		1,054.0
Group 03—Power	$4,374	$8,740	$7,729	$2,364	$10,816	$1,280	$6,988	$2,041	$44,332
First cost	$148,600	$1,800	$431,700	$193,100	$205,252	$56,400	$197,100	$141,100	$1,375,053
Ratio of annual expenditures to first cost.....per cent	2.9	485.6	1.8	1.2	5.3	2.3	3.6	1.4	3.2
Group 04—Administration		$5	$50	$352	$7	$7	$43		$464
First cost	$2,000	$1,800				$500	$400	$900	$5,600
Ratio of annual expenditures to first cost.....per cent		0.3				1.4	10.8		8.1
Group 05—Building ways									
First cost									
Ratio of annual expenditures to first cost.....per cent									
Group 06—Tool shop	$88	$946						$82	$1,116
First cost	$1,300	$42,000	$6,800					$2,200	$52,300
Ratio of annual expenditures to first cost.....per cent	6.8	2.3						3.7	2.1
Total general expense under this account	$4,462	$9,781	$8,037	$3,277	$11,366	$1,305	$7,458	$3,101	$48,787
Total cost of property under this class used by general departments	$156,300	$61,600	$513,700	$205,300	$205,252	$62,300	$201,900	$146,500	$1,552,852
Ratio of total annual expenditures to total first cost (general departments).....per cent	2.8	15.9	1.6	1.6	5.5	2.1	3.7	2.1	3.1
Group 10—Structural department	$1,695	$7,133	$17,312	$4,793	$24,002	$983	$6,205	$1,935	$64,058
First cost	$83,700	$118,000	$226,100	$98,100	$205,703	$55,700	$159,400	$98,400	$1,045,103
Ratio of annual expenditures to first cost.....per cent	2.0	6.0	7.7	4.9	11.2	1.8	3.9	2.0	6.1
Group 20—Smith and special hull	$1,129	$12,415	$21,669	$3,568	$10,668	$195	$12,111	$1,893	$63,648
First cost	$61,200	$97,300	$139,600	$62,700	$96,392	$80,500	$117,300	$90,600	$695,592
Ratio of annual expenditures to first cost.....per cent	1.8	12.7	15.5	5.7	11.1	0.6	10.3	2.1	9.2
Group 30—Machinists	$4,621	$23,800	$46,368	$11,261	$34,487	$11,521	$14,815	$12,667	$159,540
First cost	$222,900	$407,100	$753,800	$438,000	$562,321	$167,500	$480,600	$308,700	$3,340,921
Ratio of annual expenditures to first cost.....per cent	2.1	5.8	6.1	2.6	6.1	6.9	3.1	4.1	4.8
Group 40—Boilermakers	$594	$349	$3,080	$348	$3,328	$450	$826	$1,156	$10,131
First cost	$77,300	$47,300	$70,800	$16,200	$71,248	$15,500	$36,200	$39,200	$373,748
Ratio of annual expenditures to first cost.....per cent	0.8	0.7	4.3	2.1	4.7	3.9	2.3	3.0	2.7
Group 50—Electrical and pipe	$1,284	$1,767	$6,932	$4,165	$1,731	$113	$2,410	$751	$19,153
First cost	$57,600	$22,800	$101,400	$69,900	$61,254	$11,000	$74,900	$21,200	$410,054
Ratio of annual expenditures to first cost.....per cent	2.2	7.8	6.8	7.0	2.8	1.0	3.2	3.5	4.7
Group 60—Woodwork	$3,625	$6,197	$9,232	$4,744	$6,117	$856	$5,028	$3,289	$39,088
First cost	$79,000	$78,000	$97,300	$65,500	$93,300	$42,300	$88,400	$57,700	$601,500
Ratio of annual expenditures to first cost.....per cent	4.6	7.9	9.5	7.2	6.5	2.0	5.7	5.7	6.5
Group 70—Laborers and miscellaneous	$57	$322	$823	$659	$586	$40	$332	$687	$3,506
First cost	$2,300	$6,800	$8,200	$2,900	$4,481	$900	$5,500	$3,300	$34,381
Ratio of annual expenditures to first cost.....per cent	2.5	4.7	10.0	22.7	13.1	4.5	6.0	20.8	10.2
Group 80—Building trades	$518	$76	$4		$149	$128	$209	$41	$1,125
First cost	$2,800	$5,600	$900	$1,000	$3,440	$1,100	$500	$1,400	$16,740
Ratio of annual expenditures to first cost.....per cent	18.5	1.4	0.5		4.3	11.6	41.8	2.9	6.7
Group 90—Foundries	$900	$846	$2,154	$1,194	$5,583	$450	$1,847	$1,448	$14,422
First cost	$34,700	$20,800	$56,800	$24,500	$48,751	$6,900	$44,500	$44,500	$281,451
Ratio of annual expenditures to first cost.....per cent	2.6	4.1	3.8	4.9	11.5	6.5	4.1	3.3	5.1

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 6.—Machinery and machine tools—Continued.									
Group 94—Pattern shop	$207	$1,883	$2,034	$979	$421	$86	$518	$437	$6,565
First cost	$19,000	$20,400	$29,800	$14,000	$10,988	$5,300	$9,700	$9,500	$118,688
Ratio of annual expenditures to first cost.....per cent	1.1	9.2	6.8	7.0	3.9	1.6	5.3	4.6	5.5
Group 95—Dry docks	$552	$1,371	$1,195	$1,547	$1,252	$530	$472	$2,746	$9,665
First cost	$45,200	$122,000	$179,100	$74,100	.....	$49,600	.....	$164,500	$634,500
Ratio of annual expenditures to first cost.....per cent	1.2	1.1	0.7	2.1	.....	1.1	.....	1.7	1.5
Special shops	$70	$16,560	$248	$1,068	$489	$2,007	$121	$44	$20,607
First cost	.....	$149,500	$10,200	$17,100	$6,031	$16,600	$6,200	$6,000	$231,631
Ratio of annual expenditures to first cost.....per cent	.....	11.1	2.4	6.2	8.1	12.1	1.9	0.7	8.9
Total shop expense under this account	$15,252	$72,719	$111,051	$34,826	$88,813	$17,359	$44,894	$27,094	$411,508
Total cost of property under this class used by producing departments	$685,700	1,095,600	$1,674,000	$874,000	$1,163,909	$402,900	$1,023,200	$845,000	$7,764,309
Ratio of total annual expenditures to total first cost (machinery and machine tools).....per cent	2.2	6.6	6.6	4.0	7.6	4.3	4.4	3.2	5.3
Grand total general and shop expense under this account	$19,714	$82,500	$119,088	$37,603	$100,179	$18,664	$52,352	$30,195	$460,295
Total first cost of machinery and machine tools	$842,000	$1,157,200	$2,187,700	$1,079,300	$1,369,161	$465,200	$1,225,100	$991,500	$9,317,161
Ratio of total annual expenditures to total first cost of machinery and machine tools.....per cent	2.3	7.1	5.5	3.5	7.3	4.0	4.3	3.0	4.9
Ratio of total charges to account 6—machinery and machine tools—to total yard expense.....per cent	2.7	5.3	4.0	2.5	6.1	3.2	3.7	2.9	4.1
Account 7.—Portable power tools.									
Group 00—Grounds and miscellaneous	.....	.....	$8	$63	$36	.....	$20	$1	$128
First cost	$700	.....	.....	.....	$4,000	.....	.....	.....	$4,700
Ratio of annual expenditures to first cost.....per cent	.....	.....	.....	.....	0.9	.....	.....	.....	2.7
Group 01—Supply	.....	$4	$56	$17	$15	$1	$50	.....	$143
First cost	$100	.....	$100	.....	.....	.....	$100	$300	$600
Ratio of annual expenditures to first cost.....per cent	.....	.....	.....	.....	.....	.....	5.0	.....	23.8
Group 02—Transportation	.....	$4	$34	.....	$100	$169	$3	.....	$310
First cost	.....	.....	.....	.....	.....	$100	.....	.....	$100
Ratio of annual expenditures to first cost.....per cent	.....	.....	.....	.....	.....	169.0	.....	.....	310.0
Group 03—Power	.....	$30	$5	$2,277	$437	.....	$515	$3	$3,267
First cost	$100	.....	.....	$400	$200	.....	$5,700	.....	$6,400
Ratio of annual expenditures to first cost.....per cent	.....	.....	.....	569.2	218.5	.....	0.9	.....	51.0

Group 04—Administration		$4	$4		$54	$93	$33	$2	$190
First cost									
Ratio of annual expenditures to first cost.....per cent									
Group 05—Building ways									
First cost				$200					$200
Ratio of annual expenditures to first cost.....per cent									
Group 06—Tool shop		$3,515						$74	$3,589
First cost			$100						$100
Ratio of annual expenditures to first cost.....per cent									3,589.0
Total general expense under this account		$3,557	$107	$2,357	$642	$263	$621	$80	$7,627
Total cost of property under this class used by general departments	$900		$200	$600	$4,200	$100	$5,800	$300	$12,100
Ratio of total annual expenditures to total first cost (general departments).....per cent			53.5	392.8	15.0	263.0	10.7	26.7	63.0
Group 10—Structural department	$4,478	$28,026	$55,098	$7,317	$18,280	$2,871	$14,741	$4,539	$135,350
First cost	$16,100	$30,300	$100,100	$46,500	$30,800	$11,100	$38,700	$9,200	$282,800
Ratio of annual expenditures to first cost.....per cent	27.8	92.5	55.0	15.7	59.3	25.9	38.1	49.3	47.8
Group 20—Smith and special hull	$18	$2,159	$2,126	$378	$100	$29	$534	$245	$5,884
First cost	$5,500	$6,100	$7,000	$8,200	$500	$1,100	$6,700		$35,100
Ratio of annual expenditures to first cost.....per cent	0.3	35.4	30.4	4.5	20.0	2.7	12.5		16.8
Group 30—Machinists	$182	$468	$3,232	$1,583	$1,415	$274	$3,333	$917	$11,404
First cost	$1,100	$3,800	$9,400	$10,600	$8,500	$4,300	$30,200	$14,500	$77,400
Ratio of annual expenditures to first cost.....per cent	16.5	12.3	34.4	14.9	40.4	6.4	11.0	6.3	14.7
Group 40—Boilermakers	$157	$718	$1,390	$710	$3,992	$352	$1,466	$755	$9,540
First cost	$4,200	$10,400	$5,100	$4,900	$12,200	$800	$7,800	$900	$46,300
Ratio of annual expenditures to first cost.....per cent	3.8	6.9	27.2	14.5	32.7	44.0	18.8	83.8	20.6
Group 50—Electrical and pipe	$22	$220	$2,882	$319	$162	$30	$422	$302	$4,359
First cost	$160	$800	$12,300	$1,800	$3,000	$200	$3,200		$21,400
Ratio of annual expenditures to first cost.....per cent	22.0	27.5	23.4	17.7	5.4	15.0	13.2		20.4
Group 60—Woodwork	$325	$407	$200	$585	$1,604		$598	$719	$4,438
First cost	$500	$2,400	$800	$1,800	$850	$700	$6,700	$2,100	$15,850
Ratio of annual expenditures to first cost.....per cent	65.0	17.0	25.0	32.5	188.7		8.9	33.8	28.0
Group 70—Laborers and miscellaneous	$16	$477	$625	$2,579	$3,516	$408	$3,602	$1,451	$12,674
First cost	$100	$6,100	$200	$2,300	$6,500	$1,100	$7,200	$600	$24,100
Ratio of annual expenditures to first cost.....per cent	16.0	7.8	312.5	112.1	54.1	37.1	50.0	241.8	52.6
Group 80—Building trades	$10	$87	$63		$344	$276	$437	$286	$1,503
First cost	$800	$500	$3,000	$1,700	$925	$800	$2,000	$600	$10,325
Ratio of annual expenditures to first cost.....per cent	0.1	17.4	2.1		37.2	34.5	21.8	47.7	14.6
Group 90—Foundries	$50	$18	$108		$408	$2	$623	$90	$1,299
First cost	$500	$100	$3,100	$400	$230	$100	$2,200	$700	$7,330
Ratio of annual expenditures to first cost.....per cent	10.0	18.0	3.5		177.4	0.2	28.3	12.9	17.7
Group 94—Pattern shop		$4	$7	$2			$4		$17
First cost			$100	$100					$200
Ratio of annual expenditures to first cost.....per cent			7.0	0.2					8.5
Group 95—Dry docks		$6		$1		$8	$2		$17
First cost						$160			$100
Ratio of annual expenditures to first cost.....per cent						8.0			17.0

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 7.—Portable power tools—Continued.									
Special shops		$82		$4		$100	$18		$204
First cost		$100	$100			$800	$100		$1,100
Ratio of annual expenditures to first cost.....per cent		8.2				8.0	1.8		18.5
Total shop expense under this account	$5,258	$32,672	$65,731	$13,473	$29,821	$4,350	$26,080	$9,304	$186,689
Total cost of property under this class used by producing departments	$28,900	$60,600	$141,200	$78,300	$58,505	$21,100	$104,800	$28,600	$522,005
Ratio of total annual expenditures to total first cost (producing departments).....per cent	18.2	53.9	46.5	17.2	50.9	20.6	25.0	32.5	35.8
Grand total general and shop expense under this account	$5,258	$36,229	$65,838	$15,830	$30,463	$4,613	$26,701	$9,384	$194,316
Total first cost of portable power tools	$29,800	$60,600	$141,400	$78,900	$62,705	$21,200	$110,600	$28,900	$534,105
Ratio of total annual expenditures to total first cost of portable power tools.....per cent	17.7	59.7	46.6	20.1	48.6	21.8	24.1	32.5	36.4
Ratio of total charges to account 7—portable power tools—to total yard expense.....per cent	0.7	2.3	2.2	1.1	1.8	0.8	1.8	0.9	1.7
Account 8.—Loose and hand tools.									
Group 00—Grounds and miscellaneous		$9	$4		$131	$22	$130	$24	$320
First cost	$100							$400	$500
Ratio of annual expenditures to first cost.....per cent								6.0	64.0
Group 01—Supply	$21	$328	$155	$117	$227	$12	$436	$100	$1,396
First cost	$200	$100	$10,100	$100		$100	$400	$100	$11,100
Ratio of annual expenditures to first cost.....per cent	10.5	328.0	1.5	117.0		12.0	109.0	100.0	12.6
Group 02—Transportation		$10	$14	$1	$148	$87	$144		$404
First cost						$100		$200	$300
Ratio of annual expenditures to first cost.....per cent						87.0			134.7
Group 03—Power	$191	$397	$284	$209	$2,173	$296	$85	$293	$3,928
First cost	$800	$1,300	$1,400	$100	$700	$2,800		$1,100	$8,200
Ratio of annual expenditures to first cost.....per cent	23.9	30.5	20.3	209.0	310.4	10.6		26.6	47.9
Group 04—Administration		$2	$56	$169	$142	$20	$432	$10	$831
First cost	$400		$10,800			$800	$400	$1,400	$13,800
Ratio of annual expenditures to first cost.....per cent			0.5			2.5	108.0	0.7	6.0
Group 05—Building ways									
First cost									
Ratio of annual expenditures to first cost.....per cent									
Group 06—Tool shop		$1,734						$247	$1,981
First cost		$900	$1,800						$2,200
Ratio of annual expenditures to first cost.....per cent		192.7							90.1
Total general expense under this account	$212	$2,480	$513	$496	$2,821	$437	$1,227	$674	$8,860

Total first cost of property under this class used by general departments	$1,500	$2,300	$23,600	$200	$700	$3,800	$800	$3,200	$36,100
Ratio of total annual expenditures to total first cost (general departments) ..... per cent	14.1	107.9	2.2	248.0	403.0	11.5	153.4	21.1	24.5
Group 10—Structural department	$1,180	$6,701	$26,017	$1,134	$12,892	$2,356	$3,748	$1,716	$55,744
First cost	$2,200	$24,500	$42,600	$6,400	$21,600	$3,900	$22,900	$19,700	$143,800
Ratio of annual expenditures to first cost ..... per cent	53.6	27.3	61.1	17.7	59.2	60.4	16.4	8.7	38.8
Group 20—Smith and special hull	$299	$1,022	$1,290	$502	$945	$98	$403	$225	$4,784
First cost	$1,800	$2,800	$29,600	$9,100	$7,150	$300	$8,500	$4,900	$64,150
Ratio of annual expenditures to first cost ..... per cent	16.6	36.5	4.4	5.5	13.2	32.7	4.7	4.6	7.5
Group 30—Machinists	$3,039	$3,361	$9,443	$4,280	$15,661	$2,768	$5,759	$2,214	$46,525
First cost	$7,800	$18,400	$57,200	$18,700	$72,100	$2,300	$109,500	$26,400	$312,400
Ratio of annual expenditures to first cost ..... per cent	38.9	18.2	16.5	22.9	21.7	120.3	5.3	8.4	14.9
Group 40—Boilermakers	$151	$691	$3,380	$814	$4,702	$1,242	$354	$578	$11,912
First cost	$2,700	$18,200	$5,400	$2,500	$7,600	$600	$9,100	$8,400	$54,500
Ratio of annual expenditures to first cost ..... per cent	5.6	3.8	62.6	32.6	61.9	207.0	3.9	6.9	21.9
Group 50—Electrical and pipe	$411	$997	$4,257	$1,217	$4,817	$361	$3,050	$1,027	$16,137
First cost	$2,500	$8,000	$51,600	$18,600	$25,700	$2,400	$14,900	$13,400	$137,100
Ratio of annual expenditures to first cost ..... per cent	16.4	12.5	8.2	6.5	18.9	15.0	20.5	7.7	11.9
Group 60—Woodwork	$592	$1,239	$2,454	$685	$4,129	$1,690	$859	$1,467	$13,115
First cost	$1,400	$3,900	$13,700	$3,000	$11,350	$400	$9,600	$1,000	$44,350
Ratio of annual expenditures to first cost ..... per cent	42.3	31.8	17.9	22.8	36.4	422.5	8.9	146.7	29.6
Group 70—Laborers and miscellaneous	$191	$1,337	$5,576	$1,667	$3,446	$573	$1,009	$892	$14,691
First cost	$400	$1,100	$2,100	$2,600	$1,250	$400	$2,100	$1,400	$11,350
Ratio of annual expenditures to first cost ..... per cent	47.7	121.5	265.5	64.1	275.7	143.2	48.0	63.7	129.4
Group 80—Building trades	$766	$782	$749	$1,287	$1,845	$409	$2,345	$752	$8,935
First cost	$1,300	$2,000	$2,900	$4,000	$2,550	$600	$5,100	$800	$19,250
Ratio of annual expenditures to first cost ..... per cent	58.9	39.1	25.8	32.2	72.3	68.1	46.0	94.0	46.4
Group 90—Foundries	$70	$105	$163	$2,006	$573	$282	$505	$133	$3,837
First cost	$500	.....	$1,100	$600	.....	$100	$600	$2,000	$4,900
Ratio of annual expenditures to first cost ..... per cent	14.0	.....	14.8	334.3	.....	282.0	84.1	66.5	78.3
Group 94—Pattern shop	$20	$449	$174	$7	$25	$88	$54	$23	$840
First cost	$1,700	.....	$2,800	$1,300	$650	$100	$2,400	.....	$8,950
Ratio of annual expenditures to first cost ..... per cent	1.2	.....	6.2	0.5	3.9	88.0	2.3	.....	9.4
Group 95—Dry docks	.....	$3	$64	$88	.....	$60	$79	$2	$296
First cost	.....	.....	$600	.....	.....	$100	.....	.....	$700
Ratio of annual expenditures to first cost ..... per cent	.....	.....	10.7	.....	.....	60.0	.....	.....	42.3
Special shops	$3	$1,834	$49	$125	$45	$25	$570	$15	$2,666
First cost	.....	$600	$500	$3,000	$350	$100	$200	$100	$4,850
Ratio of annual expenditures to first cost ..... per cent	.....	305.7	9.8	4.2	12.9	25.0	285.0	15.0	55.0
Total shop expense under this account	$6,722	$18,521	$53,616	$13,812	$49,080	$9,952	$18,735	$9,044	$179,482
Total cost of property under this class used by producing departments	$22,300	$79,500	$210,100	$69,800	$150,300	$11,300	$184,900	$78,100	$806,300
Ratio of total annual expenditures to total first cost (producing departments ..... per cent	30.1	23.3	25.5	19.8	32.7	88.0	10.1	11.6	22.3
Grand total general and shop expense under this account	$6,934	$21,001	$54,129	$14,308	$51,901	$10,389	$19,962	$9,718	$188,342
Total first cost of loose and hand tools	$23,800	$81,800	$233,700	$70,000	$151,000	$15,100	$185,700	$81,300	$842,400

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Totals.
Account 8.—Loose and hand tools—Continued.									
Ratio of total annual expenditures to total first cost of loose and hand tools ..... per cent..	29.1	25.6	23.1	20.4	34.4	68.8	10.8	12.0	22.4
Ratio of total charges to account 8—loose and hand tools—to total yard expense ..... per cent..	1.0	1.3	1.8	1.0	3.1	1.8	1.4	1.0	1.6
Account 9.—Supervision.									
Group 00—Grounds and miscellaneous	$2,971	$125	$5,743	$1,624	$5,478	.....	$10,328	$296	$26,565
Group 01—Supply	$13,323	$13,259	$134,487	$18,243	$44,251	$14	36,689	29,751	$290,017
Group 02—Transportation	$4,195	$6,101	$20,250	$4,272	$12,728	$12	$2,191	$4,568	$54,317
Group 03—Power	$3,497	$5,736	$4,042	$3,543	$8,052	$2,778	$1,098	$4,009	$32,755
Group 04—Administration (see "A" in recapitulation)	$97,461	$206,970	$323,196	$229,304	$174,885	$84,019	$159,965	$136,561	$1,412,361
Group 05—Building ways	.....	.....	.....	.....	.....	.....	$71	.....	$71
Group 06—Tool shop	$13	$1,669	.....	.....	.....	.....	.....	$2,361	$4,043
Total general expense under this account	$121,460	$233,860	$487,718	$256,986	$245,394	$86,823	$210,342	$177,546	$1,820,129
Group 10—Structural department	$8,961	$29,238	$74,163	$29,415	$32,725	$9,710	$20,386	$18,130	$222,728
Annual productive labor	$135,200	$233,400	$825,400	$212,800	$260,400	$73,500	$250,500	$85,700	$2,076,900
Ratio of supervision to productive labor ..... per cent..	6.6	12.6	9.0	13.3	12.6	13.2	8.1	21.2	10.7
Group 20—Smith and special hull	$2,028	$7,045	$8,684	$2,689	$6,647	$1,387	$6,614	$4,576	$39,670
Annual productive labor	$34,300	$59,900	$97,300	$26,800	$62,500	$18,100	$50,600	$24,500	$374,000
Ratio of supervision to productive labor ..... pef cent..	5.9	11.8	9.0	10.0	10.6	7.7	13.1	18.7	10.6
Group 30—Machinists	$14,381	$40,170	$42,166	$36,361	$58,231	$11,687	$34,959	$25,701	$263,656
Annual productive labor	$154,900	$252,400	$734,900	$279,900	$448,000	$102,900	$322,400	$111,900	$2,407,300
Ratio of supervision to productive labor ..... per cent..	9.3	15.9	5.7	13.0	13.0	11.3	10.9	23.0	10.9
Group 40—Boilermakers	$1,763	$4,703	$7,868	$7,337	$9,225	$3,767	$6,792	$7,003	$48,458
Annual productive labor	$28,900	$45,200	$141,500	$64,700	$101,700	$39,400	$45,400	$34,300	$501,100
Ratio of supervision to productive labor ..... per cent..	6.8	10.4	5.6	11.3	9.1	9.6	15.0	20.4	9.7
Group 50—Electrical and pipe	$11,953	$14,103	$47,059	$30,521	$20,276	$6,205	$19,344	$16,146	$165,607
Annual productive labor	$106,800	$74,600	$585,800	$226,900	$109,400	$35,800	$185,500	$74,000	$1,398,800
Ratio of supervision to productive labor ..... per cent..	11.2	19.0	8.0	13.4	18.5	17.3	10.4	20.8	11.9
Group 60—Woodwork	$10,685	$14,461	$27,023	$15,553	$22,153	$7,247	$15,954	$11,675	$124,751
Annual productive labor	$118,900	$96,900	$252,100	$109,400	$128,600	$38,200	$129,400	$73,200	$946,700
Ratio of supervision to productive labor ..... per cent..	8.9	14.9	10.7	14.2	17.2	19.0	12.3	15.9	13.2
Group 70—Laborers and miscellaneous	$3,303	$14,704	$30,926	$20,789	$22,138	$6,336	$11,938	$9,269	$119,403
Annual productive labor	$54,800	$109,100	$351,100	$127,600	$143,400	$37,100	$140,200	$98,500	$1,061,800
Ratio of supervision to productive labor ..... per cent..	6.0	13.5	8.8	16.1	15.4	17.1	8.5	9.4	11.3
Group 80—Building trades	$3,172	$4,299	$12,998	$6,162	$6,966	$2,549	$7,238	$5,266	$51,450
Annual productive labor	$6,900	$27,800	$54,000	$34,500	$49,300	$22,200	$29,100	$23,700	$244,700
Ratio of supervision to productive labor ..... per cent..	46.0	15.5	24.1	18.0	14.1	11.5	25.0	22.2	20.8

Group 90—Foundries	$4,042	$2,899	$9,010	$3,283	$5,598	$1,853	$6,696	$2,777	$36,153
Annual productive labor	$36,400	$22,400	$140,000	$66,200	$77,100	$13,200	$47,900	$9,500	$412,700
Ratio of supervision to productive labor.....per cent	11.1	12.0	6.4	4.9	7.4	14.0	13.8	29.2	8.8
Group 94—Pattern shop	$1,681	$2,440	$7,802	$2,129	$3,887	$1,053	$3,964	$1,624	$24,580
Annual productive labor	$13,600	$18,400	$74,000	$16,700	$17,200	$6,800	$26,100	$6,200	$179,000
Ratio of supervision to productive labor.....per cent	12.4	13.2	10.6	12.8	22.6	15.5	15.2	26.2	13.8
Group 95—Dry docks	.....	$304	$2,087	.....	$430	$138	$29	$294	$3,282
Annual productive labor	.....	.....	$3,900	$1,200	.....	$200	$700	$200	$6,200
Ratio of supervision to productive labor.....per cent	.....	.....	53.5	.....	.....	69.0	4.1	147.0	53.0
Special shops	$176	$7,802	$2,149	$1,183	$1,626	$4,171	$1,030	$850	$18,987
Annual productive labor	$2,000	$142,400	$24,500	$16,500	$7,300	$68,000	$7,200	$700	$268,600
Ratio of supervision to productive labor.....per cent	8.8	5.5	8.8	7.1	22.3	6.1	14.3	121.3	7.1
Total shop expense under this account	$62,145	$142,168	$271,935	$155,422	$189,897	$56,103	$134,944	$103,311	$1,115,925
Total annual productive labor	$692,700	$1,082,500	$3,284,500	$1,183,200	$1,404,900	$455,400	$1,235,000	$542,400	$9,880,600
Ratio of total supervision under shop expense to total annual productive labor.....per cent	8.9	13.1	8.3	13.1	13.5	12.3	10.9	19.0	11.3
Grand total general and shop expense under this account (see "C" in recapitulation)	$183,605	$376,028	$759,653	$412,408	$435,291	$142,926	$345,286	$280,857	$2,936,054
Ratio of total charges to account 9—supervision—to total yard expense.....per cent	25.0	23.9	25.5	27.5	26.4	24.5	24.2	27.4	25.6

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

Account and group.	Portsmouth	Boston	New York	Philadelphia	Norfolk	Charleston	Mare Island	Puget Sound	Total
Account 8.—Loose and hand tools—Continued.									
Ratio of total annual expenditures to total first cost of loose and hand tools ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of total charges to account 8 loose and hand tools—to total yard expense ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Account 9.—Supervision.									
Group 00—Grounds and miscellaneous	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 01—Supply	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 02—Transportation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 03—Power	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 04—Administration (see "A" in recapitulation)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 05—Building ways	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 06—Tool shop	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total general expense under this account	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 10—Structural department	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 20—Smith and special hull	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 30—Machinists	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 40—Boilermakers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 50—Electrical and pipe	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 60—Woodwork	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 70—Laborers and miscellaneous	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Group 80—Building trades	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Annual productive labor	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ratio of supervision to productive labor ..... per cent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Group 90—Foundries	$4,042	$2,899	$9,010	$3,283	$5,593	$1,853	$6,696	$2,777	$36,153
Annual productive labor	$36,400	$22,400	$140,000	$66,200	$77,100	$13,200	$47,900	$9,500	$412,700
Ratio of supervision to productive labor.....per cent	11.1	12.0	6.4	4.9	7.4	14.0	13.8	29.2	8.8
Group 94—Pattern shop	$1,681	$2,440	$7,802	$2,129	$3,887	$1,053	$3,964	$1,624	$24,580
Annual productive labor	$13,600	$18,400	$74,000	$16,700	$17,200	$6,800	$26,100	$5,200	$179,000
Ratio of supervision to productive labor.....per cent	12.4	13.2	10.6	12.8	22.6	15.5	15.2	26.2	13.8
Group 95—Dry docks	.....	$304	$2,087	.....	$430	$138	$29	$294	$3,282
Annual productive labor	.....	.....	$3,900	$1,200	.....	$200	$700	$200	$6,200
Ratio of supervision to productive labor.....per cent	.....	.....	53.5	.....	.....	69.0	4.1	147.0	53.0
Special shops	$176	$7,802	$2,149	$1,183	$1,626	$4,171	$1,030	$850	$18,987
Annual productive labor	$2,000	$142,400	$24,500	$16,500	$7,300	$68,000	$7,200	$700	$268,600
Ratio of supervision to productive labor.....per cent	8.8	5.5	8.8	7.1	22.3	6.1	14.3	121.3	7.1
Total shop expense under this account	$62,145	$142,168	$271,935	$155,422	$189,897	$56,103	$134,944	$103,311	$1,115,925
Total annual productive labor	$692,700	$1,082,500	$3,284,500	$1,183,200	$1,404,900	$455,400	$1,235,000	$542,400	$9,880,600
Ratio of total supervision under shop expense to total annual productive labor.....per cent	8.9	13.1	8.3	13.1	13.5	12.3	10.9	19.0	11.3
Grand total general and shop expense under this account (see "C" in recapitulation)	$183,605	$376,028	$759,653	$412,408	$435,291	$142,926	$345,286	$280,857	$2,936,054
Ratio of total charges to account 9—supervision—to total yard expense.....per cent	25.0	23.9	25.5	27.5	26.4	24.5	24.2	27.4	25.6

Statement 11.—INDUSTRIAL YARD EXPENSE, BY ACCOUNTS AND ACTIVITIES—Continued.

RECAPITULATION.

Account and group.	Portsmouth.	Boston.	New York.	Philadelphia.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
RECAPITULATION OF EXPENDITURES BY PHYSICAL CLASSES.									
Account 0—Miscellaneous labor and consumable supplies (exclusive of direct labor and material title Z shops)	$311,669	$612,827	$1,098,529	$614,311	$505,462	$248,380	$509,885	$407,160	$4,308,223
1—Losses and gratuities	123,115	237,344	514,903	203,282	260,101	88,004	229,165	126,402	1,782,316
2—Land and appurtenances	27,594	71,299	84,085	53,709	65,003	20,879	93,957	34,659	451,185
3—Buildings and structures	27,320	54,683	141,887	49,387	70,167	15,176	50,621	60,459	469,700
4—Miscellaneous equipment	13,356	45,771	75,842	54,450	49,160	14,559	26,469	23,305	302,912
5—Plant appliances	15,440	41,832	62,857	41,146	80,368	19,040	71,816	40,732	373,231
6—Machinery and machine tools	19,714	82,500	119,088	37,603	100,179	18,664	52,352	30,195	460,295
7—Portable power tools	5,258	36,229	65,838	15,830	30,463	4,613	26,701	9,384	194,316
8—Loose and hand tools	6,934	21,001	54,129	14,308	51,901	10,389	19,962	9,718	188,342
9—Supervision	183,605	376,028	759,653	412,408	435,291	142,926	345,286	280,857	2,936,054
Total yard expense	734,005	1,579,514	2,976,811	1,496,434	1,648,095	582,630	1,426,214	1,022,871	11,466,574
RECAPITULATION OF EXPENDITURES BY PURPOSE GROUPS.									
Group 00—Miscellaneous	47,693	86,917	109,690	68,665	79,845	32,686	105,911	45,593	577,000
01—Supply	82,189	161,946	428,793	143,863	186,887	61,516	182,368	131,105	1,378,667
02—Transportation (See A)	55,791	86,955	225,890	89,006	154,772	34,658	135,058	103,053	885,188
03—Power (See B)	95,041	126,562	253,945	191,708	149,840	59,145	92,366	112,615	1,081,222
04—Administration (See C)	176,201	396,191	678,917	424,803	355,603	174,689	343,352	294,773	2,844,529
05—Building ways	208	2,796	28,421	.....	.....	.....	2,402	.....	33,827
06—Tool shop	4,169	20,682	.....	.....	4,494	1,915	.....	4,367	35,627
Total general departments	461,292	882,049	1,725,656	918,045	931,441	364,609	861,457	691,506	6,836,055
10—Structural department	38,752	145,018	365,881	83,932	157,854	32,817	104,395	51,250	979,909
20—Smith and special hull	24,953	69,054	81,422	22,828	74,912	10,342	48,568	25,840	357,919
30—Machinists	53,653	154,764	257,803	126,469	225,369	57,427	144,918	82,819	1,103,222
40—Boilermakers	8,546	20,015	46,248	19,910	45,727	11,801	19,182	18,070	189,499
50—Electrical and pipe	41,585	38,907	173,684	85,521	60,295	16,682	65,949	41,311	523,884
60—Woodwork	40,487	53,775	104,667	51,591	66,081	18,711	53,354	37,184	426,850
70—Laborers and miscellaneous	19,217	58,281	102,826	60,839	62,782	16,031	47,489	37,294	404,759
80—Building trades	13,027	22,033	39,621	23,675	26,423	11,494	35,972	18,852	191,098
90—Foundries	92,688	70,970	414,780	153,740	207,629	42,296	123,504	48,911	1,154,470
94—Pattern shop	5,272	13,423	21,404	6,466	12,661	4,356	13,333	7,890	84,805

95—Dry docks	8,383	17,344	26,354	28,829	17,749	4,876	10,470	12,767	126,712
Special shops	516	443,288	182,887	125,382	187,312	21,998	77,274	27,244	1,065,901
Total producing departments	347,079	1,106,872	1,817,527	789,182	1,144,794	248,783	744,409	409,382	6,608,028
Grand total general and producing departments	808,371	1,988,921	3,543,183	1,707,227	2,076,235	613,392	1,605,866	1,100,888	13,444,083
Deduct direct labor and material title Z shops	74,366	409,407	566,372	210,793	428,140	30,762	179,652	78,017	1,977,509
Total yard expense	734,005	1,579,514	2,976,811	1,496,434	1,648,095	582,630	1,426,214	1,022,871	11,466,574
A. Includes transportation chargeable to titles other than G and invoiced into store	6,645	.....	2,765	.....	2,284	.....	.....	2,366	14,060
B. Includes power chargeable to titles other than G and invoiced into store	39,117	50,272	22,115	90,662	38,277	19,050	28,210	81,708	369,411
C. Includes the following amounts for pay and allowances of officers	80,039	142,674	206,733	157,060	123,780	62,928	130,191	101,007	1,004,412

Statement 13.—INDUSTRIAL YARD SHOP EXPENSE, BY SHOPS—Continued.

No.	Shops.	Total direct shop expense.	Transfers.	Total shop expense.	Productive labor.	Actual per cent.	Productive labor hours.
25	Gas:						
	New York	$9,040.79	$3,968.98	$13,009.77	.....	.....	.....
	Norfolk	1,493.65	513.06	2,006.71	4538.22	.....	1,220
	Charleston	2,992.82	679.21	3,672.03	954.52	.....	2,488
	Mare Island	3,861.80	2,566.74	6,428.54	1,404.07	.....	4,804
	Puget Sound	1,789.24	187.19	1,976.43	319.18	.....	.....
26	Acetylene (cutting and welding):						
	Portsmouth	1,259.78	196.64	1,456.42	914.23	159.0	2,858
	Boston	7,589.87	2,418.38	10,008.25	2,692.48	372.0	6,048
	New York	4,782.77	4,093.01	8,875.78	11,160.22	79.5	25,961
	Philadelphia	2,823.33	1,478.15	4,301.48	3,098.20	139.0	9,104
	Charleston	269.33	284.76	554.09	465.89	119.0	1,804
	Mare Island	2,589.15	2,126.06	4,715.21	4,667.59	101.0	11,742
	Puget Sound	1,368.57	1,602.36	2,970.93	2,540.56	117.0	6,376
27	Galvanizing:						
	Portsmouth	8,871.41	15.39	8,886.80	.....	.....	.....
	Boston	6,364.16	1,077.18	7,441.34	.....	.....	.....
	New York	11,582.13	1,765.65	13,347.78	.....	.....	.....
	Philadelphia	5,501.40	1,430.04	6,931.44	2,618.43	.....	.....
	Norfolk	31,266.69	2,784.29	34,050.98	8,444.70	.....	24,264
	Charleston	1,015.33	283.28	1,298.61	402.09	.....	459
	Mare Island	6,719.20	1,341.54	8,060.74	2,113.52	.....	6,506
	Puget Sound	6,389.08	1,193.20	7,582.28	1,074.90	.....	8
28	Electroplating:						
	Portsmouth	1,348.48	1,381.18	2,729.66	6,244.86	43.7	17,677
	Boston	1,097.81	1,004.37	2,102.18	1,465.35	143.0	3,400
	New York	1,582.38	3,212.88	4,795.26	3,340.08	143.5	8,609
	Philadelphia	1,283.90	1,317.21	2,601.11	2,193.10	119.0	5,002
	Charleston	25.85	.34	26.19	.....	.....	.....
	Puget Sound	1,164.72	1,670.33	2,835.05	2,570.71	110.0	5,201
31	Machinists (inside):						
	Boston	113,806.81	56,437.19	170,244.00	130,891.70	130.0	304,625
	New York	208,536.51	175,725.05	384,311.56	540,281.26	71.1	1,177,871
	Philadelphia	74,102.11	68,062.26	142,164.37	136,003.55	105.0	330,734
	Norfolk	172,466.87	101,708.52	274,175.39	321,790.74	85.0	811,184
	Charleston	40,261.34	37,360.30	77,621.64	55,361.99	140.0	109,079
	Mare Island	57,055.45	58,782.11	115,837.56	126,385.10	92.0	294,416
	Puget Sound	54,721.95	36,079.29	90,801.24	56,079.86	162.0	132,915
31	Machinists (heavy):						
	Portsmouth	15,455.45	5,637.86	21,093.31	15,263.28	138.0	38,822
32	Machinists (light):						
	Portsmouth	11,582.58	16,702.00	28,284.58	57,592.86	49.1	146,426
36	Machinist (ordnance):						
	Puget Sound	6,376.75	6,596.73	12,973.48	10,392.18	125.0	24,155
37	Machinist (hand):						
	Portsmouth	8,792.24	6,143.93	14,936.17	22,358.97	66.8	56,917
37	Machinist (inside, No. 2):						
	Mare Island	42,891.84	31,816.02	74,707.86	68,031.45	110.0	179,730
37	Test shop:						
	Norfolk	2,938.53	754.54	3,693.07	2,750.48	134.0	6,890
	Puget Sound	2,392.23	1,265.45	3,657.68	1,641.75	223.0	3,895
38	Machinists (outside):						
	Portsmouth	17,820.91	15,142.08	32,962.99	50,685.05	55.2	165,571
	Boston	40,957.98	33,088.65	74,046.63	121,520.45	60.9	282,815
	New York	49,217.18	53,306.20	102,523.38	194,612.56	52.7	516,886
	Philadelphia	52,617.92	64,771.17	117,389.09	143,921.16	82.0	377,577
	Norfolk	49,963.80	41,774.92	91,738.72	123,478.34	74.0	335,962
	Charleston	17,159.20	30,577.97	47,737.17	47,516.71	100.0	109,786
	Mare Island, No. 3	45,602.63	58,051.94	103,654.57	127,934.38	81.0	301,574
	Puget Sound	19,327.28	26,914.62	46,241.90	43,781.32	106.0	108,179
41	Boiler makers (machinists):						
	Portsmouth	7,639.26	4,150.97	11,790.22	10,373.30	114.0	29,910
41	Boiler makers (all):						
	Mare Island	19,176.14	20,666.04	39,842.18	45,408.97	81.0	120,063
41	Boiler makers (inside):						
	Boston	14,018.11	7,577.79	21,595.90	14,765.16	146.0	34,534
	New York	46,309.01	49,426.54	95,735.55	141,521.17	67.6	429,517
	Philadelphia	6,163.46	3,978.48	10,141.94	7,512.08	135.0	22,737
	Norfolk	45,727.23	38,420.59	84,147.82	101,710.37	83.0	300,649
	Charleston	7,039.46	10,538.31	17,577.77	15,490.51	114.0	38,277
	Puget Sound	9,813.43	9,870.29	19,683.72	13,432.89	146.0	33,889
44	Boiler makers (outside):						
	Boston	5,996.81	7,751.97	13,748.78	30,429.55	45.2	71,026
	Philadelphia	13,809.59	26,450.67	40,260.26	57,177.44	70.0	153,071
	Charleston	4,763.24	15,235.63	19,998.87	23,912.45	84.0	56,036
	Puget Sound	8,257.07	13,632.48	21,889.55	20,874.05	105.0	53,443
45	Boiler makers (hand):						
	Portsmouth	906.60	5,769.40	6,676.00	18,488.42	36.0	53,693

Statement 12.—INDUSTRIAL YARD SHOP EXPENSE, BY SHOPS—Continued.

No.	Shops.	Total direct shop expense.	Transfers.	Total shop expense.	Productive labor.	Actual per cent.	Productive labor hours.
51	Electrical (inside):						
	Portsmouth	$15,115.86	$9,439.55	$24,555.41	$33,308.17	73.7	95,073
	Boston	22,955.82	13,138.38	36,094.20	37,019.92	97.5	80,947
	New York	89,934.89	63,780.79	153,715.68	275,499.38	55.8	612,506
	Philadelphia	16,950.17	14,136.06	31,086.23	30,267.45	102.0	74,361
	Norfolk	25,371.62	13,300.56	38,672.18	41,886.94	92.0	108,668
	Charleston	8,398.83	8,196.34	16,595.17	13,000.78	128.0	28,653
	Mare Island	.....	.....	71,332.79	80,414.74	89.0	215,057
	Puget Sound	7,183.07	4,439.35	11,622.42	4,520.50	257.0	10,239
52	Electrical (outside):						
	Portsmouth	8,252.94	5,574.91	13,827.85	21,187.30	65.2	60,549
	Philadelphia	21,600.56	24,846.24	46,446.80	56,377.24	82.0	145,134
	Puget Sound	6,800.67	12,518.83	19,319.50	20,014.08	97.0	46,586
53	Coppersmith:						
	Portsmouth	4,483.64	2,837.91	7,321.55	11,090.38	66.5	29,798
	Boston	9,071.21	6,436.10	15,507.31	19,019.53	81.5	41,971
	New York	18,073.72	17,673.22	35,746.94	59,716.15	59.8	150,951
	Philadelphia	14,905.90	19,579.78	34,485.68	42,551.39	81.0	119,745
	Norfolk	10,438.46	7,183.75	17,622.21	18,751.34	94.0	50,965
	Charleston	2,197.12	3,798.36	5,995.48	5,467.91	110.0	13,451
	Mare Island	7,943.41	10,283.03	18,226.44	23,462.93	78.0	54,471
	Puget Sound	5,760.54	4,926.77	10,687.31	7,457.98	143.0	20,250
54	Pipe coverers:						
	Puget Sound	2,483.57	3,926.33	6,409.90	7,106.12	90.0	15,715
56	Pipe fitting:						
	Portsmouth	13,731.95	10,798.68	24,530.63	41,280.58	59.4	118,289
	Boston	2,775.36	1,503.90	4,279.26	4,916.66	87.0	15,921
	New York	3,068.59	4,095.34	7,163.93	22,511.18	31.8	56,684
	Philadelphia	14,172.86	24,164.93	38,337.79	50,930.36	75.0	143,169
	Charleston	2,841.99	8,387.75	11,229.74	13,379.55	84.0	27,630
	Mare Island	21,202.03	38,914.59	60,116.62	81,203.66	74.0	185,438
	Puget Sound	16,923.13	17,978.90	34,902.03	30,565.28	114.0	80,343
58	Plumbing:						
	Boston	4,104.39	4,061.71	8,166.10	13,601.77	60.0	26,593
	Norfolk	24,539.27	16,897.51	41,436.78	48,803.07	85.0	139,995
	Mare Island	490.64	293.93	784.57	389.25	201.0	1,027
	Puget Sound	2,179.49	2,707.75	4,887.24	4,387.74	111.0	12,477
58	Plumbing (outside):						
	New York	57,202.10	46,019.96	103,222.06	212,022.43	48.7	535,469
58	Plumbing (inside):						
	Philadelphia	8,037.98	2,078.36	10,116.34	3,151.12	321.0	6,306
	Charleston	3,045.15	2,241.81	5,286.96	3,308.16	160.0	9,107
59	Plumbing (inside):						
	New York	5,406.79	4,592.33	9,999.12	16,042.35	62.3	36,043
59	Plumbing (outside):						
	Philadelphia	10,698.08	19,231.41	29,929.49	43,588.76	69.0	120,526
	Charleston	148.72	421.48	570.20	644.60	88.0	728
61	Shipwright (inside):						
	Portsmouth	4,653.07	1,414.74	6,067.81	4,474.31	136.0	12,798
	Boston	5,483.04	4,294.75	9,777.79	3,456.33	283.0	7,542
	New York	16,993.12	9,512.61	26,505.73	9,834.28	269.5	23,582
	Philadelphia	4,799.65	1,449.93	6,249.58	2,108.39	296.0	5,951
	Norfolk	20,560.66	27,369.52	47,930.18	49,514.06	97.0	131,984
	Mare Island	4,486.16	3,874.31	8,360.47	4,737.06	177.0	12,164
	Puget Sound	2,909.31	2,062.94	4,972.25	2,219.43	224.0	5,279
62	Shipwright (outside):						
	Portsmouth	3,459.10	3,476.00	6,935.10	13,388.30	51.8	28,198
	Boston	9,792.20	8,730.85	18,523.05	29,301.33	63.2	66,505
	New York	25,753.63	23,520.20	49,273.83	116,093.49	42.4	279,646
	Philadelphia	10,662.80	20,866.98	31,529.78	46,604.42	68.0	113,079
	Charleston	5,757.34	10,805.67	16,563.01	15,965.41	104.0	36,793
	Mare Island	12,971.07	22,461.37	35,432.44	48,420.80	73.0	119,534
	Puget Sound	9,513.05	16,186.21	25,699.26	27,176.16	95.0	65,413
63	Joiner (inside):						
	Portsmouth	7,913.51	7,914.19	15,827.70	17,870.72	88.5	47,029
	Boston	12,338.50	7,941.57	20,280.07	14,593.65	139.0	33,898
	New York	18,015.64	11,329.62	29,345.26	23,536.60	124.6	51,536
	Philadelphia	11,514.92	8,031.32	19,546.24	14,848.84	132.0	46,234
	Norfolk	26,029.27	20,914.12	46,943.39	44,506.43	105.0	122,384
	Charleston	9,719.14	8,242.38	17,961.52	10,611.71	169.0	21,710
	Mare Island	7,760.15	12,755.24	20,515.39	22,832.38	90.0	50,981
	Puget Sound	6,253.90	5,387.01	11,640.91	6,540.04	178.0	17,671
64	Joiner (outside):						
	Portsmouth	2,285.00	2,529.52	4,814.52	5,204.58	92.5	13,695
	Boston	7,266.87	5,923.94	13,190.81	20,811.54	63.4	55,866
	New York	6,705.59	6,675.43	13,381.02	35,018.77	38.3	76,419
	Philadelphia	8,520.51	6,804.39	15,324.90	14,858.62	103.0	39,892
	Charleston	2,876.78	6,940.06	9,816.84	9,763.03	101.0	22,223
	Mare Island	7,055.04	9,148.54	16,203.58	22,013.46	74.0	45,329
	Puget Sound	4,640.65	7,536.87	12,177.52	11,754.62	104.0	25,328

Statement 12.—INDUSTRIAL YARD SHOP EXPENSE, BY SHOPS—Continued.

No.	Shops.	Total direct shop expense.	Transfers.	Total shop expense.	Productive labor.	Actual per cent.	Productive labor hours.
65	Joiner, hand (inside):						
	Philadelphia	$3,248.41	$4,035.13	$7,283.54	$7,481.48	97.0	21,874
65	Spar and block:						
	Portsmouth	7,180.79	8,465.16	15,645.95	21,424.44	73.0	60,687
	New York	2,912.09	677.24	3,589.33	3,195.89	112.3	8,419
	Mare Island	3,847.11	2,270.57	6,117.68	3,688.58	166.0	7,463
66	Saw filers:						
	Mare Island	1,509.57	151.90	1,661.47	51.90	3,201.0	229
67	Wood calkers:						
	Portsmouth	314.72	971.73	1,286.45	3,935.84	32.7	9,900
	Philadelphia	30.20	648.18	678.38	1,453.98	47.0	1,944
	Charleston	363.38	1,246.12	1,609.50	1,904.01	85.0	3,482
	Mare Island	1,241.99	2,143.01	3,385.00	4,290.12	79.0	9,121
	Puget Sound	3,239.09	3,823.60	7,062.69	6,427.64	110.0	11,901
68	Boat:						
	Boston	18,894.56	12,787.03	31,681.59	28,767.54	110.0	66,748
	New York	34,287.28	17,870.63	52,157.91	64,454.26	80.9	161,095
	Philadelphia	13,001.02	12,118.44	25,119.46	22,087.02	114.0	68,069
	Norfolk	19,671.79	13,504.10	33,175.89	34,535.92	96.0	96,382
	Mare Island	14,606.37	10,630.95	25,237.32	23,345.22	108.0	95,910
	Puget Sound	10,627.48	13,049.34	23,676.82	19,051.12	124.0	47,430
68	Boat (machine):						
	Portsmouth	8,927.09	2,282.57	11,209.66	6,370.37	176.0	17,026
69	Boat (hand):						
	Portsmouth	5,753.48	14,073.69	19,827.17	46,259.74	42.8	123,535
71	Painting:						
	Portsmouth	7,771.00	3,677.54	11,448.54	13,392.55	85.4	36,304
	Boston	19,156.02	5,198.76	24,354.78	17,370.49	140.0	43,230
	New York	22,789.12	16,404.01	39,193.13	74,503.92	52.6	162,841
	Philadelphia	28,219.87	25,224.69	53,444.56	57,802.72	93.0	154,487
	Norfolk	20,043.79	10,969.62	31,013.41	36,492.33	85.0	90,940
	Charleston	2,878.91	3,867.50	6,746.41	6,121.71	110.0	14,477
	Mare Island	10,569.13	13,517.29	24,086.42	31,482.48	77.0	72,413
	Puget Sound	13,194.03	15,553.53	28,747.56	25,079.65	115.0	59,557
72	Laborers (outside):						
	Portsmouth	6,755.51	5,411.18	12,166.69	16,202.73	75.0	64,807
	New York	63,525.54	46,218.43	109,743.97	218,018.24	50.3	663,950
	Philadelphia	20,532.42	17,662.97	38,195.39	39,705.17	96.0	156,777
	Norfolk	29,315.22	32,978.61	62,293.83	67,193.35	93.0	281,901
	Charleston	9,273.56	14,247.44	23,521.00	20,400.38	115.0	78,096
	Mare Island	26,529.76	38,828.23	65,357.99	85,199.26	77.0	254,827
	Puget Sound	16,796.21	35,012.99	51,809.20	59,522.05	87.0	186,829
73	Riggers and laborers:						
	Boston	28,310.62	19,981.27	48,291.89	59,019.20	81.8	195,873
74	Rigging loft:						
	Portsmouth	1,139.96	1,368.03	2,507.99	5,125.08	48.9	12,954
	Boston	4,426.62	4,318.11	8,744.73	13,967.28	62.6	34,778
	New York	8,711.06	7,355.50	16,066.56	29,143.37	55.1	63,629
	Philadelphia	3,525.95	1,962.18	5,488.13	3,967.15	138.0	9,768
	Norfolk	4,518.86	5,755.67	10,274.53	17,164.69	60.0	52,994
	Charleston	2,060.68	3,117.23	5,177.91	4,725.01	110.0	11,128
	Mare Island	5,735.50	5,491.76	11,227.26	11,635.16	96.0	26,504
	Puget Sound	2,175.94	3,270.55	5,446.49	5,063.23	108.0	10,362
75	Rigging (outside):						
	Portsmouth	1,412.11	2,935.98	4,348.09	10,532.24	41.3	25,914
76	Sail loft:						
	Portsmouth	2,065.79	2,304.28	4,370.07	8,369.20	52.2	21,071
	Boston	6,292.36	5,065.33	11,357.69	18,725.16	60.7	40,092
	New York	7,799.86	8,596.66	16,396.52	29,406.58	55.7	70,023
	Norfolk	8,902.71	7,594.15	16,496.86	22,573.54	73.0	59,442
	Charleston	1,800.20	3,959.96	5,760.16	5,902.36	98.0	11,915
	Mare Island	4,428.69	4,407.20	8,835.89	9,569.21	92.0	19,291
	Puget Sound	3,596.39	4,494.55	8,090.94	6,939.04	117.0	16,475
76	Sail loft (machine):						
	Philadelphia	2,801.48	1,935.43	4,736.91	3,793.54	125.0	8,807
77	Sail loft (hand):						
	Philadelphia	3,041.60	5,528.25	8,569.85	11,753.36	73.0	24,644
78	Upholsterers:						
	Portsmouth	71.24	312.90	384.14	1,153.09	33.0	2,995
	Philadelphia	2,913.80	4,769.11	7,682.91	10,582.45	82.0	24,180
	Mare Island	429.89	1,014.28	1,444.17	2,302.68	62.0	4,814
79	Scalers:						
	Puget Sound	1,542.70	1,171.02	2,713.72	1,912.93	142.0	5,207
80	Building trades:						
	Portsmouth	13,038.88	2,940.97	15,979.85	6,942.98	.....	23,231
	Philadelphia	27,160.42	13,468.07	40,628.49	34,544.24	118.0	112,111
	Norfolk	18,660.22	21,714.43	40,374.65	38,721.47	104.0	162,153
	Puget Sound	16,977.97	16,575.89	33,553.86	20,107.63	167.0	61,157

Statement 12.—INDUSTRIAL YARD SHOP EXPENSE, BY SHOPS—Continued.

No.	Shops.	Total direct shop expense.	Transfers.	Total shop expense.	Productive labor.	Actual per cent.	Productive labor hours.
80	Public works:						
	Boston	$22,018.51	$11,195.48	$33,213.99	$27,801.63	119.0	99,084
	Charleston	11,471.00	15,724.36	27,195.36	22,191.56	122.0	65,398
	Mare Island	39,897.20	12,906.40	52,803.60	29,081.25	181.0	108,359
81	House carpenters:						
	New York	13,449.67	10,308.46	23,758.13	13,171.02	180.4	23,487
	Norfolk	7,762.51	4,492.72	12,255.23	10,538.06	116.0	31,326
	Puget Sound	1,873.77	2,513.50	4,387.27	3,600.59	122.0	8,259
82	Masons:						
	New York	6,285.58	9,325.83	15,611.41	9,820.01	158.9	17,268
83	Wharf builders:						
	New York	6,487.56	6,256.64	12,744.20	7,150.96	178.2	13,869
84	Concrete:						
	New York	13,406.59	16,692.18	30,098.77	23,824.25	126.3	91,212
91	Foundry, iron:						
	Portsmouth	9,108.07	2,460.23	11,568.30	6,852.97	.....	19,379
	Boston	35,644.77	4,644.70	40,289.47	13,113.78	.....	25,406
	New York	87,970.19	10,446.76	98,416.95	.....	.....	.....
	Philadelphia	55,760.90	16,878.43	72,639.33	26,774.02	.....	.....
	Norfolk	77,671.13	17,179.10	94,850.23	38,491.72	.....	113,946
	Charleston	23,882.82	5,817.42	29,700.24	8,825.40	.....	10,983
	Mare Island	39,970.07	12,813.03	52,783.10	29,278.57	.....	80,349
	Puget Sound	13,794.16	3,403.87	17,198.03	3,381.97	.....	50
92	Foundry, brass:						
	Portsmouth	66,129.21	9,777.03	75,906.24	24,113.20	.....	73,731
	Boston	33,192.70	3,580.08	36,772.78	8,782.18	.....	16,807
	New York	305,305.82	9,320.87	314,626.69	.....	.....	.....
	Philadelphia	95,429.32	13,072.39	108,501.71	28,646.96	.....	.....
	Norfolk	104,055.53	9,550.65	113,606.18	26,341.04	.....	77,839
	Charleston	18,418.27	2,662.78	21,081.05	4,340.75	.....	9,604
	Mare Island	71,057.69	7,199.66	78,257.35	15,609.23	.....	53,975
	Puget Sound	27,808.70	4,890.16	32,698.86	4,838.26	.....	112
93	Foundry, pig metal:						
	Portsmouth	17,658.80	1,245.16	18,903.96	3,404.70	.....	9,518
93	Foundry, steel:						
	Boston	2,132.05	291.75	2,423.80	538.99	.....	1,145
	New York	280.88	9.16	290.04	.....	.....	.....
	Philadelphia	2,552.15	436.08	2,988.23	744.81	.....	.....
	Norfolk	25,901.49	5,130.64	31,032.13	12,281.63	.....	.....
	Mare Island	12,035.07	2,400.17	14,435.24	3,006.98	.....	10,718
	Puget Sound	4,043.26	886.60	4,929.86	1,283.78	.....	.....
94	Pattern:						
	Portsmouth	5,272.67	3,852.51	9,125.18	13,589.86	67.1	29,671
	Boston	13,420.52	6,772.37	20,192.89	18,426.17	110.0	39,948
	New York	23,785.55	20,235.93	44,021.48	74,015.11	59.4	137,824
	Philadelphia	6,465.71	8,374.41	14,840.12	16,653.47	89.0	38,366
	Norfolk	12,661.95	6,246.48	18,908.43	17,181.81	110.0	38,723
	Charleston	4,356.82	4,411.93	8,768.75	6,777.56	129.0	10,846
	Mare Island	13,333.57	12,533.88	25,867.45	26,053.18	92.0	46,497
	Puget Sound	8,477.24	3,962.94	12,440.18	6,212.23	200.0	12,151
95	Dry docks:						
	Portsmouth	8,383.36	1,895.59	10,278.95	.....	.....	.....
	Boston	17,344.11	2,740.28	20,084.39	.....	.....	.....
	New York	32,700.99	13,268.67	45,969.66	3,858.60	.....	9,051
	Philadelphia	30,952.59	984.70	31,937.29	1,167.60	.....	2,259
	Charleston	4,916.58	1,124.90	6,041.48	144.75	.....	329
	Mare Island	10,533.41	862.00	11,395.41	660.96	.....	831
	Puget Sound	14,215.60	889.55	15,105.15	227.32	.....	539
96	Paint manufacturing:						
	New York	181,461.17	8,391.38	189,852.55	.....	.....	.....
	Philadelphia	101,974.25	3,287.89	105,262.14	7,544.62	.....	.....
	Norfolk	187,310.72	4,684.51	191,995.23	7,255.66	.....	18,061
	Mare Island	74,188.80	329.79	74,518.59	2,368.85	.....	4,538
	Puget Sound	33,207.93	764.89	33,972.82	658.72	.....	.....
97	Ropewalk:						
	Boston	400,116.80	29,266.63	429,383.43	71,225.36	.....	201,502
97	Flag makers:						
	New York	9,289.28	7,022.79	16,312.07	12,490.60	130.5	49,54
	Mare Island	2,352.88	2,599.52	4,952.40	4,884.40	101.0	16,458

Statement 12.—INDUSTRIAL YARD SHOP EXPENSE, BY SHOPS—Continued.

No.	Shops.	Total direct shop expense.	Transfers.	Total shop expense.	Productive labor.	Actual per cent.	Productive labor hours.
98	Wire rope: Boston	$7,645.66	$5,957.16	$13,602.82	$14,843.45	91.6	46.202
98	Tool manufacturing: Philadelphia	23,424.13	6,449.56	29,873.69	8,976.80	.....	.....
98	Torpedo testing: Charleston	159.00	.....	159.00	.....	.....	.....
99	Cooper: Portsmouth	601.10	648.49	1,249.59	1,999.46	62.5	5,623
99	Chain: Boston	35,076.04	24,872.93	59,948.97	56,375.04	106.0	129,873
99	Clothing factory: Charleston	21,889.83	359.39	22,249.22	68,011.70	33.0	304,024

Statement 13.—INDUSTRIAL YARD GENERAL

	Item.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.
000	Miscellaneous	$14,480.46	$613.42	$34,917.24	$18,102.12	$38,845.39
001	Grounds and waterfront	25,753.79	76,224.72	66,829.51	51,431.45	41,086.14
002	Communications	2,416.97	5,785.64	5,221.84	1,547.70	5,831.33
003	Fire protection	5,730.30	4,631.78	14,967.74	3,002.73	2,388.59
011	Fleet fuel supply	8,796.84	19,921.87	9,740.36	1,909.90	24.82
012	Stores supply	61,172.02	113,247.18	275,666.72	115,719.17	179,355.49
013	Laboratory	2,495.95	15,476.15	123,294.44	13,849.41	17,884.08
014	Purchase	9,725.22	13,183.49	39,705.93	14,960.52	10,478.91
	Total supply	82,190.03	161,828.69	448,407.45	146,439.00	207,743.30
021	Locomotive	4,548.31	13,665.22	25,358.79	14,902.89	25,558.25
022	Crane	5,847.55	11,590.12	52,114.71	22,647.11	9,753.63
023	Motor truck	2,920.05	3,269.57	10,643.57	2,904.59	21,341.67
024	Team	19,544.51	23,536.82	38,064.25	21,578.17	2,627.89
025	Hand	.....	3,978.99	.....	8,922.83	3,277.51
026	Water	22,174.53	31,378.19	94,937.83	21,079.59	20,457.17
	Total transportation	55,034.95	87,418.91	221,119.15	92,034.88	83,016.12
031	Heat	10,018.84	30,045.19	39,243.99	72.45	10,380.36
032	Steam	16,712.21	4,129.69	47,377.30	38,736.72	64,965.24
033	Water	.....	3,325.92	8,262.28	40,518.00	.....
034	Air	16,636.80	26,267.58	36,691.11	26,255.00	23,301.29
035	Electric	51,945.10	61,148.39	93,928.86	85,006.41	95,959.02
036	Salt water	.....	.....	.....	.....	.....
	Total power	95,312.95	124,916.77	225,503.54	190,588.58	196,605.91
041	Clerical	31,741.31	62,597.08	124,835.39	58,050.09	122,236.61
042	Drafting	27,210.99	44,870.34	158,290.82	72,716.43	75,000.51
043	Estimating	5,606.13	52,775.17	27,413.58	68,340.29	46,101.93
044	Accounting	14,533.13	34,904.23	74,219.47	28,079.71	38,213.99
045	Janitor	7,614.23	30,083.80	71,665.98	29,594.40	20,570.52
046	Dispensary [1]	.....	.....	733.24	781.48	.....
047	Disbursing [1]	.....	.....	.....	.....	.....
048	Officers	83,503.22	148,542.93	216,059.55	166,708.59	86,761.69
049	General supervisors	6,046.33	23,124.88	6,230.10	16,783.08	5,571.54
	Total administration	176,255.41	396,898.43	679,448.13	441,054.07	394,516.79
050	Building ways	208.14	3,182.41	28,809.46	.....	.....
060	Tool shop	4,223.67	20,636.29	.....	.....	.....
070	Military activities	89,369.19	36,161.99	109,240.77	33,551.17	175,689.55
	Grand total	550,975.86	917,072.21	1,834,464.83	977,751.70	1,145,813.12
	Invoices	45,761.97	50,271.80	24,880.10	90,661.58	45,144.04
	Military	286,087.70	424,040.85	800,865.49	324,650.16	292,206.96
	Industrial	219,126.19	442,759.56	1,008,719.24	562,439.96	808,462.12

[1] 1917 classification.

EXPENSE, BY ACTIVITIES.

Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.	Invoices.	Military.	Industrial.
$48,792.57	$6,651.04	$9,748.92	$9,931.03	$180,855.35	.....	$66,431.66	$114,423.69
36,525.14	22,255.53	74,168.04	31,364.96	425,639.28	.....	225,538.63	200,100.65
10,857.35	2,006.63	8,173.11	1,281.70	43,122.27	.....	16,135.82	26,986.45
4,099.82	1,752.85	12,853.88	3,504.58	52,932.27	.....	21,273.10	31,659.17
4,314.59	4,382.36	15,463.95	51,385.27	115,939.96	.....	108,055.56	7,884.40
141,948.32	53,437.64	143,656.28	58,352.93	1,142,555.75	.....	575,085.73	567,470.02
30,476.24	1,350.00	30,853.55	10,017.11	245,696.93	.....	165,812.38	79,884.55
16,647.49	2,320.31	15,154.39	11,894.22	134,070.48	.....	74,606.04	59,464.44
193,386.64	61,490.31	205,128.17	131,649.53	1,638,263.12	.....	923,559.71	714,703.41
15,387.50	6,504.44	23,106.71	13,749.10	142,780.91	$1,832.57	37,120.57	103,827.77
24,750.31	8,311.07	19,992.30	12,406.90	167,413.70	2,712.61	24,434.94	140,266.15
3,371.27	3,493.30	6,770.43	5,146.50	59,860.95	5,395.62	13,310.69	41,154.64
46,359.04	7,709.80	26,217.89	19,581.23	205,219.60	7,983.14	49,678.63	147,557.83
2,499.65	13.05	5.96	.....	18,697.99	398.10	2,448.90	15,850.99
58,289.33	8,581.30	63,920.45	51,338.73	372,158.12	86.96	284,880.39	87,190.77
150,657.10	34,612.96	140,013.74	102,223.46	966,131.27	18,409.00	411,874.12	535,848.15
19,247.61	3,571.12	13,445.27	8,357.38	134,382.21	25,333.84	39,033.25	70,015.12
14,421.27	428.08	8,353.71	54,907.91	250,032.13	87,580.98	34,320.73	128,130.42
5,751.71	.....	8,282.07	.....	66,139.98	30,762.83	11,351.91	24,025.24
33,290.67	17,694.20	19,946.77	9,077.76	211,251.18	27,483.75	13,200.25	170,567.18
74,556.16	37,457.54	33,933.02	40,082.40	574,016.90	236,002.56	85,978.38	252,035.96
.....	.....	4,879.87	.....	4,879.87	3,041.50	424.01	1,414.36
147,267.42	59,150.94	88,840.71	112,425.45	1,240,702.27	410,205.46	184,308.53	646,188.28
19,111.45	36,256.44	58,613.03	35,544.09	598,985.49	.....	128,170.00	470,815.49
56,078.21	17,107.33	37,105.35	54,507.25	542,947.23	.....	164,214.65	378,732.58
19,869.21	22,452.65	44,394.38	53,093.84	339,957.18	.....	61,691.58	278,265.60
38,048.18	16,797.01	41,931.31	23,046.57	309,773.67	.....	61,870.85	247,902.82
27,346.85	15,404.77	19,676.98	5,821.62	227,779.15	.....	83,557.17	144,221.98
653.04	524.37	.....	.....	2,692.13	.....	1,383.73	1,308.40
.....	.....	.....	.....	.....	.....	.....	.....
145,168.71	66,134.56	75,629.71	118,928.74	1,107,432.70	.....	290,776.88	816,655.82
21,512.98	.....	37,181.31	12,548.31	128,998.53	.....	26,120.59	102,877.94
377,788.63	174,677.13	314,442.07	303,485.42	3,258,566.08	.....	817,785.45	2,440,780.63
.....	.....	6,273.85	.....	38,473.86	.....	.....	38,473.86
4,494.05	1,914.78	.....	4,371.44	35,640.23	.....	495.41	35,144.82
64,570.91	58,718.62	137,254.56	22,477.99	727,034.75	.....	727,034.75	.....
1,038,439.63	423,230.79	996,897.05	722,715.56	8,607,360.75	428,614.46	3,394,437.18	4,784,309.11
40,560.73	19,049.56	28,210.26	84,074.42	428,614.46	.....	.....	.....
463,201.96	133,982.98	388,847.07	280,554.01	3,394,437.18	.....	.....	.....
534,676.94	270,198.25	579,839.72	358,087.13	4,784,309.11	.....	.....	.....

Statement 14.—EXPENDITURES BY YARDS AND TITLES.

RECAPITULATION.

[Showing gross expenditures of money and issues of material for naval establishment.]

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
A. Construction of new vessels	$3,466,567.19	$932,815.25	$2,938,384.22	$21,273,477.00	$65,548.90	$539.51		$28,677,332.07
B. Equipage of vessels	1.85		1,866.53	25,477.58	13,972,318.05	7,859.16		14,007,523.17
C. Operating expenses of vessels	447.05	173.98	26,337.54	1,078,058.10	16,280,562.65	25,175.88	$30,566,165.62	47,976,920.82
D. Repairs to vessels	2,927,994.15	797,832.85	1,319,969.83	122,217.09	21,672.60	6,025.56		5,195,712.08
K. Alterations to vessels	1,213,166.07	339,345.68	990,882.95	31,154.84	186,532.16			2,761,081.70
P. Repairs to equipage of vessels	337,597.78	102,290.40	126,807.90	32,616.44	173.09	225.30		599,710.91
E. Plant additions (industrial)	515,883.72	127,470.91	569,320.22	1,295,947.41	357.95	825.00		2,509,805.21
R. Plant additions (military)	415,074.84	5,411.22	728,832.84	2,316,785.65	140,264.49	1,748.07		3,608,117.11
G. Yard maintenance (industrial)	9,304,960.01		2,141,702.77	229,988.00	2,412.31		1,165,300.11	12,844,363.20
S. Yard maintenance (military)	2,608,040.68	15,326.48	1,299,544.33	1,112,004.02	38,266.76	69,664.21	4,303,005.40	9,535,851.88
V. General administration	1,551,455.16	189,311.92	861,580.43	2,673,204.29	4,894,082.47	847,325.77	9,827,732.39	20,844,692.43
X. Supplies in store				43,835,944.24	270,098.86	33,325.54		44,139,368.64
Indirect expense deducted		*2,705,655.73*						*2,705,655.73*
Z. Manufacturing	5,449,692.41	1,056,927.06	15,228,688.48					21,735,307.95
Marine Corps	21,776.99	3,144.66	16,157.55	2,956,115.32	70,761.19	95,183.50	3,535,739.63	6,698,878.84
Other Government departments	362,684.04	94,453.08	148,965.74		348,782.29			954,885.15
Special deposits	83,168.13	17,698.70	84,452.60					185,319.43
Cash sales					57,802.65			57,802.65
Proceeds of sales	35,817.89	774.25	4,826.10					41,418.24
		977,320.71						
Indirect divided	759,035.67		218,285.04					
Total	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15	219,668,435.75

RECONCILEMENT WITH STATEMENT 1 (COST OF THE NAVY).

[For reconcilement with Statement 40 (Appropriation Accounts, by Titles), see Statement 40.]

Total expenditures for Navy per Statement 14			$219,668,435.75
Deductions not chargeable to annual cost:			
Title B—			
Charges to (Statement 14)	$14,007,523.17		
Increase for fiscal year (Statement 25)	6,217,720.93		
Net deduction on account of stores charged to title B but not disposed of		$7,789,802.24	
Title X—			
Charges to (Statement 14)	$44,139,368.64		
Increase for fiscal year (Statements 26 and 33)	7,919,889.20		
Net deduction on account of stores purchased but not issued		36,219,479.44	
Title Z—			
Charges to (Statement 14)	$21,735,307.95		
Increase for fiscal year (Statement 34)	2,009,110.75		
Net deduction on account of material manufactured but not issued		19,726,197.20	
Deduct for net decrease in Marine Corps stores (Statement 35)		547,003.64	
Deduct for expenditures on account of other departments, special deposits, cash sales, and proceeds of sales (Statement 14)		1,239,425.47	
Deduct for checkages against pay accounts (Statement 1)		1,324,987.09	
Total deductions			66,846,895.08
Expenditures chargeable to annual cost, as per Statement 1			152,821,540.67

Statement 14.—EXPENDITURES BY YARDS AND TITLES.

100. Pay office, Portsmouth, N. H.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S				$929.39				$929.39

101. Naval coal depot, Frenchman Bay, Me.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$2,843.96		$220.47	$691.07				$3,755.50
R				16,160.82				16,160.82
Total	2,843.96		220.47	16,851.89				19,916.32

102. Navy yard, Portsmouth, N. H.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
A	$63,804.71	$18,154.49	$53,941.51					$135,900.71
D	229,540.32	56,015.71	108,645.51					394,201.54
K	125,603.65	33,389.85	96,278.75					255,272.25
P	31,247.01	7,090.45	10,160.30					48,497.76
E	27,719.38	5,734.01	19,631.20	$11,181.55				64,266.14
R				945.50				945.50
G	419,284.58		91,930.73	16,576.72			$81,568.52	609,360.55
S	7,842.24	118.52	21,674.95	9,060.94	$746.48		49,926.06	89,369.19
V	18,182.56	939.26	1,686.64					20,808.46
Indirect expense deducted		*121,442.29*						*121,442.29*
Z	260,107.22	45,815.83	444,025.92					749,948.97
Marine Corps	566.66	48.54	424.55					1,039.75
Other Government departments	630.03	167.27	106.09					903.39
Special deposits	565.95	69.73	194.82					830.50
Proceeds of sales	680.28	10.95	26.00					717.23
		46,112.32						
Indirect divided	37,880.45		8,231.87					
Total	1,223,655.04		856,958.84	37,764.71	746.48		131,494.58	2,250,619.65

103. Radio station, Portland, Me

R	$19.12	$4.02	$193.34					$216.48
S	63.88	12.60	399.39	$856.17				1,332.04
Indirect expense deducted		*16.62*						*16.62*
Total	83.00		592.73	856.17				1,531.90

104. Radio station, Portsmouth, N. H.

R			$163.37					$163.37
S	$437.70	$28.37	664.85	$771.06				1,901.98
Indirect expense deducted		*28.37*						*28.37*
Total	437.70		828.22	771.06				2,036.98

105. Naval hospital, Portsmouth, N. H.

R				$3,397.55				$3,397.55
S	$5,018.63		$9,294.53	20,625.02			$10,770.04	45,708.22
Total	5,018.63		9,294.53	24,022.57			10,770.04	49,105.77

110. Pay office, Boston, Mass.

S				$6,418.65			$3,080.87	$9,499.52

111. Navy yard, Boston, Mass.

A	$279,137.60	$93,790.67	$260,972.37					$633,900.64
D	318,087.05	103,107.61	140,810.99					562,005.65
K	90,544.99	30,713.28	74,099.14					195,357.41
P	53,247.32	18,242.81	16,423.82					87,913.95
E	44,695.21	12,956.60	61,501.38	$104,099.00		$825.00		224,077.19
R	1,275.79	257.82	540.81	2,066.56				4,140.98
G	972,723.37		208,192.07	46,637.76			$143,967.71	1,371,520.91
S	4,499.53	210.27	2,366.14	1,479.42			27,606.63	36,161.99
V	74,813.84	3,413.99	5,673.19					83,901.02
Indirect expense deducted		*962,556.44*						*962,556.44*

Statement M.—[illegible]

S.	[illegible]		[illegible]	[illegible]				$15,557.56
b...							$21,881.53	99,196.51
Total	[illegible]			[illegible]			21,881.53	114,754.07

11. Naval magazine, Hingham, Mass.

P	$1,998.56		$109.16					$2,107.72
R	17,213.57		12,934.96	$409.70				30,558.23
S	60,632.39		14,432.17	9,190.99			$6,815.38	91,069.93
V	32,011.90		34,704.93					66,716.73
Z	6,369.55		384,955.16					391,324.71
Other Government departments	.41		.47					.88
Special deposits	15.27		89.87					105.14
Total	117,311.55		446,923.61	9,799.69			6,815.38	580,850.23

114. Radio station, Boston, Mass.

R	$633.68	$238.31	$1,832.88	$1,122.77				$3,827.64
S	2,528.27	631.06	3,077.19	104.10				6,340.62
Overabsorbed		*869.37*						*869.37*
Total	3,161.95		4,910.07	1,226.87				9,298.89

115. Radio station, North Truro, Cape Cod.

R	$57.73	$19.07	$249.20	$22.00				$348.00
S	173.90	46.99	606.39	29.20	$90.85			947.33
Overabsorbed		*66.06*						*66.06*
Total	231.63		855.59	51.20	90.85			1,229.27

116. Radio station, Chelsea, Mass.

R	$5,223.32	$1,480.26	$8,868.77					$15,572.35
S	346.51	58.15	1,786.58	$279.04			$1,144.00	3,614.28
Overabsorbed		*1,538.41*						*1,538.41*
Total	5,569.83		10,655.35	279.04			1,144.00	17,648.22

120. Navy purchasing office, Newport, R. I.

S				$4,956.42	$5.10		$3,107.08	$8,068.60

121. Naval training station, Newport, R. I.

D	$860.56							$860.56
K	91.20							91.20
P	5,383.70							5,383.70
R	1,424.86		$3,637.19	$2,018.47	$6.51			7,087.03
S	32,939.26		55,970.23	12,725.76	252.20		$431,269.06	533,156.51
Total	40,699.58		59,607.42	14,744.23	258.71		431,269.06	546,570.00

Statement 14. EXPENDITURES BY YARDS AND TITLES—Continued.

183. Naval torpedo station, Newport, R. I.

Title	Labor	Incidental	Material	Public works.	Miscellaneous material	Auditor's settlements.	Pay and allowances.	Total.
[illegible]	[illegible]		[illegible]					[illegible]
[illegible]	[illegible]		[illegible]					[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]			[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]		[illegible]					[illegible]
[illegible]	[illegible]		[illegible]					[illegible]
Incidental expenses	[illegible]		[illegible]					[illegible]
Total	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]

184. Naval station, Narragansett Bay, R. I.

Title	Labor	Incidental	Material	Public works.	Miscellaneous material	Auditor's settlements.	Pay and allowances.	Total.
[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]			[illegible]
Incidental expenses	[illegible]		[illegible]					[illegible]
Total	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]

185. Naval War College, Newport, R. I.

Title	Labor	Incidental	Material	Public works.	Miscellaneous material	Auditor's settlements.	Pay and allowances.	Total.
[illegible]	$18,710.00		657.56	[illegible]	[illegible]		[illegible]	[illegible]
Total	18,710.00		657.56	9,217.60	515.86		36,767.85	65,869.96

186. Fuel station, Melville, R. I.

Title	Labor	Incidental	Material	Public works.	Miscellaneous material	Auditor's settlements.	Pay and allowances.	Total.
[illegible]	[illegible]		5,777.54	69,774.07				69,774.07
[illegible]	[illegible]			[illegible]	[illegible]		[illegible]	[illegible]
Total	99,187.00		5,777.54	7,178.96	99.41		659.17	99,778.58

126. Fuel station, New London, Conn.

R				$7,698.18	$58.50	$1,289.32		$9,046.00
S	$4,587.44		$396.91	7,587.79	379.53	84.00	$2,968.21	16,003.88
Total	4,587.44		396.91	15,285.97	438.03	1,373.32	2,968.21	25,049.88

127. Radio station, Newport, R. I.

S	$1,865.50		$1,743.55	$495.99				$4,105.04

128. Radio station, Nantucket Lightship.

S	$15.28		$467.28	$410.53				$893.09

130. Navy purchasing office, New York, N. Y.

R				$57.00				$57.00
S				18,779.70	$165.42		$1,502.00	20,447.12
Total				18,836.70	165.42		1,502.00	20,504.12

131. Navy yard, New York, N. Y.

A	$1,896,481.88	$475,881.94	$1,354,557.76					$3,726,921.58
C			9,038.80					9,038.80
D	476,569.70	109,765.18	167,677.25					754,012.13
K	337,464.99	83,059.26	238,145.32					658,669.57
P	57,308.37	18,277.07	22,376.76					97,962.20
E	47,002.67	9,512.61	44,748.82	$137,421.95	$105.12			238,791.17
R			2,316.93	162.92	139.65	$23.40		2,642.90
G	2,104,228.72		492,955.66	86,766.92	4.00		$207,556.24	2,891,511.54
S	15,808.57	942.89	10,435.25	1,790.55	794.56	5.28	79,463.67	109,240.77
V	95,988.08	10,652.17	32,642.64					139,282.89
Indirect expense deducted		*708,229.00*						*708,229.00*
Z	447,065.56	84,563.68	1,248,068.40					1,779,697.64
Marine Corps	157.59	37.98	100.94					296.51

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

131. Navy yard, New York, N. Y.—Continued.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
Other Government departments	$43,717.08	$11,307.19	$17,686.01					$72,710.28
Special deposits	7,535.99	1,973.19	3,568.45					13,077.63
Proceeds of sales	10,607.31	49.59	2,511.86					13,168.76
		97,793.75						
Indirect divided	73,356.45		24,437.30					
Total	5,613,292.91		3,671,268.15	$226,142.34	$1,043.33	$28.68	$287,019.91	9,798,795.32

132. Clothing factory, New York.

S			$1,368.81					$1,368.81
Z	$262,408.16		1,388.58					263,796.74
Total	262,408.16		2,757.39					265,165.55

133. Provisions and clothing depot, New York.

R				$3,658.70				$3,658.70
S	$51,822.24		$11,121.90	6,341.20				69,285.34
Z	4,108.95							4,108.95
Total	55,931.19		11,121.90	9,999.90				77,053.99

134. Naval magazine, Fort La Fayette, N. Y.

R			$121.92					$121.92
S	$10,344.08		767.03	$38.55			$2,781.66	13,931.32
V	928.24		90.68					1,018.92
Total	11,272.32		979.63	38.55			2,781.66	15,072.16

125. Naval magazine, Iona Island, N. Y.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	197,887.00		279,998.58	100.40		10,418.00	417,918.48

126. Naval magazine, Dover, N. J.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	48,110.76		11,974.36	150.00		[illegible]	[illegible]

127. Naval hospital, New York.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	14,233.08	92,496.31		[illegible]	[illegible]

128. Radio station, navy yard, New York.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	1,216.17	25.00			

129. Radio station, Fire Island.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]		10,479.80	1,034.80			

152. Naval magazine, Fort Mifflin, Pa.

P	$991.78		$117.51					$1,109.29
R			3,843.94	$40,312.13				44,156.07
S	42,253.52		9,037.60	3,364.19			$2,864.89	57,520.20
V	30,527.10		3,756.90					34,284.00
Z	3,541.27		509,376.35					512,917.62
Special deposits	.74		14.52					15.26
Total	77,314.41		526,146.82	43,676.32			2,864.89	650,002.44

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

131. Navy yard, New York, N. Y.—Continued.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
Other Government departments	$43,717.03	$11,307.19	$17,686.01					$72,710.23
Special deposits	7,535.99	1,973.19	3,568.45					13,077.63
Proceeds of sales	10,607.31	49.59	2,511.86					13,168.76
		97,793.75						
Indirect divided	73,356.45		24,437.30					
Total	5,613,292.91		3,671,268.15	$226,142.34	$1,043.33	$28.68	$287,019.91	9,798,795.32

132. Clothing factory, New York.

S			$1,368.81					$1,368.81
Z	$262,408.16		1,388.58					263,796.74
Total	262,408.16		2,757.39					265,165.55

133. Provisions and clothing depot, New York.

R				$3,658.70				$3,658.70
S	$51,822.24		$11,121.90	6,341.20				69,285.34
Z	4,108.95							4,108.95
Total	55,931.19		11,121.90	9,999.90				77,052.99

134. Naval magazine, Fort La Fayette, N. Y.

R			$121.92					$121.92
S	$10,344.06		767.03	$38.55			$2,781.66	13,931.32
V	928.24		90.68					1,018.92
Total	11,272.32		979.63	38.55			2,781.66	15,072.16

135. Naval magazine, Iona Island, N. Y.

R			$1,188.46					$1,188.46
S	$86,914.64		21,877.93	$166.40			$10,418.66	119,377.63
V	32,443.45		18,233.10					50,676.55
Z	7,979.81		237,961.49					245,941.30
Special deposits			34.55					34.55
Total	127,337.90		279,295.53	166.40			10,418.66	417,218.49

136. Naval magazine, Dover, N. J.

R			$690.80					$690.80
S	$43,024.04		11,283.56	$136.00			$2,338.45	56,782.05
V	92.72							92.72
Total	43,116.76		11,974.36	136.00			2,338.45	57,565.57

137. Naval hospital, New York.

R				$18,645.68				$18,645.68
S	$23,868.29		$14,833.08	73,850.63			$69,070.36	181,622.36
Total	23,868.29		14,833.08	92,496.31			69,070.36	200,268.04

138. Radio station, navy yard, New York.

R			$57.69					$57.69
S	$315.95	$71.14	1,158.48	$33.60				1,579.17
Indirect expense deducted		*71.14*						*71.14*
Total	315.95		1,216.17	33.60				1,565.72

139. Radio station, Fire Island.

R	$943.34	$191.02	$6,397.38	$842.45				$8,374.19
S	857.08	195.97	4,082.14	822.05				5,957.24
Indirect expense deducted		*386.99*						*386.99*
Total	1,800.42		10,479.52	1,664.50				13,944.44

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

140. Radio station, San Juan, P. R.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$245.29	$55.67	$11,832.32	$2,707.28				$14,840.56
S	281.11	24.80	1,605.80	2,560.86			$2,445.21	6,917.78
Indirect expense deducted		*80.47*						*80.47*
Total	526.40		13,438.12	5,268.14			2,445.21	21,677.87

141. Radio station, Colon, Canal Zone.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R				$3,124.16				$3,124.16
S	$14.12	$2.82	$1,510.09	2,865.54		$14,607.39		18,999.96
Indirect expense deducted		*2.82*						*2.82*
Total	14.12		1,510.09	5,989.70		14,607.39		22,121.30

142. Radio station, Darien, Canal Zone.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R			$1,170.00	$28.86	$288.74			$1,487.60
S	$8.80	$1.76	3,823.08	6,774.51	208.45	$38,082.61		48,899.21
Indirect expense deducted		*1.76*						*1.76*
Total	8.80		4,993.08	6,803.37	497.19	38,082.61		50,385.05

143. Radio station, Balboa, Canal Zone.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R				$2,408.55	$298.66			$2,707.21
S			$581.67	2,299.96	194.24	$13,004.06	$903.19	16,983.12
Total			581.67	4,708.51	492.70	13,004.06	903.19	19,690.33

144. Medical supply depot, New York.

S	$835.00			$17,578.11			$2,518.48	$20,931.59

150. Navy purchasing office, Philadelphia, Pa.

S				$467.60				$467.60

151. Navy yard, Philadelphia, Pa.

A	$289,423.22	$92,773.50	$363,770.64					$745,967.36
D	422,699.21	122,412.23	177,255.81					722,367.25
K	194,206.99	61,174.02	219,375.17					474,756.18
P	41,061.06	13,738.88	13,899.07					68,699.01
E	37,508.31	8,282.75	30,186.51	$36,676.98				112,654.55
R	247.43	68.10	1,135.39	68.65	$586.67	$152.39		2,258.63
G	943,599.79		210,845.83	11,400.63			$158,896.40	1,324,742.65
S	3,064.54	269.96	3,711.78	231.03	150.70		26,123.16	33,551.17
V	212,147.25	4,569.07	12,627.04					229,343.36
Indirect expense deducted		*303,288.51*						*303,288.51*
Z	265,426.13	35,979.66	686,164.89					987,570.68
Marine Corps	1,761.24	411.33	1,843.27					4,015.84
Other Government departments	10,881.93	3,407.65	2,961.26					17,250.84
Special deposits	2,289.04	737.80	670.67					3,697.51
Proceeds of sales	6,806.72	363.20	665.34					7,835.26
		40,899.64						
Indirect divided	32,719.04		8,180.60					
Total	2,463,841.90		1,733,293.27	48,377.29	737.37	152.39	185,019.56	4,431,421.78

152. Naval magazine, Fort Mifflin, Pa.

P	$991.78		$117.51					$1,109.29
			3,843.94	$40,312.13				44,156.07
	42,253.52		9,037.60	3,364.19			$2,864.89	57,520.20
	30,527.10		3,756.90					34,284.00
	3,541.27		509,376.35					512,917.62
deposits	.74		14.52					15.26
Total	77,314.41		526,146.82	43,676.32			2,864.89	650,002.44

Statement 14. EXPENDITURES BY YARDS AND STATIONS [illegible]

14A. Naval Home, Philadelphia, Pa.

Item	Labor	Subsistence	Materials	Public works	Miscellaneous supplies	Equipment	Pay and allowances	Total
R.	[illegible]		[illegible]	[illegible]	[illegible]		$10,051 03	[illegible]
S.								
Total	[illegible]		[illegible]	[illegible]	[illegible]		10,051 03	[illegible]

14B. Naval hospital, Philadelphia, Pa.

Item	Labor	Subsistence	Materials	Public works	Miscellaneous supplies	Equipment	Pay and allowances	Total
R.	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S.								
Total	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

14C. Radio station, Philadelphia, Pa.

Item	Labor	Subsistence	Materials	Public works	Miscellaneous supplies	Equipment	Pay and allowances	Total
[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]
[illegible] ect expense deducted								[illegible]
Total	[illegible]		[illegible]	[illegible]				[illegible]

14D. Navy purchasing office, Baltimore, Md.

Item	Labor	Subsistence	Materials	Public works	Miscellaneous supplies	Equipment	Pay and allowances	Total
R.				$4,951 00				$4,951 00
S.				2,136 08	$0 93		$4,138 89	6,134 90
Total				2,010 08	0 93		4,138 89	7,084 90

161. Naval Academy, Annapolis, Md.

	$4,547.46		$42,807.79	$24,159.98				$71,515.23
	466,151.53		146,074.75	26,229.78			$1,011,802.30	1,650,258.36
	31,899.95		1,901.28					33,801.23
posits	5,938.01		413.50					6,351.51
al	508,536.95		191,197.32	50,389.76			1,011,802.30	1,761,926.33

162. Radio station, Naval Academy, Annapolis, Md.

S			$41.29	$161.00				$202.29

170. Navy purchasing office, Washington, D. C.

S				$3,376.91				$3,376.91

171 Navy yard, Washington, D. C.

A	$372,202.63	$113,978.70	$291,418.15					$777,599.48
D	15,265.88	6,399.37	4,191.34					25,856.59
K	25,579.40	7,495.54	22,835.78					55,910.72
P	13,363.14	4,966.29	3,393.99					21,723.42
E	56,632.48	15,436.88	72,358.61	$310,727.42				455,155.39
R	5,560.99	1,313.92	5,920.38	12,153.15				24,948.44
G	1,223,117.37		289,627.54	11,022.61			$75,188.88	1,598,956.40
S	7,679.99	313.17	2,267.29	31,427.16			134,001.94	175,689.55
V	615,612.50	127,005.19	303,667.57					1,046,285.26
Indirect expense deducted		*472,658.79*						*472,658.79*
Z	1,828,878.16	576,566.41	3,537,305.27					5,942,750.84
Marine Corps	120.74	10.62	297.08					428.44
Other Government departments	6,940.55	2,485.84	6,422.73					15,849.12
Special deposits	14,424.42	6,347.41	2,417.72					23,189.55
Proceeds of sales	2,794.60		639.89					3,434.49
		389,660.55						
Indirect divided	295,557.60		94,102.95					
Total	4,483,730.45		4,636,867.29	365,330.34			209,190.82	9,695,118.90

							[illegible]
							24 700 38
							591 23
							[illegible]
							3 715 082 50
							[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	$122 41			$8,018.64
		124 72	[illegible]	98.22		$31,008.80	125,539.77
							124.72
[illegible]	2,380 57	67,802.11		220.63		31,008.80	133,683.13

176. Radio station, Arlington, Va.

R	$2,578.48	$687.29	$5,809.24	$17,106.50				$26,181.51
S	1,487.09	124.45	6,671.59	20,704.66			$7,653.64	36,641.43
Indirect expense deducted		*811.74*						*811.74*
Total	4,065.57		12,480.83	37,811.16			7,653.64	62,011.20

177. Radio station, Washington, D. C.

R	$854.03	$206.53	$6,155.19					$7,215.75
S	1,210.89	235.55	1,697.95	$149.43			$889.78	4,183.60
Indirect expense deducted		*448.08*						*448.08*
Total	2,064.92		7,853.14	149.43			889.78	10,957.27

178. Radio station, Indianhead, Md.

S			$35.41					$35.41

180. Navy purchasing office, Norfolk, Va.

R				$38.73				$38.73
S				2,155.44				2,155.44
Total				2,194.17				2,194.17

181. Navy yard, Norfolk, Va.

A	$84,519.98	$24,258.95	$57,905.72					$166,684.65
D	405,966.87	123,580.88	206,446.71					735,994.46
K	165,275.30	51,031.53	85,677.76					301,984.59
P	31,947.32	10,311.15	12,922.85					55,181.32
E	95,770.08	26,102.17	93,925.10	$381,817.46	$252.83			597,867.64
R	1,153.87	*217.21*	*619.89*	73,486.36	653.39			74,456.52
G	1,105,051.12		248,331.67	36,715.04	2,408.31		$128,510.16	1,521,016.30
S	11,345.81	2,529.55	11,739.64	1,999.20	13,075.55	$4.52	23,861.64	64,555.91
V	157,939.67	36,197.36	47,678.43					241,815.46
Indirect expense deducted		*$73,794.38*						*$73,794.38*

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

181. Navy yard, Norfolk, Va.—Continued.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
Z	$490,378.10	$139,749.03	$1,358,854.03					1,988,981.16
Marine Corps	2,299.59	378.05	1,389.17					4,066.81
Other Government departments	27,121.94	8,597.16	12,974.11					48,693.21
Special deposits	14,521.97	6,597.45	4,494.46					25,613.88
Proceeds of sales	7,019.55	258.25	778.26					8,056.06
		155,579.94						
Indirect divided	124,101.10		31,478.84					
Total	2,724,412.27		2,173,976.86	$494,018.06	$16,390.08	$4.52	$152,371.80	$5,561,173.59

182. Naval magazine, St. Juliens Creek, Va.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$6,857.89		$11,919.75	$25,579.86				$44,357.50
S	48,099.11		11,226.86	3,177.06			$9,527.36	72,030.39
V	31,020.19		42,297.44					73,317.63
Z	11,685.82		920,573.41					932,259.23
Other Government departments	53.45							53.45
Special deposits	13.98							13.98
Total	97,730.44		986,017.46	28,756.92			9,527.36	1,122,032.18

183. Naval hospital, Norfolk, Va.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R				$1,083.53				$1,083.53
S	$24,808.21		$14,475.94	64,469.51	$2,041.71		$41,735.18	147,530.55
Total	24,808.21		14,475.94	65,553.04	2,041.71		41,735.18	148,614.08

184. Radio station, Norfolk, Va.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R			$7.51					$7.51
S	$429.71	$107.23	1,202.50	$51.54				1,790.98
Indirect expense deducted		*107.23*						*107.23*
Total	429.71		1,210.01	51.54				1,691.26

185. Radio station, Beaufort, N. C.

R				$501.50				$501.50
S	$49.10	$12.56	$1,251.99	1,762.18				3,075.83
Indirect expense deducted		*12.56*						*12.56*
Total	49.10		1,251.99	2,263.68				3,564.77

186. Radio station, Diamond Shoals, N. C.

S	$283.20	$71.64	$291.63	$97.33		$138.21		$882.01
Indirect expense deducted		*71.64*						*71.64*
Total	283.20		291.63	97.33		138.21		810.37

191. Navy yard, Charleston, S. C.

A	$28,518.75	$7,631.45	$36,477.96					$72,628.16
D	184,566.57	47,845.41	65,402.30					297,814.28
K	63,276.36	17,826.74	58,324.43					139,427.53
P	5,940.65	1,468.23	2,189.89					9,598.77
E	56,935.93	11,947.51	85,320.14	$166,567.57				320,771.15
R	*4,143.81*	*971.76*	*3,903.66*	4,164.14				*4,855.08*
G	368,214.71		83,095.32	1,344.76			$60,233.21	512,888.00
S	6,537.13	98.38	10,403.78	7,833.56	$1,002.62		32,843.15	58,718.62
V	774.45	169.77	733.41					1,677.63
Indirect expense deducted		*85,995.47*						*85,995.47*
Z	145,312.64	13,240.01	235,169.79					393,722.44
Marine Corps	101.56	23.25	81.83					206.64
Other Government departments	4,679.11	1,229.55	3,382.17					9,290.83
Special deposits	1,994.26	436.45	1,258.63					3,689.34
Proceeds of sales	825.85	50.56	121.67					998.08
		15,000.09						
Indirect divided	12,284.77		2,715.32					
Total	875,818.93		580,772.98	179,910.03	1,002.62		93,076.36	1,730,580.92

192. Naval hospital, Port Royal, S. C.

R			$9,515.18	$37,497.44				$47,012.62
S	$1,563.42		18,109.03	7,742.75	$1,443.72	$2,645.81	$19,786.96	51,291.69
Total	1,563.42		27,624.21	45,240.19	1,443.72	2,645.81	19,786.96	98,304.31

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

193. Radio station, Charleston, S. C.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$606.33	$156.49	$1,430.95					$2,193.77
S	3,391.62	351.61	14,179.70					17,922.93
Indirect expense deducted		*508.10*						*508.10*
Total	3,997.95		15,610.65					19,608.60

194. Radio station, St. Augustine, Fla.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$137.58	$35.15	$1,172.98	$2,207.75				$3,553.46
Indirect expense deducted		*35.15*						*35.15*
Total	137.58		1,172.98	2,207.75				3,518.31

195. Radio station, Frying Pan Shoals, N. C.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$61.33	$15.24	$267.30	$361.47		$12.20		$717.54
Indirect expense deducted		*15.24*						*15.24*
Total	61.33		267.30	361.47		12.20		702.30

196. Radio station, Pensacola, Fla.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$8.00							$8.00
S	525.81		$1,031.04					1,556.85
Total	533.81		1,031.04					1,564.85

197. Radio station, Port Royal, S. C.

R			$46.20					$46.20
S	$58.28	$14.61	71.39					144.28
Indirect expense deducted		*14.61*						*14.61*
Total	58.28		117.59					175.87

201. Naval station, Key West, Fla.

D	$2,971.46		$877.21					$3,848.67
K	261.17		98.04					359.21
P	270.38		53.31					323.69
R	12.32		2,366.32	$11,984.80				14,363.44
S	95,672.31		41,714.10	1,607.40	$89.76		$42,508.93	181,592.50
V			12.94					12.94
Z	3,177.99		15,729.43					18,907.42
Marine Corps	47.56		19.63					67.19
Other Government departments	2,227.27		1,119.85					3,347.12
Special deposits	193.89		92.33					286.22
Total	14,834.35		62,083.16	13,592.20	89.76		42,508.93	223,108.40

202. Radio station, Key West, Fla.

R			$325.27	$1,755.02				$2,080.29
S	$2,036.78		2,507.81		$60.75			4,605.34
Total	2,036.78		2,833.08	1,755.02	60.75			6,685.63

203. Radio station, Jupiter Inlet, Fla.

R			$493.95		$149.35			$643.30
S	$7.18		683.58	$1,809.78				2,500.54
Total	7.18		1,177.53	1,809.78	149.35			3,143.84

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

204. Naval aeronautic station, Pensacola, Fla.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor settlements	Pay and allowances.	Total.
A	$164.82		$47,062.11					$47,226.93
B	1.85		1,866.53					1,868.38
C	7.52		5,867.05					5,874.57
D	1,836.53		21,316.67					23,153.20
K	3,337.01		29,284.67					32,621.68
P	124.43		3.25					127.68
R	16,624.99		37,638.80	$129,486.87	$110,450.94			294,201.60
S	74,146.81		59,023.88	14,569.41			$191,400.10	339,140.20
V	8,570.01		5,017.23					13,587.24
Z	4,225.88		2,911.84					7,137.72
Special deposits	103.26		102.21					205.47
Proceeds of sales	117.80							117.80
Total	109,260.91		210,094.24	144,056.28	110,450.94		191,400.10	765,262.47

205. Naval station, New Orleans, La.

D	$66,085.68		$21,715.89					$87,801.57
K	9,553.55		2,886.74					12,440.29
P	4,799.94		837.51					5,637.45
R	3,927.33		6,327.02	$2,256.25		$76.96		12,587.56
S	127,401.92		47,081.34	20,713.43	$456.10		$69,348.79	265,001.58
V	1,487.54		341.93					1,829.47
Z	1,073.31		1,054.18					2,127.49
Marine Corps	740.51		557.58					1,298.09
Other Government departments	31,799.11		12,962.05					44,761.16
Special deposits	10,066.53		3,893.18					13,959.71
Total	256,935.42		97,657.42	22,969.68	456.10	76.96	69,348.79	447,444.37

206. Radio station, New Orleans, La.

R	$2,316.86		$3,298.50	$6,807.50	$989.53			$13,412.39
S	761.12		3,599.74	427.28				4,788.14
Total	3,077.98		6,898.24	7,234.78	989.53			18,200.53

207. Radio station, Point Isabel, Brownsville, Tex.

R	$30.61		$11.18	$23,690.42	$19,822.19			$43,554.40
S			313.07	48.00	530.25	$244.89		1,136.21
Total	30.61		324.25	23,738.42	20,352.44	244.89		44,690.61

208. Radio station, Heald Bank Lightship.

R	$340.85		$2,559.43					$2,900.28
S	61.85		24.18	$187.33				273.36
Total	402.70		2,583.61	187.33				3,173.64

210. Naval training station, Great Lakes, Ill.

R			$3.00	$3,091.57				$3,094.57
S	$60,155.40		62,617.50	23,955.75	$488.56		$271,421.80	418,639.01
V	1,688.72							1,688.72
Total	61,844.12		62,620.50	27,047.32	488.56		271,421.80	423,422.30

211. Radio station, training station, Great Lakes, Ill.

R			$5,042.79	$7,138.78				$12,181.57
S	$563.55	$1.31	1,777.62	33.26	$65.25			2,440.99
Indirect expense deducted		*1.31*						*1.31*
Total	563.55		6,820.41	7,172.04	65.25			14,621.25

212. Naval hospital, Las Animas, Colo.

R				$2,256.02	$336.72			$2,592.74
S	$36,600.03		$5,544.38	106,872.35	1,679.28		$146,839.18	297,535.22
Total	36,600.03		5,544.38	109,128.37	2,016.00		146,839.18	300,127.96

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

220. Navy purchasing office, San Francisco, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S				$11,821.37	$6.01		$929.36	$12,756.74

221. Navy yard, Mare Island, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
A	$450,823.94	$105,789.84	$463,463.33					$1,020,077.11
C	2.32	.82	6,109.22					6,112.36
D	377,294.84	89,089.52	184,598.77					650,983.13
K	129,262.17	29,853.99	106,679.94					265,796.10
P	34,435.91	9,714.45	18,047.96					62,198.32
E	85,945.58	17,939.57	66,995.39	$53,452.79				224,383.33
R	1,773.96	257.00	3,114.17	57,343.13				62,488.26
G	1,040,970.62		182,379.70	14,035.12			$135,281.94	1,372,667.38
S	7,209.88	908.58	12,185.77	2,693.52	$24.74	$507.96	113,724.11	137,254.56
V	13,231.66	2,200.67	3,565.12					18,997.45
Indirect expense deducted		*255,764.51*						*255,764.51*
Z	216,514.06	40,959.69	608,881.84					866,355.59
Marine Corps	3,190.67	156.11	1,834.72					5,181.50
Other Government departments	28,721.37	7,058.06	12,180.44					47,959.87
Special deposits	2,085.23	334.81	2,051.00					4,471.04
Proceeds of sales	983.38	10.01						993.39
		48,508.61						
Indirect divided	41,689.49		6,819.12					
Total	2,434,135.08		1,678,906.49	127,524.56	24.74	507.96	249,006.05	4,490,104.88

222. Naval magazine, Mare Island, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$1,501.87		$2,841.40					$4,343.27
S	63,983.64		15,100.03	$133.00				79,216.67
V	18,547.04		3,147.49					21,694.53
Z	384.22		1,958.60					2,342.82
Total	84,416.77		23,047.52	133.00				107,597.29

223. Naval training station, San Francisco, Cal.

R			$7,866.02	$14,569.44	$9.50			$22,444.96
S	$48,900.36		48,462.92	10,404.61	.64		$206,448.63	314,217.16
Total	48,900.36		56,328.94	24,974.05	10.14		206,448.63	336,662.12

224. Fuel station, Tiburon, Cal.

R			$1,443.49	$360.85	$87.44			$1,891.78
S	$44,448.85		8,101.61	7,014.18	89.99		$2,225.74	61,880.37
Total	44,448.85		9,545.10	7,375.03	177.43		2,225.74	63,772.15

225. Fuel station, San Diego, Cal.

R			$208.67	$8,697.94	$619.36			$9,525.97
S	$8,623.95		666.51	7,639.32	528.40		$1,459.00	18,917.18
Total	8,623.95		875.18	16,337.26	1,147.76		1,459.00	28,443.15

226. Naval hospital, Mare Island, Cal.

R				$6,615.85	$2,402.70			$9,018.55
S	$17,301.49		$17,180.37	59,286.76	1,109.17		$65,958.15	160,835.94
Total	17,301.49		17,180.37	65,902.61	3,511.87		65,958.15	169,854.49

227. Radio station, San Diego, Cal. (Point Loma).

S	$4,840.76	$402.32	$6,626.81	$4,973.76				$16,843.65
Indirect expense deducted		*402.32*						*402.32*
Total	4,840.76		6,626.81	4,973.76				16,441.33

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

237. Radio station, Kodiak, Alaska.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$3,637.27	$407.24	$8,261.37	$3,867.00				$16,172.88
Indirect expense deducted		*407.24*						*407.24*
Total	3,637.27		8,261.37	3,867.00				15,765.64

238 Radio station, Pribilof.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$7,921.75	$276.64	$11,702.49	$3,319.00				$23,219.88
Indirect expense deducted		*276.64*						*276.64*
Total	7,921.75		11,702.49	3,319.00				22,943.24

239. Radio station, Dutch Harbor, Alaska.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$3,938.50	$320.23	$4,546.65	$2,779.00				$11,584.38
Indirect expense deducted		*320.23*						*320.23*
Total	3,938.50		4,546.65	2,779.00				11,264.15

240. Radio station, Unalga.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$1,059.62	$148.30	*$636.33*	$339.00				$910.59
Indirect expense deducted		*148.30*						*148.30*
Total	1,059.62		*636.33*	339.00				762.29

241. Radio station, Marshfield, Oreg.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$54.78	$0.34		$348.00				$403.12
Indirect expense deducted		*.34*						*.34*
Total	54.78			348.00				402.78

242. Radio stations, St. Paul and St. George, Alaska.

S				$241.75				$241.75

250. Navy purchasing office, Seattle, Wash.

S			$57.28	$7,689.91	$2.20		$7,717.28	$15,466.67

251. Navy yard, Puget Sound, Wash.

A	$1,489.66	$555.71	$1,155.88					$3,201.25
C	437.21	173.16	5,085.32					5,695.69
D	290,305.35	103,484.95	137,115.37					530,905.67
K	60,773.39	22,798.81	52,102.84					135,675.04
P	38,877.96	16,050.77	19,287.63					74,216.36
E	53,277.59	15,979.31	70,684.89	$89,888.07				229,829.86
R	1,377.02	405.14	1,750.30					3,532.46
G	659,090.78		139,056.83	2,235.67			$109,504.17	909,887.45
S	2,276.03	365.04	2,955.90	443.68	$68.81		16,368.53	22,477.99
V	13,474.59	1,775.72	1,990.91					17,241.22
Indirect expense deducted		*161,524.85*						*161,524.85*
Z	117,227.30	23,284.35	355,995.17					496,506.82
Marine Corps	166.80	60.10	237.87					464.77
Other Government departments	24,926.96	8,603.92	15,252.46					48,783.34
Special deposits	893.54	275.97	242.06					1,411.57
Proceeds of sales	887.40	.95	12.94					901.29
		32,289.05						
Indirect divided	26,325.86		5,963.19					
Total	1,291,807.44		808,889.56	92,567.42	68.81		125,872.70	2,319,205.93

252. Naval magazine, Puget Sound, Wash.

P	$203.55							$203.55
R	8,962.93		$14,809.44	$14,991.39				38,763.76
S	27,560.68		14,039.53	73.34			$4,325.28	45,998.83
V	19,410.41		198.87					19,609.28
Z	1,579.56		4,145.12					5,724.68
Special deposits	44.70							44.70
Total	57,761.83		33,192.96	15,064.73			4,325.28	110,344.80

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

220. Navy purchasing office, San Francisco, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S				$11,821.37	$6.01		$929.36	$12,756.74

221. Navy yard, Mare Island, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
A	$450,823.94	$105,789.84	$463,463.33					$1,020,077.11
C	2.32	.82	6,109.22					6,112.36
D	377,294 84	89,089.52	184,598.77					650,983.13
K	129,262.17	29,853.99	106,679.94					265,796.10
P	34,435 91	9,714.45	18,047.96					62,198.32
E	85,945.58	17,939.57	66,995.39	$53,452.79				224,383.33
R	1,773.96	257.00	3,114.17	57,343.13				62,488.26
G	1,040,970.62		182,379.70	14,036.12			$135,281.94	1,372,667.38
S	7,209.88	908.58	12,185.77	2,693.52	$24.74	$507.96	113,724.11	137,254.56
V	13,231.66	2,200.67	3,565.12					18,997.45
Indirect expense deducted		*255,764.51*						*255,764.51*
Z	216,514.06	40,959.69	608,881.84					866,355.59
Marine Corps	3,190.67	156.11	1,834.72					5,181.50
Other Government departments	28,721.37	7,058.06	12,180.44					47,959.87
Special deposits	2,085.23	334.81	2,051.00					4,471.04
Proceeds of sales	963.38	10.01						993.39
		48,508.61						
Indirect divided	41,689.49		6,819.12					
Total	2,434,135.08		1,678,906.49	127,524.56	24.74	507.96	249,006.05	4,490,104.88

222. Naval magazine, Mare Island, Cal.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$1,501.87		$2,841.40					$4,343.27
S	63,983.64		15,100.03	$133.00				79,216.67
V	18,547.04		3,147.49					21,694.53
Z	384.22		1,958.60					2,342.82
Total	84,416.77		23,047.52	133.00				107,597.29

223. Naval training station, San Francisco, Cal.

R			$7,866.02	$14,569.44	$9.50			$22,444.96
S	$48,900.36		48,462.92	10,404.61	.64		$206,448.63	314,217.16
Total	48,900.36		56,328.94	24,974.05	10.14		206,448.63	336,662.12

224. Fuel station, Tiburon, Cal.

R			$1,443.49	$360.85	$87.44			$1,891.78
S	$44,448.85		8,101.61	7,014.18	89.99		$2,225.74	61,880.37
Total	44,448.85		9,545.10	7,375.03	177.43		2,225.74	63,772.15

225. Fuel station, San Diego, Cal.

R			$208.67	$8,697.94	$619.36			$9,525.97
S	$8,623.95		666.51	7,639.32	528.40		$1,459.00	18,917.18
Total	8,623.95		875.18	16,337.26	1,147.76		1,459.00	28,443.15

226. Naval hospital, Mare Island, Cal.

R				$6,615.85	$2,402.70			$9,018.55
S	$17,301.49		$17,180.37	59,286.76	1,109.17		$65,958.15	160,835.94
Total	17,301.49		17,180.37	65,902.61	3,511.87		65,958.15	169,854.49

227. Radio station, San Diego, Cal. (Point Loma).

S	$4,840.76	$402.32	$6,626.81	$4,973.76				$16,843.65
Indirect expense deducted		*402.32*						*402.32*
Total	4,840.76		6,626.81	4,973.76				16,441.33

EXPENDITURES BY YARDS AND TITLES—Continued.

21) Radio station, Yerba Buena.						
	$1,002.96	$0.52	$6,421.04	$880 (n)		
		.88		8,083 (n)		
	1,002.96		6,421.04	4,000 (n)		

232. Radio station, Mare Island.

.....	$85.22	$24.37	$75.76	$73.05	.....	.....	.....	$258.40
.....	7,900.36	1,409.59	8,081.87	3,838.00	.....	.....	.....	21,229.82
leducted.....	.....	*1,433.96*	.....	.....	.....	.....	.....	*1,433.96*
.....	7,985.58	.....	8,157.63	3,911.05	.....	.....	.....	20,054.26

233. Radio station, Eureka.

S.....	$1,928.15	$252.79	$3,655.77	$1,819.00	.....	.....	.....	$7,655.71
Indirect expense deducted.....	.....	*252.79*	.....	.....	.....	.....	.....	*252.79*
Total.....	1,928.15	.....	3,655.77	1,819.00	.....	.....	.....	7,402.92

234. Radio station, Cape Blanco.

S.....	$1,771.97	$199.69	$2,360.71	$1,735.25	.....	.....	.....	$6,067.62
Indirect expense deducted.....	.....	*199.69*	.....	.....	.....	.....	.....	*199.69*
Total.....	1,771.97	.....	2,360.71	1,735.25	.....	.....	.....	5,867.93

235. Radio station, Sitka, Alaska.

S.....	$5,526.27	$441.01	$5,972.50	$4,390.00	$500.54	.....	.....	[illegible]
Indirect expense deducted.....	.....	*441.01*	.....	.....	.....	.....	.....	[illegible]
Total.....	5,526.27	.....	5,972.50	4,390.00	500.54	.....	.....	[illegible]

236. Radio station, Cordova, Alaska.

S.....	$7,092.11	$661.84	$14,154.89	$5,941.50	.....	.....	.....	[illegible]55
Indirect expense deducted.....	.....	*661.84*	.....	.....	.....	.....	.....	[illegible]5.76
Total.....	7,092.11	.....	14,154.89	5,941.50	.....	.....	.....	[illegible]98.83
								19,609.28
								5,724.68
								44.70
							[illegible].28	110,344.80

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

237. Radio station, Kodiak, Alaska.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$3,637.27	$407.24	$8,261.37	$3,867.00				$16,172.88
Indirect expense deducted		*407.24*						*407.24*
Total	3,637.27		8,261.37	3,867.00				15,765.64

238 Radio station, Pribilof.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$7,921.75	$276.64	$11,702.49	$3,319.00				$23,219.88
Indirect expense deducted		*276.64*						*276.64*
Total	7,921.75		11,702.49	3,319.00				22,943.24

239. Radio station, Dutch Harbor, Alaska.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$3,938.50	$320.23	$4,546.65	$2,779.00				$11,584.38
Indirect expense deducted		*320.23*						*320.23*
Total	3,938.50		4,546.65	2,779.00				11,264.15

240. Radio station, Unalga.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$1,059.62	$148.30	*$636.33*	$339.00				$910.59
Indirect expense deducted		*148.30*						*148.30*
Total	1,059.62		*636.33*	339.00				762.29

241. Radio station, Marshfield, Oreg.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S	$54.78	$0.34		$348.00				$403.12
Indirect expense deducted		*.34*						*.34*
Total	54.78			348.00				402.78

242. Radio stations, St. Paul and St. George, Alaska.

S				$241.75				$241.75

250. Navy purchasing office, Seattle, Wash.

S			$57.28	$7,689.91	$2.20		$7,717.28	$15,466.67

251. Navy yard, Puget Sound, Wash.

A	$1,489.66	$555.71	$1,155.88					$3,201.25
C	437.21	173.16	5,085.32					5,695.69
D	290,305.35	103,484.95	137,115.37					530,905.67
K	60,773.39	22,798.81	52,102.84					135,675.04
P	38,877.96	16,050.77	19,287.63					74,216.36
E	53,277.59	15,979.31	70,684.89	$89,888.07				229,829.86
R	1,377.02	405.14	1,750.30					3,532.46
G	659,090.78		139,056.83	2,235.67			$109,504.17	909,887.45
S	2,276.03	365.04	2,955.90	443.68	$68.81		16,368.53	22,477.99
V	13,474.59	1,775.72	1,990.91					17,241.22
Indirect expense deducted		*161,524.85*						*161,524.85*
Z	117,227.30	23,284.35	355,995.17					496,506.82
Marine Corps	166.80	60.10	237.87					464.77
Other Government departments	24,926.96	8,603.92	15,252.46					48,783.34
Special deposits	893.54	275.97	242.06					1,411.57
Proceeds of sales	887.40	.95	12.94					901.29
		32,289.05						
Indirect divided	26,325.86		5,963.19					
Total	1,291,807.44		808,889.56	92,567.42	68.81		125,872.70	2,319,205.93

252. Naval magazine, Puget Sound, Wash.

P	$203.55							$203.55
R	8,962.93		$14,809.44	$14,991.39				38,763.76
S	27,560.68		14,039.53	73.34			$4,325.28	45,998.83
V	19,410.41		198.87					19,609.28
Z	1,579.56		4,145.12					5,724.68
Special deposits	44.70							44.70
Total	57,761.83		33,192.96	15,064.73			4,325.28	110,344.80

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

253. Pacific coast torpedo station, Keyport, Wash.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$6,546.43		$47,219.17	$34,769.73				$88,535.33
S	20,465.79		6,859.18	44.30			$4,533.83	31,903.10
Total	27,012.22		54,078.35	34,814.03			4,533.83	120,438.43

254. Naval hospital, Puget Sound, Wash.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R			$468.17	$9,126.24				$9,594.41
S	$10,021.32		8,490.61	18,901.90	$604.77		$36,980.43	74,999.03
V			8.66					8.66
Total	10,021.32		8,967.44	28,028.14	604.77		36,980.43	84,602.10

255. Radio station, North Head, Wash.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R			$335.50					$335.50
S	$250.16	$109.11	3,990.03	$2,654.60				7,003.90
Indirect expense deducted		*109.11*						*109.11*
Total	250.16		4,325.53	2,654.60				7,230.29

256. Radio station, Puget Sound, Wash.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	*$2.56*	*$0.84*	$257.47					$264.07
S	381.37	133.40	1,104.48	$696.60				2,315.85
Indirect expense deducted		*133.56*						*133.56*
Total	378.81		1,361.95	696.60				2,437.36

257. Radio station, Tatoosh, Wash.

R	$261.71	$76.67	$709.99					$1,048.37
S	484.78	166.25	2,616.40	$1,183.00				4,450.43
Indirect expense deducted		*242.92*						*242.92*
Total	746.49		3,326.39	1,183.00				5,255.88

258. Radio station, Keyport, Wash.

R	$270.41	$39.14	$1,958.62					$2,268.17
Indirect expense deducted		*39.14*						*39.14*
Total	270.41		1,958.62					2,229.03

297. Radio laboratory, Mare Island, Cal.

R			$204.00					$204.00

299. Radio-Alaska Expedition.

S	$4,091.31	$649.83	$9,129.92	$10,625.63				$24,496.69
Indirect expense deducted		*649.83*						*649.83*
Total	4,091.31		9,129.92	10,625.63				23,846.86

301. Naval station, Guantanamo, Cuba.

D	$814.54		$422.14					$1,236.68
P	169.58		165.75					335.33
R	25,741.54		39,048.05	$2,855.49				67,645.08
S	132,129.72		61,632.43	873.80	$26.31	$117.23	$65,335.14	260,114.63
V	4,192.88		2,668.18					6,861.06
Z	12,411.55		19,984.95					32,396.50
Marine Corps	1,349.33		1,284.96					2,634.29
Other Government departments	260.58		61.76					322.34
Special deposits	137.85		90.62					228.47
Proceeds of sales	9.04							9.04
Total	177,216.61		125,358.84	3,729.29	26.31	117.23	65,335.14	371,783.42

Statement 14.—EXPENDITURES BY YARDS AND TITLES—Continued.

302. Radio station, Guantanamo, Cuba.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$435.70		$1,061.52					$1,497.22
S	574.82		4,253.25					4,828.07
Total	1,010.52		5,314.77					6,325.29

311. Naval station, Pearl Harbor, Hawaii.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
D	$4,911.07		$7,036.62					$11,947.69
K	1,241.41		494.46					1,735.87
P	1,241.67		644.91					1,886.58
R	128,850.74		158,321.17	$854,367.09				1,141,539.00
S	149,879.75		27,383.16	17,460.84	*$16.86*		$35,124.30	229,831.19
V			1,118.54					1,118.54
Z	14,476.32		30,686.13					45,162.45
Marine Corps	1,727.51		2,943.97					4,671.48
Other Government departments	1,477.70		828.57					2,306.27
Special deposits	2,346.40		19,536.03					21,882.43
Total	306,152.57		248,993.56	871,827.93	*16.86*		35,124.30	1,462,081.50

312. Radio station, Pearl Harbor, Hawaii.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
R	$871.66		$618.91	$91,219.58				$92,710.15
S	14.85		215.87					230.72
Total	886.51		834.78	91,219.58				92,940.87

320. Navy purchasing office, Manila, P. I.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
S				$5,868.25			$3,702.64	$9,570.89

321. Naval station, Cavite, P. I.

A			$7,658.79					$7,658.79
C			237.15					237.15
D	$25,316.91	$5,988.09	20,480.24					51,785.24
K	692.58	197.95	481.76					1,372.29
P	5,751.30	1,161.89	3,081.82					9,995.01
E	950.93	220.03	6,412.18	$490.70				8,073.84
R	120.07	20.47	284.11	3,922.00				4,346.65
G	185,905.37		92,179.74	3,169.00			$26,267.40	307,521.51
S	3,043.04	207.91	12,193.65	906.09	$76.74		118,975.64	135,403.07
V	1,572.17	241.54	1,998.63					3,812.34
Indirect expense deducted		*8,037.88*						*8,037.88*
Z	43,272.45	6,751.15	149,066.09					199,089.69
Marine Corps	20.16	2.23	416.83					439.22
Other Government departments	4,159.98	956.34	1,379.80					6,496.12
Special deposits	634.55	53.42	1,010.53					1,698.50
Proceeds of sales	530.81	4.84	18.88					554.53
		7,767.98						
Indirect divided	4,630.42		3,137.56					
Total	276,600.74		300,037.76	8,487.79	76.74		145,243.04	730,446.07

322. Naval station, Olongapo, P. I.

D	$104,692.14	$30,143.90	$54,217.78					$189,053.82
K	5,998.73	1,804.71	4,118.15					11,921.59
P	4,187.00	1,268.41	1,677.45					7,132.86
E	9,445.56	3,359.47	17,556.00	$3,623.92				33,984.95
R	466.95	217.01	769.96					1,453.92
G	282,773.58		103,107.68	83.77			$38,325.48	424,290.51
S	3,623.19	597.17	2,176.49	169.80	$794.73		104,194.22	111,555.60
V	9,051.98	2,147.18	7,719.77					18,918.93
Indirect expense deducted		*39,537.85*						*39,537.85*
Z	36,712.03	3,954.84	64,630.44					105,297.31
Marine Corps	69.84	24.68	186.14					280.66
Other Government departments	162,244.24	47,065.36	57,360.95					266,670.55
Special deposits	770.04	234.14	1,026.68					2,030.86
Proceeds of sales	139.65	5.98	.34					145.97
		51,285.00						
Indirect divided	36,439.06		14,845.94					
Total	656,613.99		329,393.77	3,877.49	794.73		142,519.70	1,133,199.68

327. Radio station, Olongapo, P. I.

R			$62.50					$62.50
S	$397.62	$101.31	658.94					1,157.87
Indirect expense deducted		*101.31*						*101.31*
Total	397.62		721.44					1,119.06

328. Radio station, Peking, China.

R					$57.04			$57.04

331. Naval hospital, Yokohama, Japan.

S				$6,580.68	$699.96		$3,304.04	$10,584.68

341. Naval station, Tutuila, Samoa.

D	$104.57							$104.57
R			$24.87	$1,634.50				1,659.37
S	25,007.89		30,148.73	2,564.04	$77.08		$85,888.80	143,686.54
Z	1,457.11							1,457.11
Other Government departments	930.44		123.11					1,053.55
Total	27,500.01		30,296.71	4,198.54	77.08		85,888.80	147,961.14

342. Radio station, Tutuila, Samoa.

R				$50.30				$50.30
S	$861.57		$1,269.77	1,120.00				3,251.34
Total	861.57		1,269.77	1,170.30				3,301.64

Statement 14.—EXPENDITURES BY YARDS AND TITLES—*Continued.*

351. Naval station, Guam, Marianas Islands.

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Total.
D	$85.44		$13.01					$98.45
K	3.18							3.18
R	7,609.18		18,738.20	$315.15	$340.20			27,002.73
S	80,610.91		31,342.47	8,528.87	5,282.29		$140,261.02	266,025.56
V	2,416.75							2,416.75
Z	16,646.61		9,622.04					26,268.65
Marine Corps	1,701.45							1,701.45
Other Government departments	1.00							1.00
Special deposits	12,521.18		18,333.69					30,854.87
Total	121,595.70		78,049.41	8,844.02	5,622.49		140,261.02	354,372.64

352. Radio station, Guam, Marianas Islands.

R	$7,829.44		$611.13					$8,440.57
S	976.26		2,973.49	$152.00			$155.58	4,257.33
Total	8,805.70		3,584.62	152.00			155.58	12,697.90

361. Fuel station, Pichilinque Bay, Mexico.

R	$2.16	$0.58	$159.74		$373.57			$536.05
S	207.06	63.53	265.10	$3,824.14	24.78			4,384.61
Indirect expense deducted		*64.11*						*64.11*
Total	209.22		424.84	3,824.14	398.35			4,856.55

Ships and naval establishment in general.

A				$21,273,477.00	$65,548.90	$539.51		$21,339,565.41
B				25,477.58	13,972,318.05	7,859.16		14,005,654.79
C				1,075,058.10	16,280,562.65	25,175.88	$30,566,165.62	47,946,962.25
D				122,217.09	21,672.60	6,025.56		149,915.25

K				31,154.84	186,532.16			217,687.00
P				32,616.44	173.09	225.30		32,014.83
V				2,673,204.29	4,894,082.47	847,325.77	9,827,732.39	18,242,344.92
X				43,835,944.24	270,098.86	33,325.54		44,139,368.64
Marine Corps				2,956,115.32	70,761.19	95,183.50	3,535,732.39	6,657,799.64
Other Government departments					348,782.29			348,782.29
Cash sales					57,802.65			57,802.65
Total				72,028,264.90	36,168,334.91	1,015,660.22	43,929,637.64	153,141,897.67

Statement 14.—EXPENDITURES BY YARDS AND TITLES.

RECAPITULATION.

[Showing gross expenditures of money and issues of material for naval establishment.]

Title.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.	Tota .
A. Construction of new vessels	$3,466,567.19	$932,815.25	$2,938,384.22	$21,273,477.00	$65,548.90	$539.51		$28,677,332.07
B. Equipage of vessels	1.85		1,866.53	25,477.58	13,972,318.05	7,859.16		14,007,523.17
C. Operating expenses of vessels	447.05	173.98	26,337.54	1,078,058.10	16,280,562.65	25,175.88	$30,566,165.62	47,976,920.82
D. Repairs to vessels	2,927,994.15	797,832.85	1,319,969.83	122,217.09	21,672.60	6,025.56		5,195,712.08
K. Alterations to vessels	1,213,166.07	339,345.68	990,882.95	31,154.84	186,532.16			2,761,081.70
P. Repairs to equipage of vessels	337,597.78	102,290.40	126,807.90	32,616.44	173.09	225.30		599,710.91
E. Plant additions (industrial)	515,883.72	127,470.91	569,320.22	1,295,947.41	357.95	825.00		2,509,805.21
R. Plant additions (military)	415,074.84	5,411.22	728,832.84	2,316,785.65	140,264.49	1,748.07		3,608,117.11
G. Yard maintenance (industrial)	9,304,960.01		2,141,702.77	229,988.00	2,412.31		1,165,300.11	12,844,363.20
S. Yard maintenance (military)	2,698,040.68	15,326.48	1,299,544.33	1,112,004.02	38,266.76	69,664.21	4,303,005.40	9,535,851.88
V. General administration	1,551,455.16	189,311.92	861,580.43	2,673,204.29	4,894,082.47	847,325.77	9,827,732.39	20,844,692.43
X. Supplies in store				43,835,944.24	270,098.86	33,325.54		44,139,368.64
Indirect expense deducted		*2,705,655.73*						*2,705,655.73*
Z. Manufacturing	5,449,692.41	1,056,927.06	15,228,688.48					21,735,307.95
Marine Corps	21,776.99	3,144.66	16,157.55	2,956,115.32	70,761.19	95,183.50	3,535,739.63	6,698,878.84
Other Government departments	362,684.04	94,453.08	148,965.74		348,782.29			954,885.15
Special deposits	83,168.13	17,698.70	84,452.60					185,319.43
Cash sales					57,802.65			57,802.65
Proceeds of sales	35,817.89	774.25	4,826.10					41,418.24
		977,320.71						
Indirect divided	759,035.67		218,285.04					
Total	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15	219,668,435.75

RECONCILEMENT WITH STATEMENT 1. (COST OF THE NAVY.)

[For reconcilement with Statement 40, see Statement 40.]

(Appropriation accounts, by titles.)

Total expenditures for Navy per Statement 14			$219,668,435.75
Deductions not chargeable to annual cost:			
Title B—			
Charges to (Statement 14)	$14,007,523.17		
Increase for fiscal year (Statement 25)	6,217,720.93		
Net deduction on account of stores charged to title B but not disposed of		$7,789,802.24	
Title X—			
Charges to (Statement 14)	$44,139,368.64		
Increase for fiscal year (Statements 26 and 33)	7,919,889.20		
Net deduction on account of stores purchased but not issued		36,219,479.44	
Title Z—			
Charges to (Statement 14)	$21,735,307.95		
Increase for fiscal year (Statement 34)	2,009,110.75		
Net deduction on account of material manufactured but not issued		19,726,197.20	
Deduct for net decrease in Marine Corps stores (Statement 35)		547,003.64	
Deduct for expenditures on account of other departments, special deposits, cash sales, and proceeds of sales (Statement 14)		1,239,425.47	
Deduct for checkages against pay accounts (Statement 1)		1,324,987.09	
Total deductions			66,846,895.08
Expenditures chargeable to annual cost, as per Statement 1			152,821,540.67

Statement 15.—TOTAL PROPERTY INVESTMENT OF THE NAVY.

Ships (see Statement 16)	$482,375,799.42
Stations (see Statement 17)	212,643,627.07
Stores and work in progress (see Statement 20)	207,672,299.82
Total	902,691,726.31

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
Total	$389,819,271.45	$92,556,527.97	$115,415,848.61
BATTLESHIPS—FIRST LINE.			
Delaware	4,802,714.65	2,028,081.23	686,245.35
North Dakota	5,190,584.85	2,056,102.19	709,779.35
Florida	[1] 6,929,602.70	2,054,152.76	344,681.90
Utah	4,901,037.18	2,101,257.84	322,018.75
Wyoming	5,360,609.09	2,881,588.69	369,150.45
Arkansas	5,515,043.62	2,861,778.08	331,343.20
New York	[1] 6,806,857.21	2,973,897.46	165,995.86
Texas	6,526,755.98	2,994,311.10	203,601.63
Nevada	[2] 6,283,266.74	3,389,899.98	3,757.35
Oklahoma	[2] 6,091,488.41	3,418,869.52	863.16
Pennsylvania	[2] 7,580,020.11	3,930,224.57	1,554.20
Arizona	[1, 2] 6,084,523.38	3,682,857.31	196.50
New Mexico	[1, 2] 1,002,957.22	3,067,677.14	.....
Mississippi	[2] 3,158,396.51	3,661,252.92	.....
Idaho	[2] 4,256,761.71	3,635,078.09	.....
Tennessee	[1, 2] 16,293.09	.....	.....
California	[1, 2] 603.64	.....	.....
Total	80,507,516.09	44,737,028.88	3,139,187.70
BATTLESHIPS—SECOND LINE.			
Indiana	3,629,068.10	1,704,639.95	2,125,306.70
Massachusetts	3,684,778.02	1,753,066.95	1,937,408.60
Oregon	4,132,834.43	1,781,187.47	1,727,344.84
Iowa	3,570,388.03	1,592,199.09	1,608,235.01
Kearsarge	2,723,859.83	1,706,030.86	1,436,131.12
Kentucky	2,704,812.52	1,713,282.47	1,464,456.48
Illinois	2,984,237.95	1,089,191.31	1,290,315.22
Alabama	2,994,023.60	1,082,986.49	1,340,723.94
Wisconsin	3,018,549.29	1,144,068.24	1,171,193.06
Maine	3,437,085.48	1,130,379.04	1,371,867.86
Missouri	3,288,288.83	1,150,636.25	1,094,860.21
Ohio	3,265,515.25	1,209,860.20	1,178,965.33
Virginia	4,005,937.24	1,485,098.88	1,117,812.87
Nebraska	4,206,507.09	1,473,008.87	1,074,843.13
Georgia	4,069,460.60	1,471,818.98	1,076,839.64
New Jersey	3,911,787.26	1,474,019.15	1,347,611.09
Rhode Island	3,889,665.75	1,470,459.77	1,267,399.01
Connecticut	[1] 4,815,744.17	1,579,013.60	1,238,315.83
Louisiana	4,472,067.30	1,593,463.89	1,172,958.54
Vermont	4,580,084.69	1,586,182.59	1,295,976.58
Kansas	4,607,675.53	1,600,865.36	889,660.55
Minnesota	4,567,419.86	1,582,454.61	1,022,663.69
New Hampshire	4,415,975.28	1,560,261.71	837,539.22
South Carolina	4,354,007.00	1,315,179.53	654,708.77
Michigan	4,371,212.42	1,322,407.45	607,551.19
Total	95,664,985.52	36,571,762.71	31,350,687.58
ARMORED CRUISERS.			
Colorado	4,059,133.78	772,808.60	1,329,721.12
Maryland	4,079,877.85	794,996.31	908,755.73
Memphis	4,313,566.18	900,351.86	792,219.41
Montana	3,886,270.06	894,819.14	467,920.76
North Carolina	3,863,833.84	915,546.43	374,141.75
Pittsburgh	4,081,494.49	775,591.75	1,245,667.72
San Diego	3,925,226.13	788,047.98	611,690.94
South Dakota	3,941,729.43	793,431.15	565,527.17
Washington	4,305,352.82	896,552.82	744,675.46
West Virginia	4,087,812.12	797,404.39	1,187,107.12
Total	40,544,296.70	8,329,550.43	8,227,427.18
CRUISERS—FIRST CLASS.			
Brooklyn	3,470,716.30	474,104.43	1,398,346.93
Charleston	3,167,234.16	.....	502,435.11
Milwaukee	3,275,217.29	.....	307,654.19
Saratoga	3,575,593.04	322,247.28	2,322,584.91
St. Louis	3,173,782.63	.....	506,698.50
Total	16,662,543.42	796,351.71	5,037,989.64

[1] Government-built ship. [2] Under construction; payments not complete.

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
CRUISERS—SECOND CLASS.			
Chicago	[1] $1,150,000.00		$1,942,381.03
Columbia	3,461,960.26		787,098.16
Minneapolis	3,403,707.07		691,858.42
Olympia	2,484,027.54		1,064,086.56
Total	10,499,694.87		4,485,424.17
CRUISERS—THIRD CLASS.			
Albany	1,207,644.13		718,262.97
Birmingham	1,629,956.43		391,155.02
Boston	[1] 700,000.00		1,007,266.68
Chattanooga	1,378,445.75		354,341.15
Chester	1,766,293.52		336,358.03
Cincinnati	[2] 2,023,326.91		1,289,897.72
Cleveland	1,098,320.33		402,086.86
Denver	1,136,146.06		432,522.79
Des Moines	1,156,256.68		326,816.43
Galveston	1,426,850.73		239,322.26
Marblehead	1,061,426.30		682,800.90
Montgomery	1,050,933.54		912,313.72
New Orleans	1,430,091.59		769,212.26
Raleigh	[2] 1,867,934.32		1,262,384.16
Salem	1,619,325.00		410,916.96
Tacoma	1,113,395.45		356,412.03
Total	21,666,346.74		9,892,069.94
MONITORS.			
Amphitrite	1,571,392.46	$380,475.71	447,482.94
Cheyenne	1,147,174.13	224,919.03	310,583.43
Monadnock	2,148,974.52	400,196.18	382,927.91
Monterey	1,866,084.03	435,020.72	596,661.13
Ozark	1,184,176.74	229,786.25	285,211.93
Tallahassee	1,079,081.31	228,049.60	307,673.06
Tonopah	1,173,101.86	223,386.75	254,169.88
Total	10,169,985.05	2,121,834.24	2,584,710.28
DESTROYERS.			
Allen	[3] 682,081.61		
Ammen	655,460.56		83,760.81
Aylwin	795,495.92		37,330.78
Balch	780,711.36		20,758.95
Beale	669,396.42		54,700.88
Benham	780,911.25		27,907.14
Burrows	679,741.78		59,861.04
Caldwell	[2] [3] 25,769.73		
Cassin	781,387.87		33,886.52
Conner	[3] 42,250.00		
Conyngham	[3] 852,362.38		17.89
Craven	[2] [3] 6,000.16		
Cummings	778,086.53		39,937.24
Cushing	866,423.14		4,791.23
Davis	[3] 682,094.10		
Downes	735,587.93		2,445.86
Drayton	643,864.54		81,855.88
Duncan	806,084.38		13,424.45
Ericsson	873,173.37		[4] 2,720.52
Fanning	642,387.76		60,263.47
Flusser	639,962.56		145,403.06
Gwin	(4)		
Henley	683,873.23		63,094.18
Jacob Jones	[3] 813,645.64		656.63
Jarvis	651,509.74		48,605.83
Jenkins	665,778.73		62,791.86
Jouett	666,511.33		66,946.46
Lamson	604,801.09		139,420.07
McCall	684,286.82		99,304.28
McDougal	848,064.17		451.26
Manly	[3] 87,950.00		

[1] Appraised value 1889; original cost of Atlanta, Boston, Chicago, and Dolph[illegible]
[2] Government-built ship.
[3] Under construction; payments not complete.
[4] Recently authorized; no charges.

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1906.
	Hull and machinery.	Armor.	
DESTROYERS—continued.			
Mayrant	$[illegible]		$77,497.70
Monaghan	644,444.29		84,380.95
Nicholson	848,322.44		8,322.00
O'Brien	838,985.01		1,695.30
Parker	778,917.70		34,587.21
Patterson	645,707.06		72,105.08
Paulding	652,926.16		84,589.46
Perkins	615,132.21		95,614.01
Porter	867,889.52		2.60
Preston	662,364.46		124,934.32
Reid	637,689.99		167,627.48
Roe	643,682.74		101,941.48
Rowan	[1] 734,438.98		
Sampson	[1] 721,689.23		6,436.51
Shaw	[2] 312,677.98		
Smith	608,437.32		130,985.13
Stewart	615,335.71		105,339.92
Stockton	[1] 42,259.60		
Terry	639,586.55		105,618.48
Trippe	665,543.70		80,694.76
Tucker	538,392.56		60.55
Wadsworth	966,684.06		1,629.48
Wainwright	[1] 762,250.31		11,254.64
Walke	650,396.79		93,519.97
Warrington	676,489.28		126,261.96
Wilkes	[1] 669,908.60		
Winslow	841,716.79		2,139.98
Total	37,234,366.37		2,710,586.13
COAST TORPEDO VESSELS—DESTROYERS.			
Bainbridge	268,969.63		263,447.91
Barry	268,389.15		259,894.68
Chauncey	268,287.48		259,128.51
Dale	273,969.35		255,858.69
Decatur	276,688.01		347,232.11
Hopkins	313,350.79		269,693.24
Hull	318,316.65		238,043.36
Lawrence	296,659.77		268,061.25
Macdonough	297,633.96		159,536.49
Paul Jones	301,279.01		253,348.67
Perry	303,390.47		159,974.61
Preble	302,882.71		268,653.55
Stewart	299,577.30		268,387.22
Truxtun	304,537.10		237,804.66
Whipple	303,734.39		253,931.89
Worden	268,381.69		214,355.92
Total	4,969,973.19		3,872,228.30
COAST TORPEDO VESSELS—TORPEDO BOATS.			
Bagley	168,695.49		81,305.46
Bailey	234,298.69		177,138.09
Barney	165,752.26		91,448.97
Biddle	165,904.01		81,198.17
Blakely	182,105.02		66,239.94
Dahlgren	209,771.07		53,924.26
De Long	174,518.88		86,433.01
Dupont	165,501.03		121,416.96
Farragut	248,902.23		149,792.34
Fanta	119,216.74		70,185.30
Fox	100,255.93		57,314.65
Goldsborough	268,206.69		65,202.76
Morris	94,923.87		72,261.58
Rodgers	110,720.63		112,530.05
Shubrick	145,298.20		101,295.92
Somers	72,997.50		35,349.62
Thornton	144,435.90		81,253.57
Tingey	196,707.65		59,501.32
Total	2,952,797.10		1,509,153.35

[1] Under construction; payments not complete. [2] Government-built ship.

Statement 16.—[illegible] INVESTMENT AND TOTAL MAINTENANCE [illegible]

[illegible]—Continued.

[illegible]	[illegible]	[illegible]
L-1	[illegible]	[illegible]
L-2	[illegible]	[illegible]
L-3	[illegible]	[illegible]
L-4	[illegible]	[illegible]
L-5	[illegible]	[illegible]
L-6	[illegible]	[illegible]
L-7	[illegible]	[illegible]
L-8	[illegible]	[illegible]
L-9	[illegible]	[illegible]
L-10	[illegible]	[illegible]
L-11	[illegible]	[illegible]
M-1	[illegible]	[illegible]
Schley	[illegible]	15.00
N-1	[illegible]	15.00
N-2	[illegible]	15.00
N-3	[illegible]	[illegible]
N-4	[illegible]	[illegible]
N-5	[illegible]	[illegible]
N-6	[illegible]	[illegible]
N-7	[illegible]	[illegible]
Number 60	[illegible]	[illegible]
Number 61	[illegible]	[illegible]
O-1	[illegible]	[illegible]
O-2	[illegible]	[illegible]
O-3	[illegible]	[illegible]
O-4	[illegible]	[illegible]
O-5	[illegible]	[illegible]
O-6	[illegible]	[illegible]
O-7	[illegible]	[illegible]
O-8	[illegible]	[illegible]
O-9	[illegible]	[illegible]
O-10	[illegible]	[illegible]
O-11	[illegible]	[illegible]
O-12	[illegible]	[illegible]
O-13	[illegible]	[illegible]

[1] Under construction; [illegible]
[2] Government-built ship[illegible]
[3] Recently authorized; no[illegible]

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1900.
	Hull and machinery.	Armor.	
SUBMARINES—continued.			
O-14	[1] $27,425.00		
O-15	[1] 27,425.00		
O-16	[1] 27,425.00		
Total	21,399,683.18		$1,717,[illegible]
TENDERS TO TORPEDO VESSELS.			
Alert	[2] 118,000.00		423,[illegible]
Bushnell	918,423.30		[illegible]
Dixie	575,000.00		1,104,[illegible]
Fulton	525,542.07		71,[illegible]
Iris	145,000.00		[illegible]
Melville	1,275,845.96		1,494,[illegible]
Panther	375,000.00		798,104.35
Pompey	111,929.50		217,928.35
Total	4,044,740.83		3,612,[illegible]
GUNBOATS.			
Annapolis	278,131.52		375,[illegible]
Castine	510,878.13		554,341.20
Dolphin	[3] 350,000.00		672,171.08
Don Juan de Austria	[2] 187,000.00		342,673.11
Dubuque	334,974.23		148,584.11
Elcano	[2] [4] 29,750.00		154,[illegible]
Helena	430,669.05		333,758.90
Isla de Luzon	[2] [5] 219,700.00		370,952.92
Machias	492,502.32		513,902.24
Marietta	260,572.02		387,313.25
Monocacy	[6] 145,281.74		7,[illegible]
Nashville	476,722.06		516,705.12
Newport	[6] 298,615.14		195,511.07
Paducah	392,698.97		160,952.43
Palos	[6] 146,153.99		2,584.08
Pampanga	[2] [4] 18,000.00		98,173.65
Petrel	309,981.65		415,515.58
Princeton	313,176.68		273,681.14
Quiros	.....		105,003.08
Ranger	[2] 127,962.00		491,618.24
Sacramento	500,667.51		29,481.34
Samar	[2] [4] 18,000.00		88,757.65
Sandoval	[2] [5] 17,000.00		42,851.32
Vicksburg	286,050.92		331,813.26
Villalobos	.....		48,658.52
Wheeling	256,069.19		330,901.48
Wilmington	424,868.65		378,436.19
Yorktown	548,906.61		809,906.20
Total	7,374,332.38		8,174,536.76
TRANSPORTS.			
Buffalo	550,000.00		908,978.11
General Alava, Quiros, and Villalobos	[7] 99,760.00		.....
General Alava	.....		165,813.40
Hancock	[3] 600,000.00		641,162.14
Henderson	[6] [1] 758,646.92		.....
Prairie	575,000.00		1,022,446.33
Total	2,583,406.92		2,738,398.98
SUPPLY SHIPS.			
Bridge	[6] [1] 630,493.32		.....
Celtic	340,900.00		601,470.45
Culgoa	247,704.85		743,265.64
Glacier	340,550.00		708,434.08
Supply	325,000.00		686,916.00
Total	1,884,648.17		2,740,076.17

[1] Under construction; payments not complete.
[2] Appraised value 1899; no record of original cost.
[3] Appraised value 1889; original cost of Atlanta, Boston, Chicago, and Dolphin was $1,268,801.80.
[4] Transferred by War Department to Navy without reimbursement.
[5] Captured.
[6] Government-built ship.
[7] General Alava, Quiros, and Villalobos purchased from Army at a total cost of $99,760.
[8] Purchased by War Department from appropriation "National defense"; transferred to Navy without reimbursement.

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
HOSPITAL SHIP.			
Solace	$600,000.00		$1,020,791.73
FUEL SHIPS.			
Abarenda	175,000.00		408,275.45
Ajax	267,675.50		554,175.50
Arethusa	218,992.50		552,891.51
Brutus	215,000.00		402,053.72
Cæsar	175,194.00		368,487.80
Cuyama	[1] [2] 484,369.73		
Cyclops	871,518.35		184,100.35
Hector	514,027.60		142,251.98
Jason	971,869.99		67,531.38
Jupiter	[1] 1,326,111.36		82,668.22
Kanawha	[1] 973,632.27		22,695.09
Mars	514,634.05		186,308.35
Maumee	[1] [2] 1,160,629.61		2,283.28
Nanshan	155,728.00		249,787.08
Neptune	907,340.65		148,135.95
Nereus	1,023,854.15		56,795.29
Nero	215,000.00		517,458.55
Orion	974,823.72		89,365.54
Proteus	998,652.53		91,019.76
Saturn	290,000.00		478,282.64
Sterling	190,000.00		280,190.67
Vulcan	515,136.49		156,858.66
Total	13,139,172.50		5,011,616.77
CONVERTED YACHTS.			
Aileen	55,000.00		30,134.64
Dorothea	187,500.00		93,091.35
Eagle	110,000.00		225,049.11
Elfrida	50,000.00		35,425.00
Gloucester	225,000.00		193,481.61
Hawk	50,000.00		65,517.90
Huntress	27,500.00		27,466.06
Mayflower	430,000.00		639,856.92
Scorpion	300,000.00		334,167.30
Sylph	50,000.00		111,201.37
Sylvia	25,000.00		58,323.44
Vixen	150,000.00		243,354.86
Wasp	95,000.00		167,980.11
Yankton	125,000.00		293,525.08
Total	1,880,000.00		2,518,574.74
TUGS.			
Accomac	40,000.00		72,803.63
Active	75,000.00		87,616.46
Apache	54,510.00		115,485.65
Arapaho	125,666.67		4,869.33
Choctaw	82,500.00		101,390.78
Fortune	146,600.00		212,200.00
Hercules	40,000.00		94,292.21
Iroquois	150,000.00		137,517.34
Iwana	33,253.57		72,632.44
Massasoit	30,000.00		42,892.14
Modoc	30,000.00		42,346.16
Mohave	125,666.67		11,899.47
Mohawk	44,000.00		109,891.47
Narkeeta	33,648.91		133,793.36
Navajo	115,000.00		56,179.65
Ontario	210,137.97		31,368.88
Osceola	100,000.00		118,991.81
Patapsco	[1] 219,402.53		58,180.76
Patuxent	[1] 212,167.02		57,266.50
Pawnee	25,000.00		53,391.07
Pawtucket	[1] 75,366.49		54,107.88
Penacook	[1] 84,465.68		56,043.00
Pentucket	[1] 95,181.86		42,438.98
Peoria	100,000.00		123,377.40
Piscataqua	130,000.00		160,227.39
Pocahontas	[1] [2] 134,331.96		19.20

[1] Government-built ship. [2] Under construction; payments not complete.

Statement 16.—PROPERTY INVESTMENT AND TOTAL MAINTENANCE—SHIPS—Continued.

	First cost.		Repairs, changes, and additions to June 30, 1916.
	Hull and machinery.	Armor.	
TUGS—continued.			
Pawtuxet	$30,000.00		$91,553.24
Potomac	125,300.00		277,003.08
Powhatan	42,500.00		99,879.14
Rapido	[1] [6] 5,000.00		51,438.51
Rocket	29,000.00		47,175.43
Samoset	[3] 73,505.28		51,359.16
Sebago	28,000.00		59,206.51
Sioux	25,553.51		83,557.46
Sonoma	198,778.55		43,470.21
Sotoyomo	[3] 71,143.05		67,728.32
Standish	48,380.00		168,884.79
Tecumseh	45,000.00		110,190.16
Tillamook	125,666.66		7,801.10
Traffic	26,400.00		79,133.47
Transfer	[3] 133,053.00		19,231.25
Triton	35,000.00		96,302.81
Unadilla	[3] 101,145.08		104,577.69
Uncas	75,000.00		155,892.11
Vigilant	60,000.00		114,126.87
Waban	20,000.00		74,480.54
Wahneta	33,176.52		97,170.59
Wando	[3] [2] 78,709.95		.....
Wompatuck	65,000.00		119,545.18
Total	3,987,210.93		4,070,975.28
SPECIAL TYPE.			
Baltimore	1,554,483.94		1,840,800.27
Hannibal	147,941.60		282,628.93
Lebanon	225,000.00		318,460.80
Leonidas	147,941.60		287,373.00
Prometheus	[3] 1,605,622.20		448,646.19
San Francisco	1,738,257.82		1,767,477.60
Vestal	[3] 1,625,417.26		455,324.99
Vesuvius	360,007.94		362,528.55
Total	7,404,672.36		5,763,240.33
UNSERVICEABLE FOR WAR PURPOSES.			
Adams	[1] 55,185.00		315,632.17
Boxer	[3] 94,703.14		1,065.59
Constellation	[3] [1] 18,785.00		192,368.64
Constitution	[3] [1] 13,320.00		133,854.99
Cumberland	[3] 427,463.37		33,667.10
Essex	[1] 117,800.00		256,256.78
Gopher	[1] [4] 41,060.00		146,787.49
Granite State	[3] [1] 61,600.00		15,448.58
Hartford	[3] [1] 256,964.05		868,216.58
Intrepid	[3] 403,948.19		31,418.69
Mohican	[3] 76,800.00		429,377.48
Philadelphia	1,561,392.47		814,355.11
Rainbow	176,260.00		695,234.34
Reina Mercedes	.....		387,322.03
Relief	[5] 450,000.00		191,689.29
Richmond	[3] [1] 43,380.00		92,322.50
Severn	357,641.96		120,399.56
Southery	100,000.00		247,660.10
Topeka	170,327.50		508,308.89
Wolverine	[1] 47,795.00		28,180.02
Yantic	[3] [1] 62,030.00		52,980.83
Total	4,536,455.68		5,562,546.46
AIR CRAFT	282,439.45		146,405.92
Grand total	389,819,271.45	$92,556,527.97	115,367,156.79

[1] Appraised value 1899; no record of original cost.
[2] Under construction; payments not complete.
[3] Government-built ship.
[4] Transferred by Light House Board to Navy without reimbursement.
[5] Purchased by War Department from appropriation "National defense"; transferred to Navy without reimbursement.
[6] Captured.

Statement 17.—PROPERTY INVESTMENT AND MAINTENANCE OF SHORE STATIONS.

Yards and stations.	Date of establishment.	Cost of original site.	Land acquired in addition to original site.	Total expenditures for buildings, improvements, and machinery.	Total maintenance since establishment, including repairs.
INDUSTRIAL YARDS.					
Portsmouth, N. H. (including naval hospital and naval prison)	1800	$5,500.00	$105,000.00	$11,337,338.12	$12,612,298.81
Boston, Mass. (including naval hospital, Chelsea; Hingham magazine and niter depot, Malden)	1800	60,746.92	367,753.83	16,540,694.27	22,855,568.34
New York, N. Y. (including magazines at Dover, Iona Island, and Fort Lafayette, and naval hospital)	1800	40,006.00	562,002.23	30,807,906.97	45,417,584.22
Philadelphia, Pa. (including magazine, Fort Mifflin)	1868	1.00	.....	13,740,212.44	17,008,151.13
Washington, D. C. (including naval hospital, dispensary, and Bellevue magazine)	1800	4,000.00	152,914.50	14,760,011.39	21,418,933.91
Norfolk, Va. (including naval hospital, magazine at St. Juliens Creek, Craney Island, and Fort Norfolk)	1800	12,000.00	625,018.40	19,931,566.36	24,147,625.19
Charleston, S. C	1901	84,207.00	26,300.00	5,111,334.99	2,830,320.99
Mare Island, Cal. (including naval hospital and magazine)	1853	83,419.00	.....	21,108,155.21	25,943,586.39
Puget Sound, Wash. (including naval hospital and magazine)	1891	9,587.25	19,812.00	10,645,931.17	8,231,075.29
Cavite, P. I. (including Sangley Point, hospital Canacao, and Manila)	1898	(1)	.....	2,649,278.74	12,820,847.08
Olongapo, P. I. (including magazines, Philippine Islands)	1902	(1)	.....	3,399,873.86	4,283,387.33
Total	.....	299,467.17	1,858,800.96	150,032,303.52	197,569,378.68
NONINDUSTRIAL YARDS AND STATIONS.					
Frenchman Bay, Me	1900	24,650.00	.....	532,678.26	80,081.28
Torpedo station, Newport, R. I	1869	(1)	76,850.00	1,952,158.12	7,075,789.81
Training station, Newport, R. I. (including naval hospital, War College, and Narragansett Bay)	1881	(1)	78,566.03	2,223,688.40	5,022,090.25
Melville, R. I	1901	35,709.00	.....	1,218,353.29	440,091.84
New London, Conn	1868	(1)	.....	442,921.61	456,947.26
Naval Home, Philadelphia, Pa. (including naval hospital)	1826	16,352.91	12,583.25	104,446.59	3,434,528.81
Naval Academy, Annapolis, Md	1845	1,801.00	532,773.54	11,950,889.75	22,768,975.41
Naval Observatory, D. C	1880	75,000.00	.....	910,347.30	420,910.88
Naval proving ground, Indianhead, Md	1890	13,220.00	25,000.00	2,100,487.10	2,804,348.43
Port Royal, S. C	1883	5,000.00	9,687.50	1,288,200.94	1,991,647.22
Key West, Fla. (including Dry Tortugas, Womans Key, and Fleming Key)	1833	4,000.00	156,111.51	2,666,326.57	3,183,036.77
Pensacola, Fla	1828	(2)	.....	8,054,713.49	5,682,216.15
New Orleans, La	1849	15,000.00	133,002.04	2,636,931.90	1,431,929.82
Training station, Great Lakes, Ill	1904	(1)	.....	3,696,374.17	2,438,818.31
Naval hospital, Las Animas, Colo	1906	(1)	.....	433,306.13	2,274,450.03
San Diego, Cal	1901	(1)	.....	291,229.14	91,609.14
Tiburon, Cal	1904	80,000.00	.....	1,075,826.98	432,900.89
Training station, California	1864	(1)	.....	434,508.92	1,868,506.48
Torpedo station, Pacific coast, Washington	1914	60,801.39	.....	108,088.34	40,749.15
Pichilinque, Mexico	1900	(1)	.....	57,093.59	35,295.61
Guantanamo, Cuba	1903	(3)	.....	2,115,990.53	2,308,550.56
Tutuila, Samoa	1891	214.29	38,665.11	529,710.41	1,154,566.98
Guam, L. I	1898	(1)	.....	524,277.08	2,649,661.68
Pearl Harbor, Hawaii	1900	58,140.50	133,159.50	10,209,754.54	1,841,313.96
Sitka, Alaska	1900	(1)	.....	145,481.69	27,813.95
Hospital, Yokohama, Japan	1872	(3)	4,980.00	85,236.07	798,979.81
Radio stations	.....	.....	.....	3,072,766.94	1,069,277.92
Total	.....	389,889.09	1,201,378.48	58,861,787.85	71,825,088.40
Grand total	.....	689,356.26	3,060,179.44	208,894,091.37	269,394,467.08

[1] No cost for original site. [2] No record. [3] Leased.

Statement 18.—APPRAISED VALUE AND REPRODUCTION COST OF INDUSTRIAL PLANTS.

APPRAISED VALUE OF DEPRECIABLE PLANT—1916.

Depreciation is computed by the "fixed percentage on reducing balance" method on all items in classes 2, 3, 5, and 6 except dry land, water rights, typewriters, computing machines and motor-propelled vehicles, the last three items being exempted from the operation of the depreciation reserve owing to the provisions of the naval acts approved Aug. 22, 1912, and Aug. 29, 1916, permitting worn-out typewriters, computing machines, and motor-propelled vehicles to be exchanged as a part of the purchase price of new ones. All additions and replacements under classes 4, 7, and 8 being charged directly to expense, no depreciation is computed on plant values under those classes, which remain at first cost figures. Adjustments between the plant ledgers and cost records in the case of items in classes 4, 7, and 8 are periodically made by physical inventories.

Class.	Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
2	Land and appurtenances	$2,790,440	$6,851,985	$1,524,673	$11,888,915	$1,669,578	$4,015,873	$831,647	$1,147,966	$707,798	$31,428,875
3	Buildings and structures	2,882,175	3,287,543	5,580,649	3,524,328	2,094,190	4,190,520	2,255,686	5,258,171	3,853,878	32,917,140
5	Plant appliances	298,793	556,214	602,857	340,647	528,337	1,084,654	196,712	678,623	666,735	5,013,572
6	Machinery and machine tools	209,699	289,889	706,159	469,288	1,451,564	535,180	276,467	426,216	519,565	4,944,027

REPRODUCTION COST.

This statement shows original or reproduction cost of present property at the yards named, by physical classes. It includes industrial, mixed industrial-military, and purely military property. The distribution of property by physical classes and purpose groups is shown in Statement 11. The excess in values shown below over those shown in Statement 11 represents the value of property devoted to purely military purposes. Statement 17 shows total *expenditures* for original site, irrespective of appreciation, and for all improvements and acquisitions to date, irrespective of dispositions.

Class.	Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
2	Land and appurtenances	$3,272,657	$7,963,491	$21,768,373	$12,657,218	$2,213,306	$4,408,422	$1,075,725	$1,923,018	$1,096,935	$56,324,144
3	Buildings and structures	4,145,138	6,969,001	11,354,529	5,108,423	3,878,531	5,557,516	2,776,522	8,511,603	5,901,260	53,792,523
4	Miscellaneous equipment	478,586	390,685	3,387,810	258,928	258,386	386,163	81,915	291,138	300,446	5,834,056
5	Plant appliances	593,858	1,390,135	2,137,153	739,384	1,160,566	1,596,599	382,742	1,312,022	1,211,850	10,524,310
6	Machinery and machine tools	841,913	1,189,120	2,342,432	1,079,246	3,671,794	1,372,646	532,040	1,232,054	1,001,364	13,132,609
7	Portable power tools	29,556	60,471	141,396	78,913	4,629	62,705	21,165	110,621	29,018	538,469
8	Loose and hand tools	24,938	81,810	243,552	60,944	1,140,187	151,000	15,928	186,270	88,541	1,996,571
		9,386,045	18,084,713	41,275,246	19,992,056	12,327,398	13,630,051	4,886,038	13,566,786	9,044,409	142,142,742

Statement 19.—COMPOSITE LIFE OF DEPRECIABLE PROPERTY—INDUSTRIAL YARDS.

[Based on the 1916 inventory and appraisal.]

Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Improvements to grounds:										
First cost	$1,218,507	$1,417,609	$2,898,373	$2,657,218	$998,957	$1,756,122	$975,360	$1,832,998	$971,935	$14,727,079
Scrap value	57,000	94,937	446,897	99,478	99,831	8,793	58,839	169,267	29,111	1,064,153
First cost less scrap value	1,161,507	1,322,672	2,451,476	2,557,740	899,126	1,747,329	916,521	1,663,731	942,824	13,662,926
Annual deterioration [1]	15,751	21,346	89,390	44,170	19,649	39,049	19,290	52,840	26,924	328,409
Composite life ... years	73.7	61.9	27.4	57.9	45.8	44.7	47.5	31.5	35.0	44.7
Buildings and structures:										
First cost	4,145,138	6,969,001	11,354,529	5,108,423	3,878,531	5,657,516	2,776,522	8,511,663	5,391,260	53,792,583
Scrap value	724,578	574,530	1,007,995	184,016	387,853	56,562	276,819	844,050	153,366	4,209,769
First cost less scrap value	3,420,560	6,394,471	10,346,534	4,924,407	3,490,678	5,600,954	2,499,703	7,667,613	5,237,894	49,582,814
Annual deterioration [1]	38,134	71,378	141,042	48,951	44,163	71,049	26,594	89,653	69,738	600,702
Composite life ... years	89.7	89.5	73.4	100.6	79.0	78.8	94.0	85.5	75.1	82.5
Plant appliances:										
First cost	593,858	1,390,135	2,137,153	739,384	1,160,566	1,596,599	382,743	1,312,022	1,211,850	10,524,310
Scrap value	87,804	72,014	170,719	72,500	99,411	111,760	29,947	140,020	80,800	864,975
First cost less scrap value	506,054	1,318,121	1,966,434	666,884	1,061,155	1,484,839	352,796	1,172,002	1,131,050	9,659,335
Annual deterioration [1]	21,367	62,073	86,618	33,985	51,188	44,752	18,603	51,369	54,921	419,876
Composite life ... years	23.7	21.2	22.7	19.6	20.7	33.0	26.0	22.8	20.6	23.0
Machinery and machine tools:										
First cost	841,913	1,159,120	2,242,432	1,079,246	3,671,794	1,372,646	532,040	1,232,054	1,001,364	13,132,609
Scrap value	96,996	71,760	177,972	99,469	357,996	137,264	50,778	103,879	140,900	1,237,014
First cost less scrap value	744,917	1,087,360	2,064,460	979,777	3,313,798	1,235,382	481,262	1,128,175	860,464	11,895,595
Annual deterioration [1]	37,760	45,805	105,267	42,990	144,540	61,665	17,699	55,176	37,605	548,507
Composite life ... years	19.7	23.7	19.6	22.8	22.9	20.0	27.0	20.4	22.9	21.7
Total depreciable property:										
First cost	6,799,416	10,935,865	18,632,487	9,584,271	9,709,848	10,382,883	4,666,665	12,888,737	8,576,409	92,176,581
Scrap value	966,378	813,241	1,803,583	455,463	945,091	314,379	416,383	1,257,216	404,177	7,375,911
First cost less scrap value	5,833,038	10,122,624	16,828,904	9,128,808	8,764,757	10,068,504	4,250,282	11,631,521	8,172,232	84,800,670
Annual deterioration [1]	113,012	200,601	422,317	170,095	259,540	216,515	77,188	249,038	189,188	1,897,494
Composite life ... years	51.6	50.6	39.9	53.7	33.8	46.5	55.0	46.7	43.2	44.7

[1] Computed on flat-rate basis.

Statement 18.—APPRAISED VALUE AND REPRODUCTION COST OF INDUSTRIAL PLANTS.

APPRAISED VALUE OF DEPRECIABLE PLANT—1916.

Depreciation is computed by the "fixed percentage on reducing balance" method on all items in classes 2, 3, 5, and 6 except dry land, water rights, typewriters, computing machines and motor-propelled vehicles, the last three items being exempted from the operation of the depreciation reserve owing to the provisions of the naval acts approved Aug. 22, 1912, and Aug. 29, 1916, permitting worn-out typewriters, computing machines, and motor-propelled vehicles to be exchanged as a part of the purchase price of new ones. All additions and replacements under classes 4, 7, and 8 being charged directly to expense, no depreciation is computed on plant values under those classes, which remain at first cost figures. Adjustments between the plant ledgers and cost records in the case of items in classes 4, 7, and 8 are periodically made by physical inventories.

Class.	Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
2	Land and appurtenances	$2,790,440	$6,851,985	$1,524,673	$11,888,915	$1,669,578	$4,015,873	$831,647	$1,147,966	$707,798	$31,428,875
3	Buildings and structures	2,882,175	3,287,543	5,580,649	3,524,328	2,084,190	4,190,520	2,255,686	5,258,171	3,853,878	32,917,140
5	Plant appliances	268,793	556,214	692,857	340,647	528,337	1,084,654	196,712	678,623	666,735	5,013,572
6	Machinery and machine tools	269,699	289,889	706,159	469,288	1,451,564	535,180	276,467	426,216	519,565	4,944,027

REPRODUCTION COST.

This statement shows original or reproduction cost of present property at the yards named, by physical classes. It includes industrial, mixed industrial-military, and purely military property. The distribution of property by physical classes and purpose groups is shown in Statement 11. The excess in values shown below over those shown in Statement 11 represents the value of property devoted to purely military purposes. Statement 17 shows total *expenditures* for original site, irrespective of appreciation, and for all improvements and acquisitions to date, irrespective of dispositions.

Class.	Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
2	Land and appurtenances	$3,272,657	$7,983,491	$21,768,373	$12,657,218	$2,213,305	$4,403,422	$1,075,725	$1,923,018	$1,026,985	$56,324,144
3	Buildings and structures	4,145,138	6,969,001	11,354,529	5,108,423	3,878,531	5,657,516	2,776,522	8,511,663	5,391,260	53,792,583
4	Miscellaneous equipment	475,585	390,685	3,387,810	258,928	258,386	386,163	81,915	291,138	300,446	5,834,056
5	Plant appliances	593,858	1,390,135	2,137,153	739,384	1,160,566	1,596,599	382,743	1,312,022	1,211,850	10,524,310
6	Machinery and machine tools	841,913	1,159,120	2,342,432	1,079,246	3,671,794	1,372,646	532,040	1,232,054	1,001,364	13,132,609
7	Portable power tools	29,556	60,471	141,396	78,913	4,629	62,705	21,165	110,621	29,013	538,469
8	Loose and hand tools	24,938	81,810	243,558	69,944	1,140,137	151,000	15,928	186,270	83,541	1,996,571
		9,386,045	18,034,713	41,275,246	19,992,056	12,227,308	13,630,051	4,886,038	13,566,786	9,044,409	142,142,742

Statement 19.—COMPOSITE LIFE OF DEPRECIABLE PROPERTY—INDUSTRIAL YARDS.

[Based on the 1916 inventory and appraisal.]

Classification.	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Improvements to grounds:										
First cost	$1,218,507	$1,417,609	$2,898,373	$2,657,218	$998,957	$1,756,122	$975,360	$1,832,998	$971,935	$14,727,079
Scrap value	57,000	94,937	446,897	99,478	99,831	8,793	58,839	169,267	29,111	1,064,153
First cost less scrap value	1,161,507	1,322,672	2,451,476	2,557,740	899,126	1,747,329	916,521	1,663,731	942,824	13,662,926
Annual deterioration [1]	15,751	21,346	89,390	44,170	19,649	39,049	19,290	82,840	26,924	328,409
Composite life ....years	73.7	61.9	27.4	57.9	45.8	44.7	47.5	31.5	35.0	44.7
Buildings and structures:										
First cost	4,145,138	6,969,001	11,354,529	5,108,423	3,878,531	5,657,516	2,776,522	8,511,663	5,391,260	53,792,583
Scrap value	724,578	574,530	1,007,995	184,016	387,853	56,562	276,819	844,050	153,366	4,209,769
First cost less scrap value	3,420,560	6,394,471	10,346,534	4,924,407	3,490,678	5,600,954	2,499,703	7,667,613	5,237,894	49,582,814
Annual deterioration [1]	38,134	71,378	141,042	48,951	44,163	71,049	26,594	89,653	69,738	600,702
Composite life ....years	89.7	89.5	73.4	100.6	79.0	78.8	94.0	85.5	75.1	82.5
Plant appliances:										
First cost	593,858	1,390,135	2,137,153	739,384	1,160,566	1,596,599	382,743	1,312,022	1,211,850	10,524,310
Scrap value	87,804	72,014	170,719	72,500	99,411	111,760	29,947	140,020	80,800	864,975
First cost less scrap value	506,054	1,318,121	1,966,434	666,884	1,061,155	1,484,839	352,796	1,172,002	1,131,050	9,659,335
Annual deterioration [1]	21,367	62,073	86,618	33,985	51,188	44,752	18,603	51,369	54,921	419,876
Composite life ....years	23.7	21.2	22.7	19.6	20.7	33.0	26.0	22.8	20.6	23.0
Machinery and machine tools:										
First cost	841,913	1,159,120	2,242,432	1,079,246	3,671,794	1,372,646	532,040	1,232,054	1,001,364	13,132,609
Scrap value	96,996	71,760	177,972	99,469	357,996	137,264	50,778	103,879	140,900	1,237,014
First cost less scrap value	744,917	1,087,360	2,064,460	979,777	3,313,798	1,235,382	481,262	1,128,175	860,464	11,895,595
Annual deterioration [1]	37,760	45,805	105,267	42,990	144,540	61,665	17,699	55,176	37,605	548,507
Composite life ....years	19.7	23.7	19.6	22.8	22.9	20.0	27.0	20.4	22.9	21.7
Total depreciable property:										
First cost	6,799,416	10,935,865	18,632,487	9,584,271	9,709,848	10,382,883	4,666,665	12,888,737	8,576,409	92,176,581
Scrap value	966,378	813,241	1,803,583	455,463	945,091	314,379	416,383	1,257,216	404,177	7,375,911
First cost less scrap value	5,833,038	10,122,624	16,828,904	9,128,808	8,764,757	10,068,504	4,250,282	11,631,521	8,172,232	84,800,670
Annual deterioration [1]	113,012	200,601	422,317	170,095	259,540	216,515	77,188	249,038	189,188	1,897,494
Composite life ....years	51.6	50.6	39.9	53.7	33.8	46.5	55.0	46.7	43.2	44.7

[1] Computed on flat-rate basis.

Statement 20.—PROPERTY INVESTMENT—STORES.

Classification.	Balances in store.	Balances in transit.	Work in progress.	Total balances June 30, 1916.
Naval supply account	$25,291,578.51	$1,024,291.68	$1,405,883.86	$27,721,754.05
Ordnance account	83,606,949.85	[1] 1,582,201.66	8,368,320.07	93,557,471.58
Survey account	625,137.33	*310.91*		624,826.42
Used-material account	144,574.08	[2] 53,102.22		197,676.30
Equipage afloat	74,245,405.79	1,008,452.15		75,253,857.94
Provisions	2,072,468.17	489,650.40		2,562,118.57
Provisions, naval auxiliaries	38,185.76			38,185.76
Ships' store supplies	265,288.13	8,569.88		273,858.01
Clothing and small stores	2,920,501.47	481,313.17	27,280.15	3,429,094.79
Medical stores	352,965.97			352,965.97
Marine Corps stores	3,660,490.43			3,660,490.43
Total	193,223,545.49	4,647,270.25	9,801,484.08	207,672,299.82

[1] Including $76,969.74 in custody of War Department, etc.
[2] Including $52,354.61 in custody of manufacturing department.

Statement 21.—TOTAL STORES OPERATIONS AND BALANCES.

Classification.	Receipts.		Expenditures.		Balances June 30, 1916 (including stores in transit, work in process, and in custody of other departments).
	New and reclaimed material.	Transfers.	Final and to manufacture.	Transfers.	
Naval supply account	$34,664,908.14	$4,077,025.10	$31,015,620.94	$3,281,937.78	$27,721,754.05
Ordnance account	19,905,231.14	5,477,903.69	8,191,133.48	14,180,669.83	93,557,471.58
Survey account	316,720.23	2,101,970.04	1,304,543.77	1,206,234.98	624,826.42
Used-material account [1]	5,173.87	6,839.95	10,956.35	62,371.27	197,676.30
Equipage afloat	430,750.92	15,338,730.52	1,367,998.51	8,193,762.00	75,253,857.94
Provisions	8,206,164.87	91,940.23	7,776,192.08	136,566.48	2,562,118.57
Provisions, naval auxiliaries	119,993.35	65,116.97	170,614.07	1,212.31	38,185.76
Ships' store supplies	876,749.65	93,969.18	935,510.23	20,141.27	273,858.01
Clothing and small stores	1,660,808.74	1,180,751.24	2,029,809.94	615,737.73	3,429,094.79
Medical stores	366,060.86	.....	299,178.03	.....	352,965.97
Marine Corps stores	1,678,022.69	.....	2,225,026.33	.....	3,660,490.43
Totals	68,238,584.46	28,434,246.92	55,326,583.73	27,688,633.65	207,672,299.82

[1] Formerly reserve account.

Statement 23.—BALANCES BY CLASSES.

(June 30, 1916.)

	Classification.	Naval supply account ashore.	Naval supply account afloat.	Total naval supply account.	Ordnance account ashore.	Ordnance account afloat.	Total ordnance account.
1	Guns, mounts, range finders, etc	$18,335.13	$12,580.75	$30,915.88	$19,100,701.36		$19,100,701.36
2	Arms, accouterments, etc	8,355.36	12,347.12	20,702.48	4,192,948.85		4,192,948.85
3	Mines and torpedoes, etc	17,726.58	2,734.85	20,461.43	5,223,387.13	$531,856.24	5,755,243.37
4	Ammunition and ammunition details	5,545.39	1,527.97	7,073.36	35,421,256.58	17,139,155.51	52,560,412.09
5	Flags and bunting	84,093.24	6,796.07	90,889.31	4.56		4.56
6	Anchors, anchor chains, etc	923,879.49	4,197.74	928,077.23	664.11		664.11
7	Fuel, steaming (coal and oil)	1,642,138.40	279,712.72	1,921,851.12			
8	Fuel, other than class 7	683,319.34	93,675.93	776,995.27			
9	Aeroplanes, boats, hydroplanes	372,003.61	25.30	372,028.91			
10	Boilers and engines (boat), etc	670,909.74	14,588.50	685,498.24	5.69		5.69
11	Pumps of every character, etc	68,786.57	20,800.95	89,587.52	11.00		11.00
12	Boat and ship fittings	472,847.83	112,019.53	584,867.36	6,338.39		6,338.39
13	Engine and fireroom fittings	145,758.07	119,595.26	265,353.33	627.91		627.91
14	Oils, greases, and all lubricants	84,220.79	54,765.07	138,985.86	14.65		14.65
15	Electrical cable and wire (insulated)	421,394.61	49,775.98	471,170.59	1,243.29		1,243.29
16	Radio appurtenances, outfits, etc	106,714.02	14,765.56	121,479.58			
17	Electrical material	1,263,845.27	473,879.08	1,737,724.35	79,772.43		79,772.43
18	Instruments of precision, etc	312,211.87	14,726.06	326,937.93	17,618.45		17,618.45
19	Blocks (boat and ship), etc	128,613.26	4,363.60	132,976.86	138.07		138.07
20	Rigging (boat and ship)	42,006.10	3,993.19	45,999.29	783.36		783.36
21	Cordage, hemp, oakum, twine	677,971.58	112,021.41	789,992.99	1.10		1.10
22	Wire (bare) and wire rope	144,180.86	25,706.76	169,887.62	879.36		879.36
23	Boat and ship utensils	41,261.23	810.77	42,072.00			
24	Canvas and duck	245,737.81	31,572.60	277,310.41	6.00		6.00
25	Canvas and duck articles	163,391.50	40,970.69	204,362.19	3,720.70		3,720.70
26	Furniture (house and ship)	104,091.85	2,258.28	106,350.13	269.44		269.44
27	Dry goods, textiles	67,894.45	13,880.51	81,774.96	40,313.25		40,313.25
28	Textiles, made up, etc	24,058.35	5,866.50	29,924.85	2,740.67		2,740.67
29	Bedding, floor coverings, etc	54,773.50	5,971.55	60,745.05	2,218.26		2,218.26
30	Bathroom and toilet fixtures, etc	50,321.87	9,128.46	59,450.33	23.28		23.28
31	Lighting apparatus (nonelectric)	50,824.31	6,901.74	57,726.05	267.39		267.39
32	Boiler and pipe covering, etc	56,478.31	3,076.15	59,554.46	17.57		17.57
33	Packing, rubber, gaskets, etc	154,855.81	170,989.28	325,845.09	909.08		909.08
34	Hose, leather, hose fittings, etc	221,880.41	16,414.04	238,294.45	477.03		477.03
35	Books, blue prints, charts, etc	63,371.36	1,406.73	64,778.09	2,571.46		2,571.46
36	Musical instruments, etc	13,610.77	943.13	14,553.90			
37	Athletic outfits and supplies	774.05	378.35	1,152.40			
38	Brooms and brushes	63,719.03	22,640.91	86,359.94	1.00		1.00
39	Lumber and timber	1,081,218.90	22,561.75	1,103,780.65	4,062.78		4,062.78
40	Machines and machine tools	180,258.27	10,227.30	190,485.57	54,221.40		54,221.40

41	Tools, hand	402,618.68	58,040.52	460,659.20	4,105.89		4,105.89
42	Hardware	401,587.21	92,479.65	494,066.86	904.50		904.50
43	Bolts, nuts, rivets, and washers	311,022.00	90,724.12	401,746.12	1,021.84		1,021.84
44	Pipe and tubing	1,902,085.83	229,301.83	2,131,387.66	716.44		716.44
45	Pipe fittings, gauges, valves	611,346.30	270,930.44	882,276.74	895.55		895.55
46	Metal in bars, billets, bolts	1,679,324.34	121,859.70	1,801,184.04	5,928.54		5,928.54
47	Metal in plates and sheets	1,172,787.48	68,496.62	1,241,284.10	17,321.01		17,321.01
48	Shapes, metal	270,940.21	7,831.46	278,771.67	128,753.89		128,753.89
49	Aeronautical fittings, etc	101,347.06	16,902.03	118,249.09	788,956.10		788,956.10
50	Foundry supplies, etc	82,374.89	11,855.00	94,229.89	598.42		598.42
51	Acids, chemicals, soaps, etc	324,691.81	57,997.92	382,689.73	373,521.43		373,521.43
52	Paints, alcohol, cements, etc	724,006.36	139,333.82	863,340.18	85.42		85.42
53	Stationery, etc	169,654.28	38,885.35	208,539.63	259.86		259.86
54	Office equipment, etc	15,974.66	3,555.45	19,530.11	533.01		533.01
55	Clothing and small stores	36,774.82	700.19	37,475.01	34.35		34.35
56	Provisions, groceries, etc	5,730.98	108.31	5,839.29	141.62		141.62
57	Drugs and surgeons' necessaries	4,668.34	4.12	4,672.46	17.71		17.71
58	Live stock, railroad supplies, etc	21,115.14	76.09	21,191.23	722.74		722.74
59	Building material, cement, etc	74,654.85	5,587.57	80,242.42	885.58		885.58
60	Boilers, engines, etc	987,823.26	194,209.31	1,182,032.57	8,420.99		8,420.99
61	Power-driven appliances, ship	27,529.78	7,474.11	35,003.89	1,539.99		1,539.99
62	Officers' mess gear, etc	111,388.79	555.55	111,944.34	2.48		2.48
63	Crew's mess gear, etc	29,549.45	20,253.47	49,802.92	175.61		175.61
64	Galley equipment, ranges, etc	153,383.53	21,081.02	174,464.55	3,173.20		3,173.20
65	Miscellaneous, scrap, etc	206,686.81	50,941.76	257,628.57	439,006.33		439,006.33
66	Shop store supplies	173,934.00		173,934.00			
67	Special construction stores	523,903.59		523,903.59			
68	do	521,511.62		521,511.62			
	Equipage afloat (title B)						
	Marine Corps stores						
	Provisions, ship's store account						
	Total in store	21,981,794.96	3,309,783.55	25,291,578.51	65,935,938.10	17,671,011.75	83,606,949.85
	Stores in transit			1,024,291.68			1,505,231.92
	Stores in custody of War Department, etc						76,969.74
	Mnaufacturing work in process ashore			1,405,883.86			8,368,320.07
	Grand total	21,981,794.96	3,309,783.55	27,721,754.05	65,935,938.10	17,671,011.75	93,557,471.58

Statement 22.—BALANCES BY CLASSES—Continued.

	Classification.	Survey account ashore.	Used material account ashore.	Equipage afloat.	Provisions, clothing, and ship's store accounts.	Medical stores.	Marine Corps stores.	Total.
1	Guns, mounts, range finders, etc	$795.55						$19,132,412.79
2	Arms, accouterments, etc	625.26	$2.55					4,214,279.14
3	Mines and torpedoes, etc	1,075.22						5,776,780.02
4	**Ammunition and ammunition details**							52,567,485.45
5	**Flags and bunting**	9,011.71						99,905.58
6	Anchors, anchor chains, etc	98,436.92	28,085.96					1,055,264.22
7	Fuel, steaming (coal and oil)							1,921,851.12
8	Fuel, other than class 7	6.92						777,002.19
9	Aeroplanes, boats, hydroplanes	83,066.84	41,833.38					496,929.13
10	Boilers and engines (boat), etc	138,025.87	52,608.70					876,138.50
11	Pumps of every character, etc	2,204.13	2,769.48					94,572.13
12	Boat and ship fittings	35,467.66	767.73					627,441.14
13	Engine and fireroom fittings	2,706.07	8.56					268,695.87
14	Oils, greases, and all lubricants	64.63						139,065.14
15	Electrical cable and wire (insulated)	563.39	310.80					473,288.07
16	Radio appurtenances, outfits, etc	2,016.53	57.00					123,553.11
17	Electrical material	43,018.47	2,942.39					1,863,457.64
18	Instruments of precision, etc	25,457.79	4,197.95					374,212.12
19	Blocks (boat and ship), etc	10,744.41						143,859.34
20	Rigging (boat and ship)	11,498.89	106.08					58,387.62
21	Cordage, hemp, oakum, twine	2,677.90	41.00					792,712.99
22	Wire (bare) and wire rope	655.83	7.00					171,429.81
23	Boat and ship utensils	18.74						42,090.74
24	Canvas and duck	231.56	33.93					277,581.90
25	Canvas and duck articles	25,344.57	1,058.09					234,485.55
26	Furniture (house and ship)	41,708.28	1.90					148,329.75
27	Dry goods, textiles							122,088.21
28	Textiles, made up, etc	5,348.85	2.14					38,016.51
29	Bedding, floor coverings, etc	3,045.43	61.28					66,070.02
30	Bathroom and toilet fixtures, etc	333.26						59,806.87
31	Lighting apparatus (nonelectric)	3,096.23						61,089.67
32	Boiler and pipe covering, etc	.32	1.00					59,573.35
33	Packing, rubber, gaskets, etc	100.37						326,854.54
34	Hose, leather, hose fittings, etc	5,816.03	13.00					244,600.51
35	Books, blue prints, charts, etc	5,677.99						73,027.54
36	Musical instruments, etc	5,500.63						20,054.53
37	Athletic outfits and supplies	43.96						1,196.36
38	Brooms and brushes	24.66						86,385.60
39	Lumber and timber	112.33						1,107,955.76
40	Machines and machine tools	10,077.67	460.32					255,244.96
41	Tools, hand	5,795.14	13.00					470,573.28

42	Hardware	610.71						495,582.07
43	Bolts, nuts, rivets, and washers	2.21						402,770.17
44	Pipe and tubing	8.46	190.60					2,132,303.16
45	Pipe fittings, gauges, valves	3,108.70	.50					886,281.49
46	Metal in bars, billets, bolts	521.66	1,064.85					1,808,699.09
47	Metal in plates and sheets	1,792.86	128.30					1,260,526.27
48	Shapes, metal	.09						407,525.65
49	Aeronautical fittings, etc	2.17						907,207.36
50	Foundry supplies, etc	380.31						96,208.62
51	Acids, chemicals, soaps, etc							756,211.16
52	Paints, alcohol, cements, etc	26.48						863,452.08
53	Stationery, etc	11.00						208,810.49
54	Office equipment, etc	3,663.30						23,726.42
55	Clothing and small stores	944.36			$2,920,501.47			2,958,955.19
56	Provisions, groceries, etc				2,110,653.93			2,116,634.84
57	Drugs and surgeons' necessaries	308.65				$352,965.97		357,964.79
58	Live stock, railroad supplies, etc	7.80						21,921.77
59	Building material, cement, etc	.60						81,128.60
60	Boilers, engines, etc	23,478.90	6,419.17					1,220,351.63
61	Power-driven appliances, ship	2,084.71						38,628.59
62	Officers' mess gear, etc	4,213.24						116,160.06
63	Crew's mess gear, etc	351.28						50,329.81
64	Galley equipment, ranges, etc	1,506.36	1,291.00					180,435.11
65	Miscellaneous, scrap, etc	1,717.47	96.42					698,448.79
66	Shop store supplies							173,934.00
67	Special construction stores							523,903.59
68	.....do							521,511.62
	Equipage afloat (title B)			$74,245,405.79				74,245,405.79
	Marine Corps stores						$3,660,490.43	3,660,490.43
	Provisions, ship's store account				265,288.13			265,288.13
	Total in store	625,137.33	144,574.08	74,245,405.79	5,296,443.53	352,965.97	3,660,490.43	193,223,545.49
	Stores in transit	*310.91*	747.61	1,008,452.15	979,533.45			4,517,945.90
	Stores in custody of War Department, etc		52,354.61					129,324.35
	Manufacturing work in process ashore				27,280.15			9,801,484.08
	Grand total	624,826.42	197,676.30	75,253,857.94	6,303,257.13	352,965.97	3,660,490.43	207,672,299.82

Statement 23.—SUPPLY DEPARTMENT OPERATIONS, 1916.

[NOTE.—For complete stores statistics, see Statements 21, 22, and 24 to 35 inclusive. This statement does not include stores in transit, afloat, at foreign stations, at magazines outside of navy yards, or coal at depots outside of navy yards.]

	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Indianhead.	Norfolk.	Charleston.	Mare Island.	Puget Sound.
1. Number of shipments made:										
Freight	824	1,578	5,047	1,102	1,652	152	1,629	566	1,634	295
Express	283	616	1,076	438	1,291	61	530	65	404	56
Mail	399	760	10,727	1,446	11,286	160	1,740	248	686	209
Government conveyance	19	38	785	36	50	.....	975	20	990	95
2. Number of public bills	3,671	7,258	20,043	6,800	8,936	990	7,177	2,197	8,619	4,373
3. Average number of days between dates of deliveries and dates of acceptance	3	9	4½	6	15	3	10	2	6	5
4. Average number of days between dates of acceptance and dates of preparation of public bills	1	10	4	6	6	18	7	2	4	3
5. Average number of days required to make payments	2	1	2	2	2	.....	1	1	1	1
6. Number of naval supply account requests submitted	155	605	1,093	610	141	131	514	196	475	273
7. Number of requisitions prepared:										
Local	393	919	1,454	587	910	131	769	133	306	239
Bureau	473	1,322	2,429	1,053	1,258	121	1,295	634	905	440
8. Number of ships' requisitions filled	2,428	7,387	22,457	7,754	1,515	12	5,300	1,657	7,400	2,557
9. Number of issue invoices prepared	6,394	16,735	64,328	22,498	13,443	.....	18,681	5,005	28,000	6,634
10. Number of manufacturing requests prepared	1,452	1,489	3,570	1,776	633	.....	1,449	431	3,087	923
11. Number of stub requisitions filled	36,000	74,884	120,667	68,819	179,100	15,933	40,227	39,537	70,358	26,117
12. Total value of naval supply account stores on hand July 1, 1915 (in navy yards only)	$833,050.65	$1,911,379.02	$2,601,446.94	$1,588,996.59	$922,191.25	$145,517.80	$2,180,260.83	$508,651.45	$2,915,962.32	$1,347,774.06
13. Total value of receipts in naval supply account	$2,224,887.20	$4,268,496.32	$8,927,666.23	$4,002,239.11	$3,806,925.76	$1,504,237.04	$6,676,031.08	$1,051,832.84	$3,929,952.68	$1,661,669.25
14. Total issue of naval supply account stores	$1,601,514.98	$3,952,274.80	$7,630,543.05	$3,742,927.06	$3,530,469.00	$1,266,852.92	$6,157,488.64	$859,801.91	$4,608,792.60	$1,612,559.44
15. Total value of naval supply account stores on hand June 30, 1916 (in navy yards only)	$1,456,422.87	$2,227,600.54	$3,898,570.12	$1,848,308.64	$1,198,648.01	$382,901.92	$2,698,803.27	$700,682.38	$2,237,122.40	$1,396,883.87
16. Total issue of nonperishable provisions	$53,441.23	$354,441.37	$2,709,318.64	$442,377.09	.....	.....	$403,511.14	$37,106.61	$611,222.96	$97,004.16
17. Total issue of clothing and small stores	$48,560.15	$191,625.64	$2,959,579.08	$286,351.12	.....	.....	$136,435.63	$317,144.90	$420,467.32	$140,281.86
18. Total value of clothing and small stores on hand June 30, 1916	$36,184.02	$121,172.19	$987,892.50	$153,014.23	.....	.....	$71,067.09	$65,324.47	$187,918.22	$62,549.74
19. Total receipts of manufactured stores under title Z, naval supply account	$709,321.83	$1,394,408.39	$1,673,188.03	$1,001,660.34	$1,442,789.69	.....	$823,147.04	$113,532.11	$959,471.94	$545,798.72
20. Total value of ordnance stores on hand July 1, 1915	$289,450.85	$1,676,910.32	$2,184,651.66	$3,312,018.68	$11,529,915.88	$2,314,484.70	$848,719.48	$584,847.48	$4,655,205.06	$2,458,817.68

21. Total receipts of ordnance stores	$130,899.94	$359,337.73	$1,900,401.63	$1,430,028.82	$12,045,639.70	$3,962,440.56	$2,472,655.55	$250,236.91	$862,753.37	$1,443,017.79
22. Total issues of ordnance stores	$131,891.88	$1,430,078.26	$641,966.68	$2,316,753.44	$10,597,570.84	$3,358,268.17	$2,289,346.27	$156,512.80	$1,317,098.30	$1,709,353.47
23. Total value of ordnance stores on hand June 30, 1916	$288,458.91	$606,169.79	$3,443,086.61	$2,425,294.06	$12,977,984.74	$2,918,657.09	$1,032,028.76	$678,571.56	$4,200,860.13	$2,191,981.95
24. Total value of scrap on hand July 1, 1915	$36,972.71	$13,929.64	$14,842.80	$23,685.46	$168,622.66	$27,000.00	$28,082.42	$2,379.78	$67,249.64	$11,467.55
25. Total value receipts of scrap	$209,035.72	$28,736.95	$117,326.12	$60,743.43	$346,006.72	$12,150.00	$119,804.16	$19,425.00	$48,229.36	$12,649.59
26. Total issues of scrap	$172,575.54	$39,978.36	$107,538.79	$50,021.68	$415,292.50	.....	$112,763.21	$18,407.77	$55,475.76	$19,709.84
27. Total value of scrap on hand June 30, 1916	$73,432.89	$2,688.23	$24,630.13	$34,407.21	$99,336.88	$39,150.00	$35,123.37	$3,397.01	$60,003.24	$4,407.30
28. Total cost of maintenance of storehouses charged to "Maintenance, supplies and accounts":										
Labor	$51,933.48	$97,209.60	$293,717.67	$112,165.52	$58,407.87	$2,391.59	$146,753.48	$45,063.12	$154,160.73	$54,208.93
Material	$3,666.12	$9,511.35	$27,914.86	$14,991.85	$4,286.72	.....	$16,750.88	$2,324.05	$8,586.87	$6,348.60
29. Estimated value of inactive stock on hand July 1, 1915	$104,470.80	$146,271.63	.....	$139,000.00	$31,631.00	$5,275.41	$238,407.00	$5,300.00	$13,468.86	$250,000.00
30. Estimated value of inactive stock on hand June 30, 1916	$65,642.61	$135,600.00	$56,919.70	$74,900.00	$65,511.27	$2,000.00	$217,407.00	$14,000.00	$86,738.45	$198,000.00
31. Total number of classified employees permanently on the rolls July 1, 1915	17	38	133	38	42	3	45	12	107	30
32. Total paid for salaries to classified employees	$18,252.36	$42,767.04	$141,938.28	$40,919.92	$27,228.00	$5,015.66	$51,407.93	$16,119.12	$117,968.63	$29,731.66
33. Total number of classified employees June 30, 1916	37	40	150	44	52	7	49	15	118	31
34. Total labor charges for unclassified employees	$33,681.12	$71,622.00	$150,758.76	$49,890.02	$180,515.30	$3,086.70	$79,558.21	$28,944.00	$50,149.11	$34,477.27
35. Total number of chemical analyses made	.....	2,026	8,975	2,561	.....	7,840	2,528	.....	1,107	908
36. Number of laboratory employees	.....	5	19	4	.....	13	4	.....	3	4
37. Annual cost of such services	.....	$6,932.72	$24,940.84	$9,949.78	.....	$18,984.06	$5,630.64	.....	$4,570.00	$3,949.36
38. Total value of fuel on hand July 1, 1915 (in navy yards)	$35,847.56	$49,356.02	$13,921.66	$2,140.16	$6,809.16	$7,929.17	$41,990.00	$47,742.83	$1,105.594.39	$287,588.73
39. Total receipts fuel	$76,140.39	$291,025.65	$534,657.23	$300,836.39	$44,555.41	$104,381.07	$1,958,441.14	$79,927.52	$914,036.15	$159,197.61
40. Total issues fuel	$103,946.73	$329,912.39	$478,208.34	$277,655.36	$44,948.28	$104,263.55	$1,967,106.37	$75,385.30	$1,796,990.32	$236,449.88
41. Total value of fuel on hand June 30, 1916 (in navy yards)	$8,041.22	$10,469.28	$70,370.55	$25,321.19	$6,416.29	$8,046.69	$33,324.77	$52,285.05	$222,640.22	$210,336.46
42. Value of military reserve stock ordered during the year	$76,141.10	$110,000.00	$356,657.79	$431,058.00	$1,448,068.86	.....	$155,179.00	$253,700.00	$323,136.59	$270,953.27
43. Square feet of floor space occupied by all stores under cover	200,000	385.000	524,330	257,992	265,200	36,615	546,300	74,500	498,856	241,961
44. Additional floor space necessary to properly store all active and reserve stock	.....	180,000	103,000	152,049	7,500	16,300	500,000	63,000	36,000	15,850

Statement 23.—SUPPLY DEPARTMENT OPERATIONS, 1916—Continued.

	Training station, Newport, R. I.	Torpedo Station, Newport, R. I.	Key West.	Pensacola.	New Orleans.	Great Lakes.	Las Animas.	Training station, California.	Total.
1. Number of shipments made:									
Freight	49	576	22	26	76	155		5	15,388
Express	51	328	18	74	36	106		23	5,456
Mail	6	1,658	21	2	17			1	29,366
Government conveyance	1	16	13		4			36	3,078
2. Number of public bills	1,515	2,171	461	1,254	1,411	1,361	31	416	73,684
3. Average number of days between dates of deliveries and dates of acceptance	6.5	8	2	5	4	3	1	3	[1] 5.9
4. Average number of days between dates of acceptance and dates of preparation of public bills	2.9	14	3	2.5	4	4	2.7	5	[1] 5.5
5. Average number of days required to make payments	9.5	23	1.5	2	2.84	5	2	2	[1] 3.4
6. Number of naval supply account requests submitted		706	127		6	39		210	5,281
7. Number of requisitions prepared:									
Local	85				212	39		162	6,389
Bureau	440	1,488	183	861	365	185	9	1	13,462
8. Number of ships' requisitions filled		1,499	476	96	402				60,940
9. Number of issue invoices prepared	410	4,898	684	120	617	24		91	188,562
10. Number of manufacturing requests prepared		300	29		60				15,199
11. Number of stub requisitions filled	1,723	22,429	8,592	8,259	5,693	1,895	90	1,911	717,229
12. Total value of naval supply account stores on hand July 1, 1915 (in navy yards only)	$9,109.36	$140,344.23	$131,503.53	$$18,915.65	$22,793.70	$25,616.24	$988.19	$2,437.68	$15,306,939.49
13. Total value of receipts in naval supply account	$103,960.56	$622,328.46	$144,002.97	$361,232.10	$222,264.54	$73,158.63	$9,845.74	$76,374.47	$39,667,104.98
14. Total issue of naval supply account stores	$103,692.71	$539,290.30	$160,115.69	$276,685.15	$151,888.71	$60,164.36	$5,544.38	$74,018.01	$36,334,623.71
15. Total value of naval supply account stores on hand June 30, 1916 (in navy yards only)	$9,377.21	$223,382.39	$115,390.81	$103,462.60	$93,169.53	$38,610.51	$5,289.55	$4,794.14	$18,639,420.76
16. Total issue of nonperishable provisions	$84,875.28	$6,277.46	$13,976.17		$7,965.00	$34,343.35		$24,486.85	$4,880,347.30
17. Total issue of clothing and small stores	$15,427.06	$7,977.34	$19,187.14		$2,536.19	$168,572.69			$4,714,146.12
18. Total value of clothing and small stores on hand June 30, 1916	$13,572.74		$11,061.71	$46.11	$1,840.20	$101,850.30			$1,813,493.52
19. Total receipts of manufactured stores under title Z, naval supply account		$47,201.65	$18,732.75	$5,512.32	$1,716.45				$8,736,481.26
20. Total value of ordnance stores on hand July 1, 1915		$3,662,315.78	$1,204.04		$15,425.35	$75.00		$72.00	$33,533,613.88
21. Total receipts of ordnance stores	$8,300.39	$3,397,129.12	$6,156.32	$2,459.51	$35,786.12	$12,173.08		$5,741.85	$28,325,158.39
22. Total issues of ordnance stores	$8,214.14	$3,118,544.29	$106.31	$61.63	$34,394.98	$12,173.08		$5,818.85	$27,128,148.39
23. Total value of ordnance stores on hand June 30, 1916	$86.25	$3,940,900.61	$7,254.05	$2,397.88	$16,816.49	$75.00			$34,730,623.88
24. Total value of scrap on hand July 1, 1915	$119.00	$514.02	$379.40						$395,245.08
25. Total value receipts of scrap	$1,041.20	$3,964.30	$60.11		$23.30				$979,195.96
26. Total issues of scrap	$1,085.20	$3,762.66	$85.34						$996,606.65
27. Total value of scrap on hand June 30, 1916	$75.00	$715.66	$354.17		$23.30				$377,744.39

28. Total cost of maintenance of storehouses charged to "Maintenance, supplies and accounts":									
Labor	$2,247.30	$10,940.92	$6,263.03	$2,730.26	$1,218.57	$6,975.30	.....	$766.36	$1,047,153.73
Material	$423.04	$89.01	$38.05	$175.00	.....	$631.41	.....	.....	$95,737.81
29. Estimated value of inactive stock on hand July 1, 1915	.....	.....	.....	$600.00	.....	$1,389.11	.....	.....	$935,813.81
30. Estimated value of inactive stock on hand June 30, 1916	.....	$2,000.00	$1,808.10	$1,200.00	.....	$522.37	.....	.....	$922,249.50
31. Total number of classified employees permanently on the rolls July 1, 1915	1	7	14	1	2	5	.....	2	497
32. Total paid for salaries to classified employees	$1,590.62	$8,838.24	$14,634.04	$3,838.64	$4,278.76	$5,744.70	.....	$2,208.80	$532,482.40
33. Total number of classified employees June 30, 1916	2	9	16	6	3	5	.....	2	586
34. Total labor charges for unclassified employees	$2,247.30	$10,940.92	$92,244.27	$2,760.26	$1,449.94	$1,230.60	.....	$1,783.48	$795,339.26
35. Total number of chemical analyses made	.....	.....	.....	.....	.....	.....	.....	.....	25,945
36. Number of laboratory employees	.....	.....	.....	.....	.....	.....	.....	.....	52
37. Annual cost of such services	.....	.....	.....	.....	.....	.....	.....	.....	$74,957.40
38. Total value of fuel on hand July 1, 1915 (in navy yards)	$226.40	$759.21	$90,867.72	$2,925.51	$8,900.20	$1,232.47	$44.20	$33.91	$1,693,909.30
39. Total receipts fuel	$29,132.49	$31,077.72	$63,517.31	$59,927.27	$13,678.58	$15,083.88	$478.23	$26,434.88	$4,702,528.92
40. Total issues fuel	$28,537.76	$30,790.35	$86,792.28	$61,492.32	$19,616.74	$16,259.00	$522.43	$26,262.62	$5,685,140.02
41. Total value of fuel on hand June 30, 1916 (in navy yards)	$821.13	$1,046.58	$57,592.75	$1,360.46	$2,962.04	$57.35	.....	$206.17	$711,298.20
42. Value of military reserve stock ordered during the year	.....	.....	.....	.....	.....	.....	.....	.....	$3,424,894.61
43. Square feet of floor space occupied by all stores under cover	4,271	52,734	50,485	23,077	16,709	12,350	1,400	2,500	3,194,280
44. Additional floor space necessary to properly store all active and reserve stock	.....	15,000	13,730	11,538	55,000	2,850	.....	600	1,172,417

[1] Average.

Statement 24.—ANNUAL TURNOVER OF PRINCIPAL CLASSES OF NAVAL SUPPLY ACCOUNT STORES.

[To find average number of months' supply carried, divide 12 by the annual turnover.]

	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Class 5.—Flags and bunting:										
Annual issues	$1,900	$10,350	$108,230	$16,640	$2,260	$11,340	$590	$20,075	$5,915	$177,300
Average stock carried	$2,170	$3,820	$21,025	$10,765	$820	$6,985	$885	$9,320	$4,345	$60,135
Annual turnover	0.9	2.7	[1] 5.2	1.5	2.8	1.6	0.7	[1] 2.2	1.4	2.9
On hand June 30, 1916	$2,350	$3,445	$33,120	$6,890	$580	$6,740	$1,030	$11,540	$3,930	$69,625
Number of months' supply on hand June 30, 1916	14.8	4.0	3.7	4.9	3.1	7.1	22.9	6.9	8.0	4.7
Class 7.—Fuel, steaming (coal and oil):										
Annual issues	$103,900	$254,700	$429,100	$168,300	.....	$1,668,100	$28,900	$1,263,000	$169,100	$4,085,100
Average stock carried	$15,200	$24,200	$11,100	$1,900	.....	$53,600	$8,800	$718,700	$2,600	$836,100
Annual turnover	6.8	10.5	38.7	88.6	.....	31.1	3.3	1.8	65.0	4.9
On hand June 30, 1916	$8,100	$9,100	$32,800	$5,000	.....	$4,700	$18,000	$290,800	$208,800	$577,300
Number of months' supply on hand June 30, 1916	0.9	0.4	1.0	0.4	.....	0.04	7.0	2.9	15.4	1.7
Class 8.—Fuel, other than class 7:										
Annual issues	$27,600	$75,300	$85,900	$109,400	$189,400	$541,600	$49,000	$14,140	$74,400	$1,166,740
Average stock carried	$1,700	$7,800	$11,300	$11,000	$6,200	$68,200	$31,700	$4,600	$3,300	$145,800
Annual turnover	16.2	9.7	7.6	9.9	30.5	7.9	1.5	3.1	22.5	8.0
On hand June 30, 1916	$2,300	$1,300	$12,200	$20,300	$14,300	$67,100	$37,000	$3,500	$4,000	$162,000
Number of months' supply on hand June 30, 1916	1.0	0.2	1.7	2.2	1.0	1.5	9.1	3.0	0.6	1.7
Class 12.—Boat and ship fittings and accessories (not classified elsewhere):										
Annual issues	$99,300	$129,900	$200,600	$136,300	$9,000	$65,100	$12,100	$80,900	$36,200	$769,400
Average stock carried	$46,200	$56,700	$74,200	$92,400	$8,200	$68,800	$13,500	$39,600	$47,200	$446,800
Annual turnover	2.2	2.3	2.7	1.5	1.1	0.9	0.9	2.0	0.8	1.7
On hand June 30, 1916	$50,600	$48,900	$75,600	$78,800	$9,100	$58,600	$13,400	$27,100	$41,300	$403,400
Number of months' supply on hand June 30, 1916	6.1	4.6	4.5	7.0	12.1	10.8	13.3	4.0	13.7	6.2
Class 13.—Engine and fire room fittings and supplies:										
Annual issues	$15,200	$36,100	$94,100	$48,400	$9,900	$36,900	$9,300	$38,400	$17,600	$305,900
Average stock carried	$8,700	$13,000	$16,100	$26,100	$8,300	$14,300	$3,900	$6,500	$11,100	$108,000
Annual turnover	1.8	2.8	5.8	1.9	1.2	2.6	2.4	5.9	1.6	2.8
On hand June 30, 1916	$12,600	$14,000	$22,900	$27,500	$8,000	$19,300	$5,900	.....	$8,200	$118,400
Number of months' supply on hand June 30, 1916	10.0	4.7	2.9	6.8	9.7	6.3	7.6	.....	5.6	4.6
Class 14.—Oils (illuminating and lubricating), grease, and all lubricants:										
Annual issues	$10,300	$47,000	$35,000	$13,860	$23,930	$32,580	$5,630	$34,920	$10,640	$213,860
Average stock carried	$5,000	$4,300	$21,000	$4,570	$2,070	$7,870	$4,620	$5,250	$2,730	$57,410
Annual turnover	2.1	11.0	1.7	3.0	11.5	4.1	1.2	6.7	3.9	3.9
On hand June 30, 1916	$12,600	$5,870	$24,000	$4,860	$4,150	$9,030	$4,260	$6,710	$2,670	$74,150
Number of months' supply on hand June 30, 1916	14.7	1.5	8.2	4.2	2.1	3.3	9.1	2.3	3.0	4.1

Class 15.—Electrical cable and wire (insulated):										
Annual issues	$10,780	$24,850	$218,000	$34,800	$22,100	$24,500	$7,000	$43,700	$23,500	$409,230
Average stock carried	$14,610	$7,440	$169,400	$31,000	$8,840	$37,200	$6,700	$66,500	$27,700	$369,390
Annual turnover	0.7	3.2	1.3	1.1	2.5	0.7	1.0	0.7	0.9	1.1
On hand June 30, 1916	$17,110	$9,330	$182,700	$36,800	$6,520	$37,100	$7,500	$60,700	$29.400	$387,160
Number of months' supply on hand June 30, 1916	19.0	4.5	10.1	12.7	3.5	18.2	12.9	16.7	15.0	11.1
Class 16.—Radio appurtenances, outfits, and supplies:										
Annual issues	$20,700	$55,900	$299,300	$79,200	$140,300	$37,400	$15,400	$91,900	$17,300	$757,400
Average stock carried	$6,100	$14,500	$6,800	$10,800	$39,500	$17,200	$6,700	$27,400	$2,000	$131,000
Annual turnover	3.4	3.2	44.0	7.3	3.6	2.2	2.3	3.4	8.7	5.8
On hand June 30, 1916	$2,200	$13,500	.....	$13,600	$47,500	$12,500	$5,000	$24,800	$700	$119,800
Number of months' supply on hand June 30, 1916	1.3	2.9	.....	2.1	4.1	3.0	4.0	3.2	0.5	1.9
Class 17.—Electrical material other than classes 15 and 16:										
Annual issues	$89,000	$141,000	$450,600	$226,600	$33,500	$172,100	$55,400	$175,100	$36,300	$1,379,600
Average stock carried	$142,300	$83,400	$406,300	$167,700	$24,100	$146,300	$22,100	$120,400	$73,500	$1,186,100
Annual turnover	0.6	1.7	1.1	1.3	1.4	1.2	2.5	1.4	0.5	1.2
On hand June 30, 1916	$144,400	$84,500	$428,000	$163,100	$24,800	$133,200	$27,100	$123,500	$70,800	$1,199,400
Number of months' supply on hand June 30, 1916	19.4	7.2	11.2	8.6	8.9	9.2	5.9	8.5	23.4	10.4
Class 19.—Blocks (boat and ship, excluding blocks, chain), block pins, and sheaves:										
Annual issues	$36,900	$9,200	$22,000	$19,900	$180	$8,400	$1,450	$17,100	$3,400	$118,530
Average stock carried	$50,100	$5,000	$18,700	$20,300	$80	$5,900	$1,650	$8,000	$1,300	$111,030
Annual turnover	0.7	1.8	1.2	0.9	2.3	1.4	0.9	2.1	2.6	1.1
On hand June 30, 1916	$51,400	$1,600	$19,200	$20,900	$60	$3,200	$740	$4,700	$1,300	$103,100
Number of months' supply on hand June 30, 1916	[2] 16.7	2.1	10.5	12.6	4.0	4.5	6.1	3.3	4.6	10.5
Class 20.—Rigging, ship and boat, standing and running:										
Annual issues	$3,000	$17,800	$6,300	$26,500	$60	$15,200	$1,100	$15,500	$4,500	$89,960
Average stock carried	$4,200	$9,900	$4,500	$12,400	$40	$2,500	$500	$4,700	$2,000	$40,740
Annual turnover	0.7	1.8	1.4	2.1	1.5	6.1	2.2	3.3	2.3	2.2
On hand June 30, 1916	$4,700	$9,900	$6,400	$11,400	$80	$1,200	$700	$3,000	$2,000	$39,380
Number of months' supply on hand June 30, 1916	18.8	6.7	12.2	5.2	16.0	0.9	7.6	2.3	5.3	5.3
Class 21.—Cordage, hemp, oakum, twine:										
Annual issues	$20,100	$706,800	$368,100	$63,500	$5,600	$78,000	$10,100	$76,500	$25,900	$1,354,600
Average stock carried	$35,100	$152,600	$16,800	$30,200	$10,200	$34,300	$13,700	$15,600	$17,000	$325,500
Annual turnover	0.6	[3] [4] 4.6	21.9	2.1	0.5	2.3	0.7	4.9	1.5	4.1
On hand June 30, 1916	$109,200	$375,000	$13,100	$29,300	$10,800	$35,200	$18,000	$20,400	$16,800	$627,800
Number of months' supply on hand June 30, 1916	65.2	6.4	0.4	5.5	23.2	5.4	21.3	3.2	7.9	5.6
Class 22.—Wire, bare, and wire rope:										
Annual issues	$5,300	$125,800	$21,700	$14,000	$3,300	$55,000	$3,200	$21,300	$6,300	$255,900
Average stock carried	$7,300	$47,600	$14,400	$10,900	$6,500	$15,600	$3,800	$5,400	$13,800	$125,300
Annual turnover	0.7	[4] 2.7	1.5	1.3	0.5	3.5	0.9	4.0	0.5	2.0
On hand June 30, 1916	$7,700	$42,000	$16,900	$9,800	$8,500	$11,000	$3,800	$5,300	$13,300	$118,300
Number of months' supply on hand June 30, 1916	17.4	4.0	9.3	8.4	30.9	2.4	14.2	3.0	25.3	5.6

[1] Flag manufacturing shops located at these yards. [2] Block shop located at this yard. [3] Rope walk and wire rope mill located at this yard.
[4] Raw hemp was carried in class 23 until October, 1915, when transferred to class 21.

Statement 24.—ANNUAL TURNOVER OF PRINCIPAL CLASSES OF NAVAL SUPPLY ACCOUNT STORES—Continued.

	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Class 23.—Boat and ship utensils (not classified elsewhere):										
Annual issues	$240	.....	$289,400	$600	.....	$21,900	$20	$2,700	.....	$554,660
Average stock carried	$10	.....	$2,900	$600	.....	$20,000	$50	$300	$30	$62,290
Annual turnover	24.0	.....	99.0	1.0	.....	1.1	0.4	9.0	.....	8.9
On hand June 30, 1916	$15	.....	$11,300	$1,000	.....	$28,200	$50	$500	$80	$41,165
Number of months' supply on hand June 30, 1916	0.8	.....	.....	20.0	.....	15.4	30.0	2.2	.....	0.9
Class 24.—Canvas and duck:										
Annual issues	$11,100	$40,700	$231,300	$26,000	$3,900	$50,000	$3,800	$28,400	$18,400	$413,600
Average stock carried	$5,100	$24,800	$111,500	$21,000	$1,500	$26,800	$3,400	$3,200	$9,800	$207,100
Annual turnover	2.2	1.6	2.1	1.2	2.6	1.9	1.1	9.0	1.9	2.0
On hand June 30, 1916	$8,000	$28,800	$116,500	$29,000	$2,500	$38,200	$4,800	.....	$12,800	$240,600
Number of months' supply on hand June 30, 1916	8.6	8.5	6.0	13.4	7.7	9.2	15.2	.....	8.3	7.0
Class 25.—Canvas and duck articles:										
Annual issues	$22,900	$59,100	$78,200	$65,900	$1,200	$57,100	$10,100	$38,600	$23,600	$356,700
Average stock carried	$13,600	$25,400	$23,100	$29,900	$200	$35,300	$1,800	$16,100	$7,200	$152,600
Annual turnover	1.7	2.3	3.4	2.2	6.0	1.6	5.6	2.3	3.3	2.4
On hand June 30, 1916	$14,400	$30,100	$23,900	$22,900	$200	$37,600	$1,500	$15,500	$7,500	$153,600
Number of months' supply on hand June 30, 1916	7.6	6.1	3.7	4.2	2.0	8.0	1.8	4.8	3.8	5.2
Class 27—Dry goods, textiles (except canvas), duck, and bunting:										
Annual issues	$3,300	$11,300	$61,000	$20,200	$2,200	$6,800	$1,400	$11,700	$2,900	$120,800
Average stock carried	$2,300	$3,100	$19,900	$9,200	$2,500	$5,500	$1,300	$2,900	$1,900	$48,600
Annual turnover	1.4	3.7	3.1	2.2	0.9	1.2	1.1	4.0	1.5	2.5
On hand June 30, 1916	$3,600	$2,700	$28,100	$10,000	$4,300	$6,100	$900	$1,900	$2,600	$60,200
Number of months' supply on hand June 30, 1916	13.1	3.0	5.5	5.9	23.5	10.8	7.7	1.9	10.8	6.0
Class 28—Textiles, made up, such as curtains, rugs, etc.:										
Annual issues	$1,200	$6,200	$21,700	$5,600	$1,000	$3,700	$900	$8,500	$4,100	$52,900
Average stock carried	$1,600	$5,000	$2,100	$3,100	$80	$1,600	$500	$5,800	$1,200	$20,980
Annual turnover	0.8	1.2	10.3	1.8	12.5	2.3	1.8	1.5	3.4	2.5
On hand June 30, 1916	$1,800	$3,700	$4,400	$1,400	$70	$1,100	$700	$5,800	$1,200	$20,170
Number of months' supply on hand June 30, 1916	18.0	7.2	2.4	3.0	0.8	3.6	9.3	8.2	3.5	4.6
Class 29—Bedding, floor coverings and upholstery (not classified elsewhere):										
Annual issues	$5,100	$17,100	$32,000	$88,100	$1,100	$16,500	$3,000	$21,100	$6,900	$190,900
Average stock carried	$2,700	$4,500	$13,700	$14,200	$800	$10,900	$3,100	$8,300	$3,700	$61,900
Annual turnover	1.9	3.8	2.3	5.8	1.4	1.5	1.0	2.5	1.9	3.1
On hand June 30, 1916	$3,800	$3,400	$12,600	$10,100	$700	$6,600	$3,500	$5,800	$4,400	$50,900
Number of month's supply on hand June 30, 1916	9.0	2.4	4.7	1.4	7.6	4.8	14.0	3.3	7.7	3.2

Class 30—Bathroom and toilet fixtures:										
Annual issues	$3,300	$7,300	$24,700	$8,000	$1,700	$4,500	$2,000	$5,400	$5,000	$62,400
Average stock carried	$2,200	$3,800	$7,000	$1,300	$400	$5,800	$500	$6,100	$3,300	$30,400
Annual turnover	1.5	1.9	3.5	6.5	4.3	0.8	4.0	0.9	1.5	2.1
On hand June 30, 1916	$2,900	$4,700	$5,700	$1,600	$200	$8,100	$800	$5,700	$3,900	$33,600
Number of months' supply on hand June 30, 1916	10.5	7.7	2.8	2.3	1.4	21.6	4.8	12.7	9.4	6.5
Class 32—Boiler and pipe coverings:										
Annual issues	$2,100	$3,900	$12,900	$4,100	$800	$9,000	$2,400	$7,600	$3,900	$46,700
Average stock carried	$900	$4,600	$5,300	$3,500	$1,200	$7,700	$3,600	$3,600	$4,700	$35,100
Annual turnover	2.4	0.8	2.4	1.2	0.7	1.2	0.7	2.1	0.8	1.3
On hand June 30, 1916	$1,200	$5,300	$8,400	$3,600	$1,200	$10,900	$4,200	$11,100	$5,100	$51,000
Number of months' supply on hand June 30, 1916	7.0	16.3	8.0	10.3	18.0	14.5	21.0	17.5	15.7	13.1
Class 33—Packing (rubber), gaskets, and all articles made of rubber (not classified elsewhere):										
Annual issues	$15,300	$28,300	$57,500	$42,400	$5,700	$29,400	$5,500	$38,300	$9,700	$232,100
Average stock carried	$7,800	$12,300	$16,500	$13,500	$9,100	$31,100	$6,400	$4,200	$7,800	$108,700
Annual turnover	2.0	2.3	3.5	3.1	0.6	0.9	0.9	9.1	1.2	2.1
On hand June 30, 1916	$8,200	$12,600	$20,400	$16,600	$8,300	$36,300	$6,200	$4,400	$8,300	$121,300
Number of months' supply on hand June 30, 1916	6.4	5.0	4.2	4.7	17.5	14.8	13.5	1.4	10.3	6.3
Class 34—Hose (leather), flexible tubing, hose fittings, leather belting:										
Annual issues	$13,500	$34,600	$71,400	$68,400	$12,500	$27,000	$11,900	$30,500	$11,600	$281,400
Average stock carried	$8,400	$15,800	$24,400	$35,400	$10,300	$19,600	$5,300	$27,800	$11,500	$158,500
Annual turnover	1.6	2.2	2.9	1.9	1.2	1.4	2.2	1.1	1.0	1.8
On hand June 30, 1916	$12,600	$26,600	$26,900	$52,900	$11,500	$20,900	$4,700	$23,500	$12,100	$191,700
Number of months' supply on hand June 30, 1916	11.2	9.2	4.5	9.3	11.0	9.3	4.8	9.2	12.5	8.2
Class 38—Brooms and brushes:										
Annual issues	$4,400	$9,800	$23,500	$11,900	$3,400	$12,600	$2,100	$13,300	$6,900	$87,900
Average stock carried	$1,700	$5,000	$10,600	$5,200	$4,500	$11,900	$1,800	$3,000	$5,600	$49,300
Annual turnover	2.6	2.0	2.2	2.3	0.8	1.1	1.2	4.4	1.2	1.8
On hand June 30, 1916	$2,900	$6,200	$14,300	$6,400	$4,100	$11,200	$2,300	$2,000	$3,300	$52,700
Number of months' supply on hand June 30, 1916	7.9	7.6	7.3	6.5	14.5	10.7	13.1	1.8	5.7	7.2
Class 39—Lumber and timber:										
Annual issues	$59,700	$105,700	$223,400	$88,900	$74,500	$140,100	$26,500	$119,600	$69,400	$907,800
Average stock carried	$72,000	$98,900	$122,200	$79,600	$48,300	$231,200	$21,800	$73,300	$35,700	$783,000
Annual turnover	0.8	1.1	1.8	1.1	1.5	0.6	1.2	1.6	1.9	1.2
On hand June 30, 1916	$106,400	$111,400	$152,800	$101,800	$49,300	$278,400	$26,200	$83,700	$39,100	$949,100
Number of months' supply on hand June 30, 1916	21.4	12.6	7.9	13.7	7.9	23.9	12.0	8.4	7.0	12.5
Class 41—Tools, hand:										
Annual issues	$10,600	$38,100	$87,600	$98,300	$29,100	$43,700	$10,700	$41,500	$14,700	$374,300
Average stock carried	$14,700	$34,500	$73,300	$52,400	$23,900	$34,500	$16,000	$28,300	$19,000	$296,600
Annual turnover	0.7	1.1	1.2	[1] 1.9	1.2	1.2	0.7	1.5	0.8	1.3
On hand June 30, 1916	$15,900	$34,900	$113,800	$61,000	$23,200	$38,100	$16,100	$27,200	$18,400	$348,600
Number of months' supply on hand June 30, 1916	18.0	11.2	15.7	7.5	9.6	10.5	18.1	7.8	15.0	11.2
Class 42—Hardware:										
Annual issues	$17,200	$29,900	$75,600	$41,700	$13,100	$69,700	$6,300	$47,400	$17,900	$318,800
Average stock carried	$10,000	$16,000	$60,100	$32,200	$19,700	$50,900	$15,000	$39,800	$29,700	$273,400
Annual turnover	1.7	1.9	1.2	1.3	0.7	1.4	0.4	1.2	0.6	1.2
On hand June 30, 1916	$23,100	$16,600	$70,600	$45,900	$21,400	$57,900	$14,700	$39,300	$28,200	$317,700
Number of months' supply on hand June 30, 1916	16.1	6.6	11.2	13.2	19.6	10.0	28.0	10.0	18.9	11.9

[1] Tool manufacturing plant located at this yard.

Statement 24.—ANNUAL TURNOVER OF PRINCIPAL CLASSES OF NAVAL SUPPLY ACCOUNT STORES—Continued.

	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Class 23.—Boat and ship utensils (not classified elsewhere):										
Annual issues	$240	.....	$289,400	$600	.....	$21,900	$20	$2,700	.....	$554,660
Average stock carried	$10	.....	$2,900	$600	.....	$20,000	$50	$300	$30	$62,290
Annual turnover	24.0	.....	99.0	1.0	.....	1.1	0.4	9.0	.....	8.9
On hand June 30, 1916	$15	.....	$11,300	$1,000	.....	$28,200	$50	$500	$80	$41,165
Number of months' supply on hand June 30, 1916	0.8	.....	.....	20.0	.....	15.4	30.0	2.2	.....	0.9
Class 24.—Canvas and duck:										
Annual issues	$11,100	$40,700	$231,300	$26,000	$3,900	$50,000	$3,800	$28,400	$18,400	$413,600
Average stock carried	$5,100	$24,800	$111,500	$21,000	$1,500	$26,800	$3,400	$3,200	$9,800	$207,100
Annual turnover	2.2	1.6	2.1	1.2	2.6	1.9	1.1	9.0	1.9	2.0
On hand June 30, 1916	$8,000	$28,800	$116,500	$29,000	$2,500	$38,200	$4,800	.....	$12,800	$240,600
Number of months' supply on hand June 30, 1916	8.6	8.5	6.0	13.4	7.7	9.2	15.2	.....	8.3	7.0
Class 25.—Canvas and duck articles:										
Annual issues	$22,900	$59,100	$78,200	$65,900	$1,200	$57,100	$10,100	$38,600	$23,600	$356,700
Average stock carried	$13,600	$25,400	$23,100	$29,900	$200	$35,300	$1,800	$16,100	$7,200	$152,600
Annual turnover	1.7	2.3	3.4	2.2	6.0	1.6	5.6	2.3	3.3	2.4
On hand June 30, 1916	$14,400	$30,100	$23,900	$22,900	$200	$37,600	$1,500	$15,500	$7,500	$153,600
Number of months' supply on hand June 30, 1916	7.6	6.1	3.7	4.2	2.0	8.0	1.8	4.8	3.8	5.2
Class 27—Dry goods, textiles (except canvas), duck, and bunting:										
Annual issues	$3,300	$11,300	$61,000	$20,200	$2,200	$6,800	$1,400	$11,700	$2,900	$120,800
Average stock carried	$2,300	$3,100	$19,900	$9,200	$2,500	$5,500	$1,300	$2,900	$1,900	$48,600
Annual turnover	1.4	3.7	3.1	2.2	0.9	1.2	1.1	4.0	1.5	2.5
On hand June 30, 1916	$3,600	$2,700	$28,100	$10,000	$4,300	$6,100	$900	$1,900	$2,600	$60,200
Number of months' supply on hand June 30, 1916	13.1	3.0	5.5	5.9	23.5	10.8	7.7	1.9	10.8	6.0
Class 28—Textiles, made up, such as curtains, rugs, etc.:										
Annual issues	$1,200	$6,200	$21,700	$5,600	$1,000	$3,700	$900	$8,500	$4,100	$52,900
Average stock carried	$1,600	$5,000	$2,100	$3,100	$80	$1,600	$500	$5,800	$1,200	$20,980
Annual turnover	0.8	1.2	10.3	1.8	12.5	2.3	1.8	1.5	3.4	2.5
On hand June 30, 1916	$1,800	$3,700	$4,400	$1,400	$70	$1,100	$700	$5,800	$1,200	$20,170
Number of months' supply on hand June 30, 1916	18.0	7.2	2.4	3.0	0.8	3.6	9.3	8.2	3.5	4.6
Class 29—Bedding, floor coverings and upholstery (not classified elsewhere):										
Annual issues	$5,100	$17,100	$32,000	$88,100	$1,100	$16,500	$3,000	$21,100	$6,900	$190,900
Average stock carried	$2,700	$4,500	$13,700	$14,200	$800	$10,900	$3,100	$8,300	$3,700	$61,900
Annual turnover	1.9	3.8	2.3	5.8	1.4	1.5	1.0	2.5	1.9	3.1
On hand June 30, 1916	$3,800	$3,400	$12,600	$10,100	$700	$6,600	$3,500	$5,800	$4,400	$50,900
Number of month's supply on hand June 30, 1916	9.0	2.4	4.7	1.4	7.6	4.8	14.0	3.3	7.7	3.2

Class 30—Bathroom and toilet fixtures:										
Annual issues	$3,300	$7,300	$24,700	$8,500	$1,700	$4,500	$2,000	$5,400	$5,000	$62,400
Average stock carried	$2,200	$3,800	$7,000	$1,300	$400	$5,800	$500	$6,100	$3,300	$30,400
Annual turnover	1.5	1.9	3.5	6.5	4.3	0.8	4.0	0.9	1.5	2.1
On hand June 30, 1916	$2,900	$4,700	$5,700	$1,600	$200	$8,100	$800	$5,700	$3,900	$33,600
Number of months' supply on hand June 30, 1916	10.5	7.7	2.8	2.3	1.4	21.6	4.8	12.7	9.4	6.5
Class 32—Boiler and pipe coverings:										
Annual issues	$2,100	$3,900	$12,900	$4,100	$800	$9,000	$2,400	$7,600	$3,900	$46,700
Average stock carried	$900	$4,600	$5,300	$3,500	$1,200	$7,700	$3,600	$3,600	$4,700	$35,100
Annual turnover	2.4	0.8	2.4	1.2	0.7	1.2	0.7	2.1	0.8	1.3
On hand June 30, 1916	$1,200	$5,300	$8,400	$3,600	$1,200	$10,900	$4,200	$11,100	$5,100	$51,000
Number of months' supply on hand June 30, 1916	7.0	16.3	8.0	10.3	18.0	14.5	21.0	17.5	15.7	13.1
Class 33—Packing (rubber), gaskets, and all articles made of rubber (not classified elsewhere):										
Annual issues	$15,300	$28,300	$57,500	$42,400	$5,700	$29,400	$5,500	$38,300	$9,700	$232,100
Average stock carried	$7,800	$12,300	$16,500	$13,500	$9,100	$31,100	$6,400	$4,200	$7,800	$108,700
Annual turnover	2.0	2.3	3.5	3.1	0.6	0.9	0.9	9.1	1.2	2.1
On hand June 30, 1916	$8,200	$12,600	$20,400	$16,600	$8,300	$36,300	$6,200	$4,400	$8,300	$121,300
Number of months' supply on hand June 30, 1916	6.4	5.0	4.2	4.7	17.5	14.8	13.5	1.4	10.3	6.3
Class 34—Hose (leather), flexible tubing, hose fittings, leather belting:										
Annual issues	$13,500	$34,600	$71,400	$68,400	$12,500	$27,000	$11,900	$30,500	$11,600	$281,400
Average stock carried	$8,400	$15,800	$24,400	$35,400	$10,300	$19,600	$5,300	$27,800	$11,500	$158,500
Annual turnover	1.6	2.2	2.9	1.9	1.2	1.4	2.2	1.1	1.0	1.8
On hand June 30, 1916	$12,600	$26,600	$26,900	$52,900	$11,500	$20,900	$4,700	$23,500	$12,100	$191,700
Number of months' supply on hand June 30, 1916	11.2	9.2	4.5	9.3	11.0	9.3	4.8	9.2	12.5	8.2
Class 38—Brooms and brushes:										
Annual issues	$4,400	$9,800	$23,500	$11,900	$3,400	$12,600	$2,100	$13,300	$6,900	$87,900
Average stock carried	$1,700	$5,000	$10,600	$5,200	$4,500	$11,900	$1,800	$3,000	$5,600	$49,300
Annual turnover	2.6	2.0	2.2	2.3	0.8	1.1	1.2	4.4	1.2	1.8
On hand June 30, 1916	$2,900	$6,200	$14,300	$6,400	$4,100	$11,200	$2,300	$2,000	$3,300	$52,700
Number of months' supply on hand June 30, 1916	7.9	7.6	7.3	6.5	14.5	10.7	13.1	1.8	5.7	7.2
Class 39—Lumber and timber:										
Annual issues	$59,700	$105,700	$223,400	$88,900	$74,500	$140,100	$26,500	$119,600	$69,400	$907,800
Average stock carried	$72,000	$98,900	$122,200	$79,600	$48,300	$231,200	$21,800	$73,300	$35,700	$783,000
Annual turnover	0.8	1.1	1.8	1.1	1.5	0.6	1.2	1.6	1.9	1.2
On hand June 30, 1916	$106,400	$111,400	$152,800	$101,800	$49,300	$278,400	$26,200	$83,700	$39,100	$949,100
Number of months' supply on hand June 30, 1916	21.4	12.6	7.9	13.7	7.9	23.9	12.0	8.4	7.0	12.5
Class 41—Tools, hand:										
Annual issues	$10,600	$38,100	$87,600	$98,300	$29,100	$43,700	$10,700	$41,500	$14,700	$374,300
Average stock carried	$14,700	$34,500	$73,300	$52,400	$23,900	$34,500	$16,000	$28,300	$19,000	$296,600
Annual turnover	0.7	1.1	1.2	[1]1.9	1.2	1.2	0.7	1.5	0.8	1.3
On hand June 30, 1916	$15,900	$34,900	$113,800	$61,000	$23,200	$38,100	$16,100	$27,200	$18,400	$348,600
Number of months' supply on hand June 30, 1916	18.0	11.2	15.7	7.5	9.6	10.5	18.1	7.8	15.0	11.2
Class 42—Hardware:										
Annual issues	$17,200	$29,900	$75,600	$41,700	$13,100	$69,700	$6,300	$47,400	$17,900	$318,800
Average stock carried	$10,000	$16,000	$60,100	$32,200	$19,700	$50,900	$15,000	$39,800	$29,700	$273,400
Annual turnover	1.7	1.9	1.2	1.3	0.7	1.4	0.4	1.2	0.6	1.2
On hand June 30, 1916	$23,100	$16,600	$70,600	$45,900	$21,400	$57,900	$14,700	$39,300	$28,200	$317,700
Number of months' supply on hand June 30, 1916	16.1	6.6	11.2	13.2	19.6	10.0	28.0	10.0	18.9	11.9

[1] Tool manufacturing plant located at this yard.

Statement 24.—ANNUAL TURNOVER OF PRINCIPAL CLASSES OF NAVAL SUPPLY ACCOUNT STORES—Continued.

	Portsmouth.	Boston.	New York.	Philadelphia.	Washington.	Norfolk.	Charleston.	Mare Island.	Puget Sound.	Total.
Class 43—Bolts, nuts, rivets, and washers:										
Annual issues	$9,400	$20,600	$49,300	$26,900	$7,700	$28,400	$7,800	$36,400	$5,400	$191,900
Average stock carried	$13,700	$22,000	$46,500	$18,600	$19,800	$30,700	$17,700	$30,200	$12,900	$212,100
Annual turnover	0.7	0.9	1.1	1.5	0.4	0.9	0.4	1.2	0.4	0.9
On hand June 30, 1916	$16,900	$31,100	$51,100	$21,500	$21,600	$34,700	$18,900	$32,500	$22,400	$250,700
Number of months' supply on hand June 30, 1916	21.6	18.1	12.4	9.6	33.7	14.9	29.1	10.7	49.8	15.6
Class 44—Pipe and tubing:										
Annual issues	$48,300	$133,300	$176,100	$112,700	$17,000	$161,100	$33,100	$126,800	$43,900	$852,300
Average stock carried	$113,100	$207,800	$238,700	$89,600	$30,800	$170,100	$153,900	$264,500	$183,600	$1,452,100
Annual turnover	0.4	0.6	0.7	1.3	0.6	0.9	0.2	0.5	0.2	0.6
On hand June 30, 1916	$101,100	$243,600	$262,100	$100,000	$38,700	$209,200	$175,600	$257,300	$169,600	$1,577,200
Number of months' supply on hand June 30, 1916	25.1	21.9	19.2	9.6	27.2	15.6	63.6	24.3	46.4	22.2
Class 45—Pipe fittings, gauges, valves, etc.:										
Annual issues	$21,200	$49,700	$117,300	$50,700	$10,900	$45,400	$21,600	$50,600	$14,400	$384,800
Average stock carried	$29,000	$60,200	$85,400	$53,500	$17,800	$77,700	$31,200	$68,100	$31,500	$454,400
Annual turnover	0.8	0.8	1.3	1.0	0.6	0.6	0.7	0.7	0.4	0.8
On hand June 30, 1916	$35,000	$60,800	$94,700	$52,500	$20,100	$73,900	$39,800	$65,400	$30,800	$473,000
Number of months' supply on hand June 30, 1916	17.3	14.7	9.7	12.4	22.2	19.5	22.1	15.5	25.7	14.7
Class 46—Metals in bars, bolts, rods, etc.:										
Annual issues	$164,300	$209,400	$506,700	$394,600	$628,500	$256,000	$32,900	$200,300	$21,200	$2,413,900
Average stock carried	$106,700	$557,900	$127,700	$116,000	$435,200	$178,000	$39,600	$194,300	$59,000	$1,814,400
Annual turnover	1.5	0.3	4.1	3.4	1.5	1.4	0.8	1.0	0.4	1.3
On hand June 30, 1916	$134,400	$149,900	$92,900	$142,300	$408,500	$237,500	$52,000	$201,800	$63,700	$1,483,000
Number of months' supply on hand June 30, 1916	9.8	8.6	2.2	4.3	7.8	11.1	18.9	12.0	36.1	7.3
Class 47—Metals in plates and sheets:										
Annual issues	$183,900	$101,900	$386,800	$112,800	$1,048,700	$267,000	$38,100	$253,500	$52,100	$2,444,800
Average stock carried	$181,400	$64,900	$68,200	$60,700	$242,700	$209,100	$15,200	$35,900	$64,300	$942,400
Annual turnover	1.0	1.6	5.7	1.9	4.3	1.3	2.5	7.1	0.8	2.5
On hand June 30, 1916	$96,400	$73,300	$120,300	$91,600	$286,400	$240,300	$19,900	$59,200	$85,500	$1,072,900
Number of months' supply on hand June 30, 1916	6.3	8.6	3.7	9.7	3.3	10.4	6.3	2.8	19.7	5.0
Class 48—Shapes, metal:										
Annual issues	$112,700	$43,200	$98,000	$17,100	$12,900	$21,200	$18,100	$32,500	$11,600	$367,300
Average stock carried	$34,000	$19,600	$2,700	$28,400	$40,700	$44,600	$12,100	$35,100	$17,300	$234,500
Annual turnover	3.3	2.2	3.6	0.6	0.3	0.5	1.5	0.9	0.7	1.6
On hand June 30, 1916	$13,600	$17,600	.....	$40,200	$46,500	$58,000	$17,400	$41,600	$10,600	$245,500
Number of months' supply on hand June 30, 1916	1.4	4.9	.....	28.2	43.3	32.8	11.5	15.3	11.0	7.8
Class 51—Acids, chemicals, soaps, etc.:										
Annual issues	$7,500	$24,700	$95,600	$26,300	$19,800	$31,600	$5,500	$41,700	$10,300	$263,000
Average stock carried	$4,100	$16,500	$14,100	$11,500	$9,700	$11,900	$3,800	$13,600	$4,400	$89,600
Annual turnover	1.8	1.5	6.8	2.3	2.0	2.7	1.4	3.1	2.3	2.9
On hand June 30, 1916	$5,600	$18,700	$27,800	$12,600	$12,500	$17,500	$4,100	$13,700	$4,900	$117,400
Number of months' supply on hand June 30, 1916	8.9	9.1	3.5	5.7	7.6	6.6	8.9	4.0	5.7	5.4

Class 52—Paints, paint oils, etc.:										
Annual issues	$33,800	$89,000	$594,600	$293,100	$18,100	$599,100	$19,800	$288,200	$52,900	$1,988,600
Average stock carried	$18,600	$21,900	$141,300	$56,000	$9,600	$197,200	$19,500	$28,800	$26,000	$518,900
Annual turnover	1.8	4.1	4.2	5.2	1.9	3.0	1.0	10.0	2.0	3.8
On hand June 30, 1916	$21,400	$15,800	$182,000	$71,500	$9,500	$208,400	$20,800	$19,300	$29,600	$578,300
Number of months' supply on hand June 30, 1916	7.6	2.1	3.7	2.9	6.3	4.2	12.6	0.8	6.7	3.5
Class 53—Stationery:										
Annual issues	$6,900	$17,500	$134,500	$25,700	$59,200	$20,600	$6,700	$23,600	$11,600	$306,300
Average stock carried	$3,100	$5,400	$53,000	$7,600	$42,200	$6,900	$3,500	$8,400	$4,900	$135,000
Annual turnover	2.2	3.2	2.5	3.4	1.4	3.0	1.9	2.8	2.4	2.3
On hand June 30, 1916	$2,800	$5,400	$66,700	$6,900	$42,400	$8,400	$3,900	$6,000	$5,400	$147,900
Number of months' supply on hand June 30, 1916	4.7	3.7	5.9	3.2	8.6	4.9	7.0	3.1	5.6	5.8
Class 59—Building material:										
Annual issues	$4,500	$18,700	$25,700	$19,600	$11,700	$24,100	$12,100	$30,300	$17,500	$164,200
Average stock carried	$1,600	$4,000	$7,100	$5,900	$700	$6,800	$2,200	$7,600	$4,300	$40,200
Annual turnover	2.8	4.7	3.6	3.3	16.7	3.5	5.5	4.0	4.1	4.1
On hand June 30, 1916	$2,100	$3,100	$6,000	$6,800	$2,700	$6,400	$2,000	$7,500	$3,900	$40,500
Number of months' supply on hand June 30, 1916	5.6	2.0	2.8	4.2	2.8	3.2	2.0	3.0	2.7	2.9

RECAPITULATION.

Total annual issues under the above classes at the yards named	$24,461,580
Average stock carried	$12,125,375
Annual turnover	2.0
On hand June 30, 1916	$12,618,550
Number of months' supply on hand June 30, 1916	6.2
Average number of months' stock carried	6.0

Statement 25.—EQUIPAGE ACCOUNT AFLOAT (TITLE B).

[Title B, excepting medical and Marine Corps stores.]

Bureau.	Balance July 1, 1915.	Receipts.				Total on hand and received.
		Purchases.	Gain by inventory.	Transfers from X and between ships under B.	Total.	
Navigation	$855,238.39	$6,968.44	$11,013.54	$185,620.29	$203,602.27	$1,058,840.66
Ordnance	[1] 50,739,380.88	2,760.36	218,630.85	11,661,752.63	11,883,143.84	62,622,524.72
Construction and Repair	10,099,265.69	5,275.24	68,516.08	2,235,769.64	2,309,560.96	12,408,826.65
Steam Engineering	5,036,080.79	7,770.22	61,090.36	1,205,146.56	1,274,007.14	6,310,087.93
Supplies and Accounts	552,671.05	4,170.02	6,352.89	151,038.56	161,561.47	714,232.52
Naval Militia	[2] 400,888.59	.....	38,202.92	243,562.31	281,765.23	682,653.82
Total on balance sheets	[1] 67,683,525.39	26,944.28	403,806.64	15,682,889.99	[3] 16,113,640.91	83,797,166.30
In transit	[1] 1,352,611.62	.....	.....	.....	.....	.....
Grand total	69,036,137.01	.....	.....	.....	.....	.....
	69,036,137.01	.....	.....	.....	.....	.....

Bureau.	Expenditures.					Balance June 30, 1916.
	Loss, title C.	Alterations to ships, title K.	Naval Militia, title V.	Transfers.	Total.	
Navigation	$18,721.51	$550.92	$1,029.05	$112,662.59	$132,964.07	$925,876.59
Ordnance	320,289.14	26,177.43	18,822.73	5,826,293.24	6,191,582.54	56,430,942.18
Construction and Repair	356,684.58	29,437.81	38,313.13	1,278,454.58	1,702,890.10	10,705,936.55
Steam Engineering	171,726.59	97,242.80	18,735.38	810,667.27	1,098,372.04	5,211,715.89
Supplies and Accounts	38,217.75	270.50	3,121.04	91,838.02	133,447.31	580,785.21
Naval Militia	.....	.....	228,658.15	63,846.30	292,504.45	390,149.37
Total on balance sheets	905,639.57	153,679.46	308,679.48	8,183,762.00	9,551,760.51	74,245,405.79
In transit	.....	.....	.....	.....	.....	1,008,452.15
Grand total	.....	.....	.....	.....	.....	75,253,857.94
Increase	.....	.....	.....	.....	.....	6,217,720.93
	.....	.....	.....	.....	.....	69,036,137.01

[1] This table last year included title Y stores afloat (ammunition) to the value of $16,857,520.34 (balance $16,490,311.18, transit $367,209.16), which is now shown under title X—Ordnance account afloat.

[2] Included in Ordnance balance June 30, 1915.

[3] To reconcile the total receipts as shown by statement 21, deduct stores in transit on July 1, 1915, from the total receipts shown above and add stores in transit on June 30, 1916, to the remainder.

Statement 26.—NAVAL SUPPLY ACCOUNT, AFLOAT AND ASHORE (TITLE X).

On hand July 1, 1915		$21,871,495.67
Received:		
From open purchase	$4,472,474.03	
From contracts	19,593,107.65	
Equipage and supplies included in cost of new ships	475,090.53	
From other Government departments	98,621.05	
From manufacture	9,605,861.75	
From gain by appraisal	76,739.62	
From gain by inventory	284,410.48	
From condemned stores account	6,118.40	
Miscellaneous material returned to store	52,484.63	
New and reclaimed material		34,664,908.14
From equipage account and miscellaneous and title C stores	120,112.83	
From ordnance account	3,252,218.15	
From survey account	580,636.84	
From used material account	26,998.12	
From provisions and clothing accounts	97,059.16	
Transfers between accounts		4,077,025.10
		60,613,428.91
Expended:		
For use and to manufacturing account on reports of expenditures	22,206,203.63	
To ships (title C) and on miscellaneous invoices	8,425,809.94	
To loss by appraisal	213,690.68	
Fuel for officers	17,549.88	
To condemned stores account	117,924.41	
To loss by inventory	34,442.40	
Final expenditures and to manufacturing account		31,015,620.94
To equipage account	3,011,838.92	
To ordnance account	164,873.87	
To survey account	1,741.73	
To used-material account	36.77	
To provisions and clothing accounts	103,446.49	
Transfers between accounts		3,281,937.78
On hand June 30, 1916		26,315,870.19
		60,613,428.91

ANALYSIS OF BALANCES.

	July 1, 1915.	June 30, 1916.
Navy yard, Portsmouth	$833,050.65	$1,456,422.87
Navy yard, Boston	1,911,379.02	2,227,600.54
Naval magazine, Hingham	920.01	533.16
Naval torpedo station, Newport	140,344.23	223,513.99
Naval training station, Newport	9,109.36	9,377.21
Navy yard, New York	2,601,446.94	3,898,570.12
Naval magazine, Iona Island	20,008.74	16,868.28
Naval powder depot, Dover	5,201.39	6,662.23
Navy yard, Philadelphia	1,588,996.59	1,848,308.64
Naval magazine, Fort Mifflin	899.75	590.37
Naval Academy, Annapolis	55,080.20	52,864.39
Navy yard, Washington	922,191.25	1,198,648.01
Naval Observatory, Washington	111,139.60	128,168.09
Naval proving ground, Indianhead	145,517.80	382,901.92
Navy yard, Norfolk	2,180,260.83	2,698,803.27
Naval magazine, St. Juliens Creek	3,492.66	1,088.63
Navy yard, Charleston	508,651.45	700,682.38
Naval disciplinary barracks, Port Royal	19,898.93	.....
Naval station, Key West	131,503.53	115,390.81
Naval aeronautic station, Pensacola	18,915.65	103,462.50
Naval station, New Orleans	22,793.70	93,169.53
Naval training station, Great Lakes	25,616.24	38,610.51
Naval hospital, Las Animas	988.19	5,289.55
Naval training station, San Francisco	2,437.68	4,794.14
Navy yard, Mare Island	2,915,962.32	2,237,122.40
Naval magazine, Mare Island	5,059.43	2,562.00
Navy yard, Puget Sound	1,347,774.06	1,396,883.87
Naval station, Guantanamo	386,703.71	265,459.87
Naval station, Cavite	1,237,867.08	1,314,834.05
Naval station, Olongapo	330,699.74	387,090.25
Naval station, Guam	88,729.12	74,036.07
Naval station, Pearl Harbor	701,164.71	721,937.11
Naval station, Tutuila	51,461.93	52,933.34
Naval coal depot, Melville	118,239.41	154,244.16
Naval coaling station, New London	9,940.21	9,409.91
Naval coaling station, San Diego	63,312.01	71,859.38
Naval coaling station, Pichilinque	13,126.33	10,278.76
Naval coaling station, Sitka	33,661.73	18,536.24
Naval coaling station, Yokohama	59,424.48	52,286.41
Naval colliers	118,125.70	298,329.92
General supply system vessels	2,772,056.36	3,011,453.63
Shipments between stations in transit	365,328.27	1,024,291.68
Total	21,871,495.67	26,315,870.19
Increase in balances	4,444,374.52	.....

Statement 27.—ORDNANCE ACCOUNT, AFLOAT AND ASHORE (TITLE X).

On hand July 1, 1915		$82,177,819.99
Received:		
From open purchase	$135,927.06	
From contracts	9,589,429.33	
From other Government departments	274,270.80	
From manufacture	9,336,195.96	
From gain by appraisal	424,224.67	
From gain by inventory	82,988.89	
From condemned stores account	23.25	
Miscellaneous material returned to store	62,171.18	
New and reclaimed material		19,905,231.14
From naval supply account	164,873.87	
From survey account	600,849.25	
From provisions and clothing accounts	13.85	
From equipage account and miscellaneous and title C stores	4,712,166.72	
Transfer between accounts		5,477,903.69
		107,560,954.82
Expended:		
For use and to manufacturing account on reports of expenditures	4,499,130.16	
To ships (title C) and on miscellaneous invoices	1,903,670.95	
To loss by appraisal	1,526,968.26	
To condemned stores account	87,303.78	
To loss by inventory	174,060.33	
Final expenditures and to manufacturing account		8,191,133.48
To equipage account	10,904,876.45	
To naval supply account	3,252,218.15	
To survey account	23,322.00	
To used-material account	253.23	
Transfers between accounts		14,180,669.83
On hand June 30, 1916		85,189,151.51
		107,560,954.82

ANALYSIS OF BALANCES.

	July 1, 1915.	June 30, 1916.
Navy yard, Portsmouth	$289,450.85	$288,458.91
Navy yard, Boston	1,676,910.32	606,169.79
Naval magazine, Hingham	3,276,436.19	3,961,739.56
Naval torpedo station, Newport	3,662,315.78	3,940,900.61
Naval training station, Newport	.....	86.25
Navy yard, New York	2,184,651.66	3,443,086.61
Naval magazine, Iona Islaand	7,588,958.55	7,248,336.00
Naval powder depot, Dover	3,887,067.71	4,093,575.60
Navy yard, Philadelphia	3,312,018.68	2,425,294.06
Naval magazine, Fort Mifflin	5,250,153.45	5,079,790.00
Naval Academy, Annapolis	7,229.94	10,101.86
Navy yard, Washington	11,529,915.88	12,977,984.74
Naval proving ground, Indianhead	2,314,484.70	2,918,657.09
Navy yard, Norfolk	848,719.48	1,032,028.76
Naval magazine, St. Juliens Creek	8,001,136.90	8,547,130.74
Navy yard, Charleston	584,847.45	678,571.56
Naval disciplinary barracks, Port Royal	21,176.35	.....
Naval station, Key West	1,204.04	7,254.05
Naval aeronautic station, Pensacola	1,141.08	2,397.88
Naval station, New Orleans	15,425.35	16,816.49
Naval training station, Great Lakes	75.00	75.00
Naval training station, San Francisco	72.00	.....
Navy yard, Mare Island	699,137.77	626,096.34
Naval magazine, Mare Island	4,655,205.06	4,200,860.13
Navy yard, Puget Sound	2,458,317.63	2,191,981.95
Naval station, Guantanamo	404.58	404.58
Naval station, Cavite	132,229.18	133,367.72
Naval station, Olongapo	1,620,048.41	1,490,720.97
Naval station, Guam	.85	.....
Naval station, Pearl Harbor	22,386.92	24,034.31
Naval station, Tutuila	16.54	16.54
Naval vessels (ordnance, title X)	16,535,309.69	17,671,011.75
Shipments between stations in transit	1,543,157.76	1,505,231.92
Naval stores in custody of others than naval officers	58,214.24	76,989.74
Total on hand	82,177,819.99	85,189,151.51
Increase in balance	3,011,331.52	.....

Statement 28.—SURVEY ACCOUNT, ASHORE (TITLE X).

On hand July 1, 1915		$716,914.90
Received:		
Equipage included in cost of new ships	$2,230.00	
From other Government departments	44.33	
From gain by appraisal	57,768.40	
From gain by inventory	17,491.73	
From condemned stores account	2,238.50	
Miscellaneous material returned to store	236,947.27	
New and reclaimed material		316,720.23
From equipage account and miscellaneous and title C stores	2,076,869.06	
From naval supply account	1,741.73	
From ordnance account	23,322.00	
From provisions and clothing accounts	37.25	
		2,101,970.04
Transfers between accounts		3,135,605.17
Expended:		
For use on reports of expenditures	113,855.02	
To loss by appraisal	786,770.60	
To loss by inventory	4,397.32	
To condemned stores account	399,499.57	
To ships title C	21.26	
Final expenditures		1,304,543.77
To equipage account	20,229.53	
To naval supply account	580,636.84	
To ordnance account	600,849.25	
To used-material account	4,519.36	
Transfers between accounts		1,206,234.98
On hand June 30, 1916		624,826.42
		3,135,605.17

ANALYSIS OF BALANCES.

	July 1, 1915.	June 30, 1916.
Navy yard, Portsmouth	$10,641.54	$45,611.22
Navy yard, Boston	27,322.96	26,614.70
Naval training station, Newport	6.32	.....
Navy yard, New York	60,373.27	97,781.96
Navy yard, Philadelphia	189,115.78	195,868.03
Naval Academy, Annapolis	2,064.90	.....
Navy yard, Washington	120.00	.....
Naval Observatory, Washington	7,373.43	1,102.68
Navy yard, Norfolk	67,671.33	52,953.69
Navy yard, Charleston	124,625.92	71,032.54
Naval station, Key West	.....	816.90
Naval aeronautic station, Pensacola	133,557.41	600.00
Naval station, New Orleans	69.56	357.40
Naval training station, Great Lakes	.....	180.31
Navy yard, Mare Island	58,400.27	83,124.22
Navy yard, Puget Sound	16,432.56	21,763.31
Naval station, Guantanamo	5,927.33	15,568.92
Naval station, Cavite	4,711.65	4,344.99
Naval station, Olongapo	5,998.24	6,616.21
Naval station, Guam	225.52	.....
Naval station, Pearl Harbor	69.39	650.25
Naval station, Tutuila	.....	150.00
Shipments between stations in transit	2,207.52	*510.91*
Total on hand	716,914.90	624,826.42
Decrease in balance	.....	92,088.48

Statement B.—USED-MATERIAL ACCOUNT, ACCOUNT TITLE E.

On hand July 1, 1915, reserve account		[illegible]
Received:		
From sales of material	[illegible]	
From sales of inventory	[illegible]	
From condemned stores account	[illegible]	
Miscellaneous material returned to stock	[illegible]	
Used material		5,123.73
From engineer account	2,[illegible]	
From naval supply account	[illegible]	
From ordnance account	[illegible]	
From navy account	4,[illegible]	
Transfers between accounts		[illegible]
		[illegible]
Expended:		
For account of expenditures	1,271.[illegible]	
For account of material	5,[illegible]	
For account of inventory	3,[illegible]	
For account of miscellaneous stores	[illegible]	
Total expenditures		[illegible]
To engineer account	35,[illegible]	
To naval supply account	[illegible]	
Transfers between accounts		[illegible]
On hand June 30, 1916		[illegible]
		[illegible]

ANALYSIS OF BALANCES.

	July 1, 1915.	June 30, 1916.
Navy yard, Portsmouth	[illegible]	[illegible]
Navy yard, Boston	35,[illegible]	12,[illegible]
Naval torpedo station, Newport	[illegible]	[illegible]
Navy yard, New York	[illegible]	[illegible]
Navy yard, Philadelphia	[illegible]	[illegible]
Naval Observatory, Washington	5,[illegible]	[illegible]
Navy yard, Norfolk	[illegible]	[illegible]
Navy yard, Charleston	[illegible]	[illegible]
Naval station, Key West		[illegible]
Naval aeronautic station, Pensacola		[illegible]
Navy yard, Mare Island	[illegible]	[illegible]
Navy yard, Puget Sound	[illegible]	[illegible]
Naval station, Guantanamo	[illegible]	[illegible]
Naval station, Cavite	[illegible]	[illegible]
Naval station, Olongapo	[illegible]	[illegible]
Naval station, Tutuila		[illegible]
Shipments between stations in transit	[illegible]	[illegible]
Naval stores in custody of others than naval officers	[illegible]	[illegible]
Total on hand	[illegible]	[illegible]
Increase in balance		[illegible]

Statement 30.—PROVISIONS ACCOUNT, AFLOAT AND ASHORE (TITLE X).

PROVISIONS, NAVY.

Balances July 1, 1915:		
At navy yards and stations	$1,161,065.87	
On board ships	887,346.95	
In transit	128,359.21	
		$2,176,772.03
Received:		
From purchase	8,166,279.83	
From Marine Corps	1,603.68	
From naval hospitals	6,842.07	
From manufacture	1,116.00	
From gain by inventory	2,683.04	
From advanced in prices	27,640.25	
New material		8,206,164.87
From naval supply account	48,145.84	
From ships' stores account	6,744.64	
From provisions, naval auxiliaries	1,136.34	
From clothing and small stores account	35,686.88	
From other naval accounts	226.53	
Transfers between accounts		91,940.23
		10,474,877.13
Expended:		
Issued to crew and marines	6,143,926.05	
Sales for cash	1,099,802.42	
To Marine Corps	275,774.29	
To naval hospitals	104,251.27	
To Naval Militia	14,339.30	
Miscellaneous expenditures	22,965.06	
To other Government departments	4,699.49	
Condemned by survey to loss	84,969.84	
Condemned to be sold at auction	9,739.56	
Crews' entertainment allotment	722.32	
Deficit in accounts	6,347.61	
For testing and use	8,654.87	
Final expenditures		7,776,192.08
To naval supply account	8,229.50	
To ships' stores account	62,482.63	
To provisions, naval auxiliaries	65,854.35	
Transfers between accounts		136,566.48
Balances June 30, 1916:		
At navy yards and stations	976,566.22	
On board ships	1,095,901.95	
In transit	489,650.40	2,562,118.57
		10,474,877.13
Balance June 30, 1916		2,562,118.57
Balance July 1, 1915		2,176,772.03
Increase		385,346.54

MAINTENANCE NAVAL AUXILIARIES.

Balance July 1, 1915		24,901.82
Received:		
From purchase		119,993.35
From naval supply account	53.14	
From provisions, Navy account	65,063.83	
Transfers between accounts		65,116.97
		210,012.14
Expended:		
Issued to crew	147,703.38	
Sales for cash	6,600.99	
Subsistence of supernumeraries	11,119.59	
To other Government departments	81.68	
Condemned by survey to loss	4,794.68	
Deficit in accounts	313.75	
Final expenditures		170,614.07
To provisions, Navy account		1,212.31
Balance June 30, 1916		38,185.76
		210,012.14
Balance June 30, 1916		38,185.76
Balance July 1, 1915		24,901.82
Increase		13,283.94

Statement 31.—SHIP'S STORE ACCOUNT AFLOAT (TITLE X).

Balance July 1, 1915:		
On hand	$251,534.37	
In transit	7,256.31	
		$258,790.68
Received:		
From purchase	775,650.32	
From gain by inventory	151.35	
New material		775,801.67
From provision account	76,637.92	
From clothing and small stores account	10,138.63	
From naval supply account	7,135.87	
From other naval appropriations	56.76	
Transfer between accounts		93,969.18
From gain by advanced prices		100,947.98
		1,229,509.51
Expended:		
Sales for cash	922,176.75	
Condemned by survey	13,333.48	
Final expenditures		935,510.23
To provision account	10,300.27	
To clothing and small-stores account	1,468.88	
To naval supply account	349.60	
To crew's entertainment allotment	8,004.56	
Miscellaneous expenditures	17.96	
Transfer between accounts		20,141.27
Balance June 30, 1916:		
On hand	265,288.13	
In transit	8,569.88	
		273,858.01
		1,229,509.51
Balance June 30, 1916		273,858.01
Balance July 1, 1915		258,790.68
Increase		15,067.33

Statement 32.—CLOTHING ACCOUNT, AFLOAT AND ASHORE (TITLE X).

Balances, July 1, 1915, at issuing prices:		
At navy yards and stations	$2,054,361.48	
On board ships	1,129,917.84	
In transit	99,042.10	
	3,283,321.42	
Deduct difference between cost and issuing prices	26,941.98	
		$3,256,379.44
Received:		
From purchase	1,648,456.77	
From Marine Corps	14,285.54	
From other Government departments	116.56	
From gain by inventory	5,949.87	
New material		1,668,808.74
From naval supply account	40,865.49	
From ships' stores account	1,460.68	
From other naval accounts	1,028.44	
From naval clothing factories	1,137,396.63	
Transfers between accounts		1,180,751.24
		6,105,939.42
Expended:		
Issued to officers, crew, and marines	1,758,620.58	
Issued to naval prisons and prisoners	18,666.17	
Sales for cash	32,188.08	
To Marine Corps	1,064.65	
To Naval Militia	104,794.57	
Miscellaneous expenditures	20,847.98	
To other Government departments	41,812.95	
To condemned by survey to loss	11,827.91	
Deficit in accounts	.65	
Lost in transit	129.16	
To loss by inventory	1,001.32	
For testing and use	76.59	
Loss from reduced prices	38,779.33	
Final expenditures		2,029,809.94
To naval supply account	89,386.96	
To ships' stores account	10,116.63	
To provisions, navy account	17,418.36	
To crews' entertainment allotment	56.90	
To condemned to be sold at auction	144,066.46	
To naval clothing factories	354,692.42	
Transfers between accounts		615,737.73
Balances, June 30, 1916, at issuing prices:		
At navy yards and stations	1,890,548.85	
On board ships	1,029,952.62	
In transit	481,313.17	
	3,401,814.64	
Add difference between cost and issuing prices	58,577.11	
		3,460,391.75
		6,105,939.42
Balance, June 30, 1916		3,401,814.64
Balance, July 1, 1915		3,283,321.42
Increase[1]		118,493.22

[1] Net increase shown by statement 21 is $204,012.31, or $118,493.22 plus differences between cost and issuing prices ($26,941.98 and $58,577.11).

Statement 33.—MEDICAL STORES (TITLE X).

RECEIPTS.

Balance, July 1, 1913	$286,083.14
Purchases	366,060.86
Total	652,144.00

EXPENDITURES.

Maintenance of ships in commission (title C)	166,382.80
All other (see title X)	184,433.11
Purchases, 1	1,152.12
Balance, June 30, 1914	352,965.97
Total	652,144.00
Balance, June 30, 1914	352,965.97
Balance, July 1, 1913	286,083.14
Increase	66,882.83

Statement 34.—MANUFACTURING ACCOUNT (TITLE Z).

	Naval supply account.	Ordnance account.	Clothing account.	Total.
RECEIPTS.				
Balance July 1, 1915	$1,614,470.22	$5,869,394.08	$308,509.03	$7,792,373.33
Labor, indirect, and material	9,397,275.39	11,835,121.95	854,038.24	22,086,435.58
Total	11,011,745.61	17,704,516.03	1,162,547.27	29,878,808.91
EXPENDITURES.				
Completed work	9,605,861.75	9,336,195.96	1,135,267.12	20,077,324.83
Balance June 30, 1916	1,405,883.86	8,368,320.07	27,280.15	9,801,484.08
Total	11,011,745.61	17,704,516.03	1,162,547.27	29,878,808.91
Work in process June 30, 1916				9,801,484.08
Work in process July 1, 1915				7,792,373.33
Increase				2,009,110.75

Statement 35.—MARINE CORPS STORES.

	Clothing.	Public property.	Total.
RECEIPTS.			
Balance July 1, 1915	$1,060,800.76	$3,146,693.31	$4,207,494.07
Received during fiscal year 1916	630,122.09	1,047,900.60	1,678,022.69
Total	1,690,922.85	4,194,593.91	5,885,516.76
EXPENDITURES.			
Expended by regular issues	425,960.01		425,960.01
Expended by extra issues (sold, etc.)	99,121.41	77,259.79	176,381.20
Expended for manufacture, etc	1,303.09	620,112.59	621,415.68
Decrease in value	117,904.23	621,760.78	739,665.01
Condemned by survey	75,369.26	186,235.17	261,604.43
Balance June 30, 1916	971,264.85	2,689,225.58	3,660,490.43
Total	1,690,922.85	4,194,593.91	5,885,516.76
Balance July 1, 1915			4,207,494.07
Balance June 30, 1916			3,660,490.43
Decrease			547,003.64

Statement 36.—SHIP'S STORE PROFITS FUND.

DEBIT.

Balance July 1, 1915	$63,149.03
Profits current fiscal year	87,614.50
	150,763.53

CREDIT.

Expenditures for current fiscal year for entertainment of enlisted men	94,263.01
Balance June 30, 1916	56,500.52
	150,763.53

Statement 37.—CLOTHING AND SMALL-STORES FUND.

ASSETS.

Cash balance in United States Treasury		$279,351.30
Stock at issuing prices:		
At navy yards and stations	$1,890,548.85	
On board ships	1,029,952.62	
In transit	481,313.17	
	3,401,814.64	
Add difference between cost and issuing prices	58,577.11	
		3,460,391.75
Work in process		27,280.15
Condemned stock (estimated sale value)		23,871.02
Machinery		19,425.00
Accounts in course of adjustment by the Auditor for the Navy Department: For issues, sales, and transfers		1,514,741.13
Total		5,325,060.35

LIABILITIES.

Accounts in course of adjustment by the Auditor for the Navy Department:	
For purchases, labor, and transfers	365,709.55
Value of clothing and small-stores fund June 30, 1916	4,959,350.80
Total	5,325,060.35
Value of fund June 30, 1915	5,104,422.54
Value of fund June 30, 1916	4,959,350.80
Decrease	145,071.74

Statement 38.—MIDSHIPMEN'S STORE FUND.

BALANCE SHEET—MIDSHIPMEN'S STORE.

ASSETS.

Advanced to Naval Academy dairy, act of Mar. 4, 1913		$100,000.00
Naval Academy dairy loan		40,000.00
Cash on hand and in subtreasury, Baltimore, Md		113,200.20
Merchandise on hand June 30, 1916:		
In midshipmen's store	$46,756.18	
In tailor shop	1,680.11	
		48,436.29
Accounts receivable:		
Naval Academy dairy	14,503.88	
Officers and others	3,078.46	
Midshipmen	1,358.78	
		18,941.12
Automobile	599.00	
Less reserve for depreciation	299.00	
		300.00
Total		320,877.61

LIABILITIES.

Accounts payable:		
Due the United States, act Mar. 4, 1913	$100,000.00	
Due on deposits by midshipmen	89,182.50	
Due merchants	34,144.33	
		223,326.83
Value of midshipmen's store fund as at June 30, 1916		97,550.78
Total		320,877.61

PROFIT AND LOSS STATEMENT—MIDSHIPMEN'S STORE.

Income from sales of merchandise	$13,406.09	
Income from tailor shop	50.31	
Income on account of discounts received	1,568.28	
		$15,024.68
Deduct operating expenses:		
Salaries of clerks and other employees	8,945.97	
Office fixtures	42.75	
Miscellaneous expenses	672.91	
Loss on obsolete stock	1,086.47	
Fixtures in midshipmen's quarters	826.25	
Depreciation on automobile	299.00	
		11,873.35
Net income for the fiscal year 1915		3,151.33
Add value of midshipmen's store as at June 30, 1915		94,399.45
Value of midshipmen's store fund as at June 30, 1916		97,550.78

NAVAL ACADEMY DAIRY APPROPRIATION (REIMBURSABLE).

RECEIPTS.

Appropriation, act of Mar. 4, 1913		$100,000.00

EXPENDITURES.

Land	$56,725.00	
Improvements	33,119.24	
Equipment	10,155.76	
		100,000.00

Statement 39.—APPROPRIATION BALANCES.

[Appropriations and funds, June 30, 1916.]

RECAPITULATION.

[NOTE.—Figures in *italics*, column 1, represent appropriations overobligated; figures in *italics*, column 4, represent appropriations overexpended.]

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
Fiscal year 1916 and continuing appropriations	$18,546,445.97	$623,867.69	$33,016,300.42	$52,186,614.08	$1,192,853.87	$11,792,626.83	$5,311,423.32	$59,860,671.46
Fiscal year 1915	*572,223.40*	10,903.80	465,476.12	*95,843.48*	296,102.85	1,592,815.53	121,995.86	1,671,079.04
Fiscal year 1914	170,629.15			170,629.15	21,643.29	47,675.86	27,762.66	212,185.64
Fiscal year 1913 and prior years	27,476.53			27,476.53		10,445.87	119.28	37,803.12
Certified claims, etc	15,833,116.71			15,833,116.71		13,016.77	17.15	15,846,116.33
Contracts based on authorizations for which appropriations have not been made	*30,892,383.28*		30,892,383.28					
Total of appropriations and funds	3,113,061.68	634,771.49	64,374,159.82	68,121,992.99	1,510,600.01	13,456,580.86	5,461,318.27	77,627,855.65

FISCAL YEAR 1916 AND CONTINUING APPROPRIATIONS.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
SECRETARY'S OFFICE.								
6101. Pay, miscellaneous, 1916	*$99,774.08*	$34,640.46	$59,153.56	*$5,980.06*	$111.75	$44,367.90	$37,505.83	$993.76
6102. Contingent, Navy, 1916	28,092.02		319.27	28,411.29		1,827.58		30,238.87
5103. Contingent, Navy, 1915-16	101,462.60			101,462.60				101,462.60
6104. Care of lepers, etc., Guam, 1916	858.09		3.00	861.09	*530.19*	231.84	75.58	487.16
6105. Committee to investigate cost of United States armor plant, 1916	4,581.57			4,581.57				4,581.57
6106. Aeronautics, Navy, 1916	65,551.47		458,945.67	524,497.14		3,324.24	3.62	527,817.76
6107. Advisory committee of aeronautics, 1916	513.21		2,420.14	2,933.35				2,933.35
6108. Arming and equipping Naval Militia, 1916	2,452.07		43,644.06	46,096.13		5,052.32	235.79	50,912.66
6109. Arms, uniforms, equipment, etc., Naval Militia, 1916	*9,150.90*		36,870.09	27,719.19		11,534.60	757.16	38,496.63
5110. Relief of inhabitants, American Samoa, hurricane damages, 1915-16	1,665.04			1,665.04				1,665.04
6113. Increase of the Navy, C. and M.	15,178,667.10		435,828.69	15,614,495.79	25,648.97	459,523.62	211,472.67	15,888,195.71
6115. Increase of the Navy, torpedo boats	349,171.89		6,626,085.36	6,975,257.25		4,661.98	5,099.00	6,974,820.23
6117. Navy fines and forfeitures (special fund)	685,833.08	1,043.81		686,876.89		112,890.58	783,475.43	16,292.04
6121. Purchase of land, Penobscot Bay, Me	693.34			693.34				693.34
6122. Naval Observatory, purchase of land	.30			.30				.30
BUREAU OF YARDS AND DOCKS.								
6201. Maintenance, Yards and Docks, 1916	*22,280.83*		120,959.21	98,678.38	1,248.75	115,898.81	2,412.31	213,413.63
6202. Repairs and preservation, 1916	*2,060.12*		12,687.14	10,627.02	106.57	62,953.46	23.75	73,663.30
6203. Contingent, Yards and Docks, 1916	3,002.20		15.37	3,017.57		381.34		3,398.91
6210. Four timber dry docks			11,365.43	11,365.43				11,365.43
6211. Consolidating power plants, navy yards and stations	1,611.74			1,611.74				1,611.74
6212. Floating derrick	8,464.56			8,464.56				8,464.56
6213. Marine Corps rifle range, Winthrop, Md	1,985.18		74.14	2,059.32				2,059.32
6214. Rifle range, naval station, Bremerton, Wash	7,000.00			7,000.00				7,000.00
6215. Navy yard, Portsmouth, N. H.:								
151. For continuing the extension of the quay wall	896.51		1,569.54	2,466.05				2,466.05
152. Crane track and railroad, extension	517.67			517.67				517.67
6216. Navy yard, Boston, Mass.:								
163. Reconstruction building No. 24	3,644.58			3,644.58		141.50		3,786.08
168. Fireproofing of pattern shop	*7.36*		212.49	205.13				205.13
177. Improvement of sanitation system, etc	802.18			802.18		989.11		1,791.29
179. Building slip and equipment	*18.71*		1,027.11	1,008.40				1,008.40
180. Paving, to continue	92.93			92.93		1,360.64		1,453.57

Statement 30.—APPROPRIATION BALANCES—Continued.

FISCAL YEAR 1916 AND CONTINUING APPROPRIATIONS—Continued.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, navy supply account.	Other unaudited expenditures.	[illegible]	[illegible]
	1	2	3	4	5	6	7	8
BUREAU OF YARDS AND DOCKS—continued.								
6218. [illegible] Boston, Mass.—Continued.								
[illegible] supply system	$224.31		$5,616.00	$5,840.31				$5,840.31
[illegible] distributing system, extensions	1,951.61		3,407.33	5,358.94		$404.65		5,763.59
[illegible] Narragansett Bay, R. I.:								
[illegible]	17.68			17.68				17.68
[illegible], New York, N. Y.:								
[illegible]plus account	.30			.30				.30
[illegible] improvement of water front, to continue	1,161.27		3,167.12	4,328.39				4,328.39
211. To complete Pier D	2,634.28		2,260.00	4,894.28		388.35		5,282.63
215. Yard railroad, extension and equipment	10,478.44			10,478.44		475.23		10,953.67
216. To complete construction of Pier C (cost not to exceed $150,000)	82.31		18,536.14	18,618.45				18,618.45
217. Distributing system, extensions	18,675.56			18,675.56		264.74		18,940.30
6219. Navy yard, Philadelphia, Pa.:								
179. Electric system, extensions	200.03			200.03				200.03
182. Sewer system, extensions	3,612.88			3,612.88				3,612.88
[illegible] and piers	18,548.12			18,548.12		97.42		18,645.54
[illegible]-plant improvement (to install converters)	.26		1,633.65	1,633.91				1,633.91
[illegible]ing slip, and equipment	.09		8,930.00	8,930.09		135.97		9,066.06
[illegible]railroad system, extensions	8,513.67			8,513.67		17.72		8,531.39
[illegible] Distributing systems, extensions	10,000.00			10,000.00				10,000.00
194. Dredging, to continue	240.24		24,465.00	24,705.24				24,705.24
195. Paving, to continue	2,078.42			2,078.42				2,078.42
6220. Navy yard, Washington, D. C.:								
Surplus account	.19			.19				.19
76. Water system, to extend	922.82			922.82				922.82
84. Railroad bridge and tracks	34,460.36			34,460.36				34,460.36
95. Purchase of land	135,221.36			135,221.36				135,221.36
[illegible] Dredging, to continue	6,259.39			6,259.39				6,259.39
[illegible]proof general storehouse (cost not to exceed $225,000), to complete	*164.18*		200.00	35.82				35.82
[illegible] Railroad system, improvements and extensions	6,012.06			6,012.06				6,012.06
Navy yard, Norfolk, Va.:								
Surplus account	39.00			39.00				39.00
171. To enlarge Dry Dock No. 3	85.80		2,000.00	2,085.80				2,085.80

...ase of land and widening of channel	37,099.50		40,779.52	77,879.02			77,879.02
...ic plant, extensions	111.77			111.77		149.90	261.67
...-closets and lavatories for ships in dock	15,000.00			15,000.00			15,000.00
...rovements to water front, to continue	*321.56*			*321.56*			*321.56*
...ating system, extensions	1,011.51			1,011.51		164.57	1,176.08
... One hundred and fifty ton crane	*88,935.78*			*88,935.78*			*88,935.78*
...09. Dredging, to continue	*431.97*		6,491.34	6,059.37		344.07	6,403.44
210. Water system, extensions	65.73			65.73		33.80	99.53
211. Sewer system, extensions	1,378.27			1,378.27			1,378.27
212. Lavatories and toilet facilities	7.65			7.65		1,140.00	1,147.65
213. Compressed-air system, extensions	10,743.45			10,743.45		90.87	10,834.32
214. Repairs buildings, St. Helena	10,324.78			10,324.78		17.35	10,342.13
215. Building for school	4,499.78		23,064.85	27,564.63			27,564.63
216. Railroad system, extensions	*107.83*			*107.83*			*107.83*
217. Disinfecting plant	2,800.00		12,200.00	15,000.00			15,000.00
218. For construction of a building slip, and equipment	11,494.71			11,494.71		134.03	11,628.74
6222. Navy yard, Charleston, S. C.:							
Surplus account	500.00			500.00			500.00
94. To complete torpedo-boat berths (to cost not exceeding $300,000)	10,495.33		14,656.46	25,151.79			25,151.79
96. Sewer system, extensions	3,431.99			3,431.99			3,431.99
98. Dredging, to continue	13,776.97			13,776.97		1,089.76	14,866.73
99. Paving and grading, to continue	786.47			786.47			786.47
100. To make dry and wet borings to determine water-front conditions, etc	12,179.35		2,700.00	14,879.35		15.68	14,895.03
101. Construction of building ways for constructing tugs, lighters, etc	6,736.29		23,545.44	30,281.73			30,281.73
6223. Naval station, Key West, Fla.:							
Surplus account	2.12			2.12			2.12
47. Sewers	1,496.82			1,496.82			1,496.82
56. Officers' quarters, and improving grounds	103.55		2,343.99	2,447.54			2,447.54
57. Dredging, to continue	1,858.42			1,858.42		44.75	1,903.17
6224. Navy yard, Pensacola, Fla.:							
40. Machinery for central power plant	4,576.60			4,576.60			4,576.60
44. Remodeling building No. 29	13,006.82			13,006.82		12.00	13,018.82
46. Elevator for building No. 1	638.00		2,362.00	3,000.00			3,000.00
47. Remodeling building No. 52 to fit it for sick quarters	982.34		2,747.63	3,729.97		1.20	3,731.17
6225. Naval station, New Orleans, La.:							
73. General purposes	104,083.50		4,223.83	108,307.33		1,295.39	109,602.72
6226. Navy yard, Mare Island, Cal.:							
210. Improvement of hydraulics in Mare Island straits, etc	14,458.41			14,458.41		*185.77*	14,272.64
212. Dredging and diking, to continue	25,704.30			25,704.30		1,584.44	27,288.74
214. Garbage crematory	7,500.00			7,500.00			7,500.00
215. Improvements and extensions to distributing system	71.35			71.35		55.62	126.97
216. Oil storage	12,500.00			12,500.00			12,500.00

Statement 39.—APPROPRIATION BALANCES—Continued.

FISCAL YEAR 1916 AND CONTINUING APPROPRIATIONS—Continued.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
		2	3	4	5	6	7	8
BUREAU OF YARDS AND DOCKS—continued.								
6227. Navy yard, Puget Sound, Wash.:								
180. Pattern shop	$15,970.13			$15,970.13		$293.53		$16,263.66
198. Pier No. 4	701.34			701.34				701.34
200. Electric crane	472.05			472.05				472.05
203. Power-plant extensions						20.44		20.44
206. Linseed-oil storage tanks	1,447.10			1,447.10				1,447.10
207. Sewer system, extensions	2,238.32			2,238.32				2,238.32
211. To complete ship fitters' shop, mold loft, etc.	1,520.77			1,520.77				1,520.77
212. Dredging, to continue	1,530.00			1,530.00				1,530.00
213. Railroad system, extensions	14,528.46			14,528.46				14,528.46
214. Building slip for submarines	3,680.93			3,680.93		1.60		3,682.53
6228. Naval station, Cavite, P. I.:								
22. Improvements to No. 1 ways	214.94			214.94		123.90		338.84
6229. Naval station, Island of Guam:								
24. Water system, extension	12,548.31			12,548.31	$139.55	170.44		12,858.30
6230. Naval station, Guantanamo, Cuba:								
Surplus account	322.49			322.49				322.49
6. For emergency repair installation	1,024.28			1,024.28				1,024.28
7. Quarters for civilian employees	3,679.26			3,679.26		486.45		4,165.71
8. Recreation building for enlisted men	7,355.45			7,355.45		583.98		7,939.43
6231. Naval station, Olongapo, P. I.:								
27. Improvement and development of naval station	47.59			47.59				47.59
28. Steel pontoons for approach to floating dry dock Dewey	2,055.85			2,055.85		517.28		2,573.13
6232. Naval station, Pearl Harbor, Hawaii:								
Surplus account	15.83			15.83				15.83
15. Toward erecting machine shops	14,035.04			14,035.04		87.37		14,122.41
20. Toward yard development of naval station	31,796.34			31,796.34		2,602.85		34,399.19
30. Foundry	15,330.73		$740.00	16,070.73		137.25		16,207.98
[illegible]. Forge shop	6,734.25			6,734.25				6,734.25
[illegible] Combined ship fitters', metal workers', and boiler shop	15,446.56			15,446.56		.75		15,447.31
[illegible]pe and plumber shop	10,451.35			10,451.35		76.37		10,527.72
[illegible]mbined woodworking shop	6,582.19			6,582.19		574.54		7,156.73
[illegible]ven industrial buildings	*2,059.20*			*2,059.20*				*2,059.20*

37. Dry dock, to continue			941,607.87	941,607.87		287.76	6124.00	941,771.63
29. Street paving	1,293.64			1,293.64		2,516.36	268.06	3,541.94
44. Pattern shop	6,911.97		1,251.50	8,163.47		228.34		8,391.81
45. Storehouses	24,413.27			24,413.27		51.00		24,464.27
[illegible] Latrines	9,765.44			9,765.44				9,765.44
[illegible] Water-front development	3,647.38		144,354.80	148,002.18		95.38		148,097.56
[illegible] Water system	95.38			95.38		95.38		
[illegible] wer distribution, mains and conduits	33,441.27			33,441.27		788.53		34,229.80
[illegible] road equipment	13,415.51			13,415.51				13,415.51
[illegible] landings	3,379.04			3,379.04		.82		3,379.86
[illegible] ant and refrigerating system	96.60			96.60		48.18		144.78
[illegible] ry-dock crane	100,000.00			100,000.00				100,000.00
[illegible] railway	99,874.60			99,874.60				99,874.60
[illegible] ospital, to continue	6,301.61			6,301.61		1,218.03		7,519.64
[illegible] eers' quarters			2,216.26	2,216.26				2,216.26
[illegible] ete torpedo-boat slips	13,848.46		71,112.92	84,961.38		11.72		84,973.10
[illegible] g station, Rhode Island, buildings:								
[illegible] water supply	497.57			497.57				497.57
[illegible] tation, California, buildings:								
[illegible] xtension of wharf for receiving ship	4,937.15			4,937.15				4,937.15
[illegible] ew England coast:								
[illegible]	3.84			3.84				3.84
[illegible] agazine	75.49		1,180.45	1,255.94				1,255.94
[illegible] ort Mifflin, Pa.:								
[illegible]	234.15		2,616.16	2,850.31				2,850.31
[illegible] tion storehouse	366.07		1,356.58	1,722.65				1,722.65
[illegible]	1,194.06		10,474.59	11,668.65				11,668.65
[illegible] plant, extension	1,818.00		518.20	2,336.20				2,336.20
[illegible] stem, extension	6,000.00			6,000.00				6,000.00
[illegible] ine, Norfolk, Va.:								
[illegible] g fresh-water supply and additional fire protection	1,968.71			1,968.71				1,968.71
[illegible] harf and approaches	3,321.38		4,984.00	8,305.38				8,305.38
[illegible] Railroad system, extensions	616.25			616.25		72.57		688.82
[illegible] ne shell house	121.58		1,926.32	2,047.90		272.09		2,319.99
[illegible] al magazine, Puget Sound, Wash.:								
[illegible] plus account	15.77			15.77				15.77
[illegible] Extension of fire-protection system	961.03			961.03				961.03
29. Shell house			15,000.00	15,000.00				15,000.00
30. Two magazines	2,419.22		3,825.50	6,244.72				6,244.72
31. Storage sheds	83.21			83.21				83.21
32. House on pier	549.12			549.12				549.12
33. Pier extension	126.16			126.16				126.16
34. Lightning protection	1,344.48			1,344.48		253.82		1,598.30
6244. Naval magazine, Kuahua, Hawaii:								
Surplus account	637.87			637.87				637.87
8. Electric-power installation	3,388.01			3,388.01				3,388.01
15. Machinery and tools	25,000.00			25,000.00				25,000.00
16. One shipping house	47.10			47.10		47.10		
20. One bombproof	1,500.00			1,500.00				1,500.00
21. One unfusing roof	500.00			500.00				500.00
23. Compressed-air locomotive plant	3,467.42			3,467.42		146.03		3,613.45

Statement 39.—APPROPRIATION BALANCES—Continued.

FISCAL YEAR 1916 AND CONTINUING APPROPRIATIONS—Continued.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
BUREAU OF YARDS AND DOCKS—continued.								
6245. Naval magazine, Olongapo, P. I.:								
Surplus account	$49.09			$49.09		*$4.26*		$44.83
6246. Marine barracks, Norfolk, Va.:								
1. Barracks	10,399.27		$128,703.42	139,102.69				139,102.69
6247. Marine barracks, Philadelphia, Pa.:								
Surplus account	1.89			1.89				1.89
2. Central heating plant for Marine Corps, establishment	504.21			504.21				504.21
6249. Marine barracks, Pearl Harbor, Hawaii:								
1. Set double quarters	51.99			51.99		70.97		122.96
2. Quartermaster's storehouse	25,000.00			25,000.00				25,000.00
3. Post exchange, gymnasium	20,000.00			20,000.00				20,000.00
6250. Marine barracks, Mare Island, Cal.:								
1. Barracks	48,431.79		80,321.72	128,753.51		2,159.07		130,912.58
6251. Depots for coal:								
O. General purposes	13,263.60			13,263.60				13,263.60
C. Pearl Harbor, Hawaii	5,968.58			5,968.58		*755.49*		5,213.09
F. Boston, Mass	*514.18*		7,351.50	6,837.32		23.96		6,861.28
1. To complete coaling plant, Pearl Harbor, Hawaii	5,617.69			5,617.69		3,440.97		9,058.66
2. Heater coils in fuel-oil tanks	43,500.00			43,500.00				43,500.00
3. Additional fuel-oil tank, Pearl Harbor, Hawaii	2,095.73			2,095.73				2,095.73
4. Fuel-oil tank at Boston, Mass	2,227.53			2,227.53		860.17		3,087.70
9. Steel coaling tower at San Diego, Cal	7,715.62		4,311.98	12,027.60				12,027.60
11. Fuel-oil storage at San Francisco Bay, Cal	50,084.91		240.22	50,325.13				50,325.13
13. Additional fuel-oil storage at Melville, R. I	45,014.46			45,014.46				45,014.46
14. Additional fuel-oil storage at Norfolk, Va	197,012.54		4,549.48	201,562.02				201,562.02
15. Fuel-oil storage at San Diego, Cal	74,548.67			74,548.67				74,548.67
16. Fuel-oil storage at Puget Sound, Wash	128,190.37			128,190.37				128,190.37
17. Fuel-oil storage at Mare Island, Cal	80,000.00			80,000.00				80,000.00
18. Fuel-oil storage at Guantanamo, Cuba	50,000.00			50,000.00				50,000.00
19. Fuel-oil storage at Pearl Harbor, Hawaii	80,000.00			80,000.00				80,000.00
20. Custody and care of naval petroleum reserves	4,486.82			4,486.82		1,880.26		6,367.08
21. Contingent	65,331.90		1,210.59	66,542.49		426.15		66,968.64

6252. Naval coal depot, Melville Station, R. I.:								
1. Extension of wharf	4,401.63		6.80	4,408.43		621.72		5,030.15
6253. Buildings and grounds, Naval Academy, Annapolis, Md.	7,125.59			7,125.59				7,125.59
6255. Naval disciplinary barracks	21,704.43		22.68	21,727.11				21,727.11
6256. Torpedo station, buildings:								
Surplus account	104.44			104.44				104.44
25. New power house, toward building and equipping	17.88			17.88				17.88
30. One assembly shop							$4.80	*4.80*
31. One torpedo storehouse	2,296.54		8,988.11	11,284.65		108.19		11,392.84
32. One machine shop						*31.65*		*31.65*
6257. Pacific coast torpedo station	31,514.18			31,514.18				31,514.18
6258. Naval proving ground, Indianhead, Md.:								
32. Purchase of 5 acres (more or less) of additional land	200.00			200.00				200.00
37. Toward extension of powder factory (cost not to exceed $500,000), to complete public-work features	21,390.65		69,468.13	90,858.78		*3,443.03*		87,415.75
6259. Naval hospital, New York, N. Y.:								
1. Three contagious-disease units	98.40			98.40				98.40
BUREAU OF NAVIGATION.								
[illegible]ntingent, Navigation, 1916	52.39		2,346.91	2,399.30		209.78		2,609.08
[illegible]nsportation, Navigation, 1916	46,930.28	$59,440.88	105.29	106,476.45		306,056.80	27,529.37	385,003.88
[illegible]ruiting, Navigation, 1916	5,506.03		2,571.79	8,077.82		36,604.23		44,682.05
[illegible]ntenance, naval auxiliaries, 1916	*124,016.77*	11,812.12		*112,204.65*		260,954.76	3,438.94	145,311.17
[illegible]nery exercises, 1916	10,038.25		4,072.50	14,110.75	$39.75	34,500.50		48,651.00
[illegible]ming exercises, 1916	1,626.82		32.05	1,658.87		5.00		1,663.87
[illegible]its on first enlistment, 1916	41,997.88			41,997.88		568,089.38	121.21	609,966.05
[illegible]ruments and supplies, 1916	17,228.30	3,250.00	15,416.28	35,904.58	1,875.62	8,155.02	7,007.19	38,928.03
[illegible] and lake surveys, 1916	11,376.33		9,250.83	20,627.16	10,129.63	2,982.13		33,738.92
[illegible] training station, Rhode Island, 1916	*3,119.11*		3,546.67	427.56		2,305.08	620.86	2,111.78
[illegible] training station, St. Helena, Va., 1916	202.51		33.75	236.26		5.28		241.54
[illegible]aining station, Great Lakes, 1916	*814.09*		1,494.46	680.37		3,811.95	487.47	4,004.85
[illegible]aining station, California, 1916	1,348.28		455.08	1,803.36		3,009.68	*5.03*	4,818.07
[illegible] College, 1916:								
[illegible]ance and care of grounds	35.35		100.06	135.41		1,337.17		1,472.58
[illegible] of lecturer on international law			1,000.00	1,000.00				1,000.00
[illegible] of civilian lecturer, rendered at War College			160.00	160.00				160.00
[illegible] preservation of library, etc	25.65		404.98	430.63				430.63
[illegible]e, Philadelphia, Pa., 1916:								
[illegible]ees	513.82			513.82		2.82		516.64
[illegible]nance	1,542.78	2.80	5,768.31	7,313.89		42.11	722.17	6,633.83
[illegible]val Academy, 1916	1,493.63			1,493.63		15,139.71		16,633.34
[illegible]ent and miscellaneous expenses, Naval Academy, 1916:								
1. Text and reference books for instructors, etc	4,503.12		4,872.00	9,375.12		54.68		9,429.80
2. Purchase, binding, and repair of books for the library	1,554.25		393.30	1,947.55				1,947.55
3. Expenses of the Board of Visitors	400.00		100.00	500.00				500.00
4. Contingencies for the superintendent	1.30		359.22	360.52		51.06		411.58

Statement 39.—APPROPRIATION BALANCES—Continued.

FISCAL YEAR 1916 AND CONTINUING APPROPRIATIONS—Continued.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
BUREAU OF YARDS AND DOCKS—continued.								
6319. Maintenance and repairs, Naval Academy, 1916:								
1. General purposes	$807.12		$3,275.39	$4,082.51		$18,269.35	$2,130.10	$20,221.76
2. Rent of buildings for the use of the academy and commutation of rent for bandsmen	135.19			135.19		3,354.94		3,490.13
6332. Naval training station, Great Lakes, buildings:								
2. Construction of buildings	2,700.00		24,875.14	27,575.14				27,575.14
6334. Medals for officers and men, Navy and Marine Corps, War with Spain	9,861.10			9,861.10				9,861.10
BUREAU OF ORDNANCE.								
6401. Ordnance and ordnance stores, 1916:								
1. General purposes	60,459.17	$189.00	846,708.71	907,356.88	$14,703.27	483,340.43	45,499.20	1,359,901.38
2. Purchase and manufacture of smokeless powder	301.70		65,507.50	65,809.20		31.56	3,073.53	62,767.23
6402. Contingent, ordnance, 1916	2,807.77		542.20	3,349.97		23.90	8.50	3,365.37
6403. Repairs, ordnance, 1916	3,372.26		1,393.50	4,765.76		1,000.48		5,766.24
6404. Torpedo station, 1916:								
1. General purposes	340.95		5,705.85	6,046.80		3,084.53	202.58	8,928.75
2. New machinery and tools for torpedo factory	418.19		45.00	463.19				463.19
3. Construction of building for storage of torpedoes	20,000.00			20,000.00				20,000.00
6405. Naval Gun Factory, Washington, D. C., 1916	1,056.50		40,836.20	41,892.70		*3,062.50*		38,830.20
6406. Experiments, Ordnance, 1916	*142.06*		22,960.00	22,817.94		3,075.53		25,893.47
6409. New batteries for ships of the Navy, 1916–17	9,739.26		78,419.94	88,159.20				88,159.20
5410. New batteries for ships of the Navy, 1915–16:								
2. Replacing Mark VI, 6-inch with Mark VIII guns, etc	3,033.15		2,939.84	5,972.99				5,972.99
3. For liners for eroded guns	86.68			86.68		*22.91*		63.77
6411. Torpedoes and appliances, 1916–1918	634,009.29		305,544.96	939,554.25		434.25	4.83	939,983.67
5411. Torpedoes and appliances, 1915–1917	265,532.63		36,719.00	302,251.63		34,604.47	2,376.44	334,479.66
6420. Increase of the Navy, armor and armament	623,158.97		11,555,492.23	12,178,651.20	1,525.22	70,822.39	270,427.41	11,980,571.40
6421. Ammunition for ships of the Navy	448,859.97		6,161,563.61	6,610,423.58		53,619.11	5,564.44	6,658,478.25
6422. Ordnance material, proceeds of sales:								
1. General account	468,087.50			468,087.50				468,087.50
2. Allotment for 1915	*3,814.73*		9,800.54	5,985.81				5,985.81
3. Allotment for 1916	662.40		74,337.60	75,000.00				75,000.00
6426. Powder factory, Indianhead, Md	27,690.64		31,274.08	58,964.72		1,792.99	8,760.00	51,997.71

BUREAU OF CONSTRUCTION AND REPAIR.								
6501. Construction and Repair, 1916	46,443.23	2,313.00	163,738.33	212,494.56	132,843.63	517,770.89	41,305.94	821,803.14
6502. Construction plants at navy yards, 1916:								
1. Portsmouth, N. H.	265.03		2,893.00	3,158.03		65.20	286.22	2,937.01
2. Boston, Mass.	356.51		678.00	1,034.51				1,034.51
3. New York, N. Y.	1,020.10		2,580.00	3,600.10		1,284.62		4,884.72
4. Philadelphia, Pa.	647.72		2,559.00	1,911.28				1,911.28
5. Norfolk, Va.	233.65		6,554.50	6,320.85		325.82		6,646.67
6. Charleston, S. C.	107.95		4,319.20	4,427.15		144.88		4,572.03
7. Mare Island, Cal.	282.43		1,733.12	2,015.55				2,015.55
8. Puget Sound, Wash.	105.00		4,510.00	4,615.00		71.62		4,686.62
6510. Construction plant, navy yard, Portsmouth, N. H.	242.01			242.01		157.77		399.76
6511. Construction plant, navy yard, Boston, Mass.	64.53		500.00	435.47		187.76		247.71
6513. Construction plant, navy yard, Norfolk, Va.	29.75			29.75				29.75
6515. Construction plant, navy yard, Pensacola, Fla.	62,276.52			62,276.52				62,276.52
6518. Construction plant, navy yard, Puget Sound, Wash.						18.74		18.74
6519. Construction plant, naval station, Pearl Harbor, Hawaii	1,689.66		719.68	2,409.34				2,409.34
BUREAU OF STEAM ENGINEERING.								
6601. Engineering, 1916	7,921.76	2,729.00	553,580.53	548,387.77	207,639.38	388,154.83	22,523.64	1,121,658.34
6602. Engineering experimental station, Annapolis, Md., 1916:								
1. Experimental and research work	.34		1.34	1.00		4,067.79		4,068.79
2. Equipment of building	126.05		2,013.50	2,139.55		654.93		2,794.48
6610. Machinery plant, navy yard, Portsmouth, N. H.			300.00	300.00				300.00
6626. Machinery plant, navy yard, Boston, Mass.	1,056.49		1,020.20	2,076.69				2,076.69
6611. Machinery plant, navy yard, New York, N. Y.	904.89		800.00	104.89	119.67	24.43		39.21
6612. Machinery plant, navy yard, Philadelphia, Pa.	54.88			54.88				54.88
6613. Machinery plant, navy yard, Norfolk, Va.	2,569.38		3,014.00	5,583.38				5,583.38
6614. Machinery plant, navy yard, Charleston, S. C.	300.00		2,628.00	2,928.00				2,928.00
6615. Machinery plant, navy yard, Pensacola, Fla.	13,458.17		3,152.50	16,610.67				16,610.67
6617. Machinery plant, navy yard, Mare Island, Cal.	430.13			430.13				430.13
6619. Machinery plant, naval station, Cavite, P. I.	33,260.00			33,260.00				33,260.00
6620. Machinery plant, naval station, Olongapo, P. I.	9,425.52		11,779.75	21,205.27				21,205.27
6621. Machinery plant, naval station, Pearl Harbor, Hawaii	2,914.75		825.75	3,740.50		509.25		4,249.75
6624. High-power radio stations			492,989.80	492,989.80	3.75	16,261.56		509,255.11
6625. Building, Bureau of Steam Engineering, Annapolis, Md.:								
Surplus account	4,833.65			4,833.65				4,833.65
7. To complete the installation of steam, air, and water lines, etc.	413.74			413.74				413.74
BUREAU OF SUPPLIES AND ACCOUNTS.								
6701. Pay of the Navy, 1916	1,584,963.75	93,299.00		1,491,664.75	3,423.44	3,081,292.96	275,079.69	13,17,971.96
6702. Provisions, Navy, 1916–17	413,494.73	222,910.00	520,560.87	329,976.14	4,331.88	1,342,703.59	1,636,819.58	40,192.03
5702. Provisions, Navy, 1915–16	30,670.41		82,995.28	113,665.69		311,284.47	48,061.76	376,888.40
6701 Maintenance, Supplies and Accounts, 1916	2,670.95	616.00	13,020.43	16,307.38	26,831.16	103,974.72	6,983.55	140,129.71
6705 Freight, Supplies and Accounts, 1916	196,255.77	175,048.49		21,207.28		71,598.78	856.24	49,535.26

BUREAU [illegible] AND [illegible]

6709. [illegible] 1916							
6710. Naval [illegible]							
6715. Clothing and [illegible]							
6717. [illegible]							
[illegible]							
[illegible] Medical Department, 1916							
[illegible] Contingent, medicine and surgery [illegible]							
1. General purposes							
2. Dental outfits and dental [illegible]							
[illegible] Bringing home remains of [illegible] ment, 1915–17							
[illegible] Bringing home remains of [illegible] ment, 1915–16							
[illegible] Naval hospital, Chelsea, Mass							[illegible] 14
[illegible] Naval hospital, Newport, R. I							[illegible]
6841. Naval hospital, Pensacola, Fla							[illegible]
2. For the erection of quarters [illegible] etc							20,000 00
6813. Naval Hospital, Great Lakes	[illegible]						
6814. Bringing home remains of officers, [illegible] ment							10,000 00
6815. Naval hospital fund					[illegible]		16,852 08
					[illegible]		705 75
					[illegible]	[illegible]	[illegible] 88
MARINE CORPS							
6901. Pay Marine Corps, 1916							
6902. Maintenance quartermaster's department, Marine Corps, 1916	[illegible]	41,[illegible] 75	[illegible]	1,101,306 03	30,517 86		1,453,933 54
6915. Barracks and quarters, Marine Corps	[illegible]	[illegible]	2,[illegible] 12	[illegible] 11	[illegible]		[illegible] 04 [illegible] 00

MISCELLANEOUS.								
Pay Navy deposit fund	376,059.83			376,059.83			3,536.00	372,523.83
Pay Marine Corps deposit fund	312,913.20			312,913.20			564.00	312,349.20
Total	18,724,317.53	623,867.69	32,838,428.86	52,186,614.08	1,192,853.87	11,792,626.83	5,311,423.32	59,860,671.46

FISCAL YEAR 1915.

5101. Pay, miscellaneous, 1915	$22,158.69	$199.98		$22,358.67		$8,396.46	$2,725.37	$28,029.76
5102. Contingent, Navy, 1915	21,081.16			21,081.16		78.46		21,159.62
5104. Care of lepers, etc., Guam, 1915	371.76			371.76				371.76
5107. Advisory committee for aeronautics, 1915	973.46		$1,066.91	2,040.37				2,040.37
5201. Maintenance, yards and docks, 1915	506.10		694.50	1,200.60		*123.24*	279.26	798.10
5202. Repairs and preservation, 1915	470.43		3,320.66	3,791.09		24.19		3,815.28
5206. Contingent, yards and docks, 1915	406.75		69.10	475.85		*23.77*		452.08
5301. Contingent, navigation, 1915	4,144.30		161.78	4,306.08		*22.98*	8.70	4,279.40
5302. Transportation, navigation, 1915	220,694.39	672.83		221,367.22		5,443.71	2,379.55	224,431.38
5303. Recruiting, navigation, 1915	30,818.33		5,604.70	36,423.03		929.56	2.85	37,349.74
5304. Maintenance, naval auxiliaries, 1915	20,090.86			20,090.86	*89.18*	16.79		20,098.53
5305. Gunnery exercises, 1915	10,627.50			10,627.50		1,394.88	*1.00*	12,023.38
5306. Steaming exercises, 1915	3,549.98		5.05	3,555.03		79.06		3,634.09
5308. Outfits on first enlistment, 1915	145,277.03			145,277.03		4,472.72	1,332.73	148,417.02
5309. Instruments and supplies, 1915	146,330.92		1,526.24	147,857.16		*155.19*	*.94*	147,702.91
5310. Ocean and lake surveys, 1915	9,595.32			9,595.32				9,595.32
5311. Naval training station, Rhode Island, 1915	*129.51*			*129.51*		984.78		855.47
5312. Naval training station, St. Helena, Va., 1915	346.23			346.23				346.23
5313. Naval training station, Great Lakes, 1915	18,007.52	?	1,345.36	19,352.88		34.19		19,387.07
5314. Naval training station, California, 1915	11.82			11.82		74.78		86.60
5307. Experiments in aviation, 1915	3,752.66		1,366.29	5,118.95				5,118.95
5315. Naval War College, 1915:								
1. Maintenance and care of grounds	686.39			686.39				686.39
3. Services of civilian lecturer rendered at the War College			300.00	300.00				300.00
4. Care and preservation of the library, etc	69.03		132.27	201.30				201.30
5316. Naval Home, Philadelphia, Pa., 1915:								
1. Employees	793.52			793.52		1.07		794.59
2. Maintenance	1,249.64			1,249.64				1,249.64
5317. Pay, Naval Academy, 1915	2,196.53			2,196.53				2,196.53
5318. Current and miscellaneous expenses, Naval Academy, 1915:								
1. Text and reference books for instructors, etc	4,074.42		250.00	4,324.42				4,324.42
2. Purchase, binding, and repair of books for the library	1,018.74		112.66	1,131.40				1,131.40
3. Expenses of the Board of Visitors	227.68			227.68				227.68
4. Contingencies for the superintendent	1.19			1.19				1.19
5319. Maintenance and repairs, Naval Academy, 1915:								
1. General purposes	5,846.69		31.00	5,877.69		16.32	1.26	5,892.75
2. Rent of buildings for the use of the academy and commutation of rent for bandsmen	.35			.35				.35

Statement 30.—APPROPRIATION BALANCES—Continued.

FISCAL YEAR 1915—Continued.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
5401. Ordnance and ordnance stores, 1915:								
1. General purposes	$15,208.42		$218,192.71	$233,401.12		$389.80	$1,425.64	$231,593.18
2. Purchase and manufacture of smokeless powder	6,528.08		2,509.00	8,037.08		184.71		8,352.37
5402. Contingent, ordnance, 1915	2,603.50		474.27	3,077.77				3,077.77
5403. Repairs, ordnance, 1915	1,594.83		36.65	1,631.48				1,631.48
5404. Torpedo station, 1915:								
1. General purposes	1,358.21			1,358.21				1,358.21
2. New machinery and tools for torpedo factory	587.62			587.62				587.62
5405. Naval Gun Factory, Washington, D. C., 1915	262.27		8,537.75	8,800.02		3,062.50		11,862.52
5406. Experiments, ordnance, 1915	39,479.77		24.76	39,503.53		6,782.49		46,286.02
5407. Arming and equipping Naval Militia, 1915	6,968.87		16,187.53	9,878.66		2,678.18	209.53	12,347.31
5408. Arms, uniforms, and equipment, Naval Militia, 1915	82		8,317.05	8,228.04		1,987.52		10,215.56
5409. New batteries for ships of the Navy, 1915	7,220.54			7,220.54			1,844.85	5,370.19
5410. Construction and repair, 1915	87,467.55		105,706.04	193,373.59	$1,009.95	170.62	769.76	194,382.68
5412. Construction plants at navy yards, 1915:								
1. Portsmouth, N. H.	6,943.77			6,943.77				6,943.77
2. Boston, Mass.	1,658.40			1,658.40				1,658.40
3. New York, N. Y.	1,133.83			1,133.83				1,133.83
4. Philadelphia, Pa.	852.95		1,735.00	1,382.05				1,382.05
5. Norfolk, Va.	1,702.47			1,702.47				1,702.47
6. Charleston, S. C.	1,142.28		1,582.42	2,724.70		780.16		3,504.86
7. Mare Island, Cal.	2,397.28		3,197.00	5,594.28				5,594.28
8. Puget Sound, Wash.	5,908.34			5,908.34				5,908.34
5601. Engineering, 1915	29,197.48		69,953.41	40,755.93		171.19	5,828.72	34,756.02
5602. Engineering experimental station, Annapolis, Md., 1915:								
1. Experimental and research work	518.54		416.25	102.29				102.29
2. Equipment of building	285.86		1,081.00	1,366.86				1,366.86
5701. Pay of the Navy, 1915	1,021,014.58			1,021,014.58		1,158,023.18	30,480.74	108,527.86
5702. Provisions, Navy, 1914–15	46,466.13			46,466.13		117,935.54	71,413.46	55.95
5704. Maintenance, supplies and accounts, 1915	90,508.78		11,518.76	102,027.54		393.75	34.71	102,380.58
5705. Freight, supplies and accounts, 1915	131,833.73	$10,030.99		121,802.74		122,021.71	117.26	101.71
5706. Fuel and transportation, 1915	314,160.03			314,160.03	293,102.02	34,500.29	178.66	15,273.62
5801. Medical department, 1915	7,820.69			7,820.69		7,914.46	1.66	92.11
5802. Contingent, medicine and surgery, 1915	15,188.34			15,188.34		91.86		15,280.20

1. Pay, Marine Corps, 1915	38,330.36			38,330.36		14,035.15	3,908.11	48,457.40
2. Maintenance, quartermaster's department, Marine Corps, 1915	1,884.94			1,884.94		101,526.35		103,411.29
Total	572,223.40	10,903.80	465,476.12	95,843.48	296,102.85	1,592,815.53	121,995.86	1,671,079.04

FISCAL YEAR 1914.

4701. Pay of the Navy, 1914	$13,652.15			$13,652.15		$366.48	$14,018.63	
4101. Pay, miscellaneous, 1914	1,325.77			1,325.77		2,296.24	3,622.01	
4162. Contingent, Navy, 1914	358.36			358.36				$358.36
4201. Maintenance, yards and docks, 1914	3,398.52			3,398.52	$484.17	2,914.35		
4202. Repairs and preservation, 1914	777.47			777.47		810.25	32.78	
4302. Transportation, navigation, 1914	1,139.86			1,139.86		6,443.96	5,304.10	
4303. Recruiting, navigation, 1914	74.22			74.22		87.02	12.80	
4308. Outfits on first enlistment, 1914	29,669.96			29,669.96		29,678.01	8.05	
4401. Ordnance and ordnance stores, 1914	1,996.04			1,996.04	375.43	2,371.47		
4705. Freight, supplies and accounts, 1914	10,135.27			10,135.27		2,708.06	1,039.16	11,804.17
4708. Coal and transportation, 1914	16,790.76			16,790.76	21,604.10			4,813.34
4802. Contingent, medicine and surgery, 1914	69.55			69.55	69.55			
4803. Bringing home remains of officers, etc., 1914	157.57			157.57				157.57
4901. Pay, Marine Corps, 1914	3,725.11			3,725.11		.02	3,725.13	
4902. Maintenance, quartermaster's department, Marine Corps, 1914	195,052.20			195,052.20				195,052.20
Total	170,629.15			170,629.15	21,643.29	47,675.86	27,762.66	212,185.64

FISCAL YEAR 1913 AND PRIOR YEARS.

3701. Pay of the Navy, 1913	$308.19			$308.19		$308.19		
3101. Pay, miscellaneous, 1913	6,758.62			6,758.62		4,176.47		$10,935.09
3302. Transportation, navigation, 1913	57.86			57.86		1.50	$56.36	
3303. Recruiting, navigation, 1913	6.95			6.95			6.95	
3308. Outfits on first enlistment, 1913	49.28			49.28		49.28		
3601. Steam machinery, 1913	2,888.76			2,888.76		2,888.76		
3705. Freight, supplies, and accounts, 1913	19,443.71			19,443.71		2,696.84		22,140.55
3708. Coal and transportation, 1913	4,727.48			4,727.48				4,727.48
3901. Pay, Marine Corps, 1913	41.60			41.60		41.60		
2701. Pay of the Navy, 1912	88.25			88.25		125.20	36.95	
2101. Pay, miscellaneous, 1912	2.00			2.00			2.00	
2302. Transportation, navigation, 1912	17.02			17.02			17.02	
2308. Outfits on first enlistment, 1912	52.41			52.41		52.41		
1701. Pay of the Navy, 1911	19.06			19.06		19.06		
1308. Outfits on first enlistment, 1911	38.04			38.04		38.04		
0701. Pay of the Navy, 1910	51.52			51.52		51.52		
Total	27,476.53			27,476.53		10,445.87	119.28	37,803.12

Statement 39.—APPROPRIATION BALANCES—Continued.

CERTIFIED CLAIMS, ETC.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
Pay, miscellaneous (certified claims)	$17.92			$17.92		$17.92		
Transportation, navigation (certified claims)	3,481.33			3,481.33		3,481.33		
Outfits on first enlistment (certified claims)	45.00			45.00		45.00		
Construction and repair (certified claims)	5.46			5.46				$5.46
Freight, supplies, and accounts (certified claims)	9,472.52			9,472.52		9,472.52		
Bounty for destruction of enemies' vessels	52,351.52			52,351.52				52,351.52
Bounty for destruction of enemies' vessels (certified claims)	.56			.56				.56
Claims for damages by collision with Naval vessels	175.00			175.00				175.00
Claims reported by Court of Claims under Bowman and Tucker Acts, etc	649.22			649.22				649.22
Indemnity for lost property, naval service	170.58			170.58				170.58
Judgments, bounty for destruction of enemies' vessels	60,379.28			60,379.28				60,379.28
Judgments, Court of Claims, Navy	5,525.38			5,525.38				5,525.38
Navy pension fund, interest	435,725.04			435,725.04				435,725.04
Navy pension fund, principal trust fund	14,767,725.43			14,767,725.43			13.65	14,767,711.78
Navy pension fund, sale of material at Naval Home	3.50			3.50			3.50	
Payment of certain claims arising under the Navy Department	2,372.59			2,372.59				2,372.59
Payment for certain services arising under the Navy Department	1,174.13			1,174.13				1,174.13
Payment for Japanese award	28,492.18			28,492.18				28,492.18
Prize money, battle of Manila Bay	32,888.93			32,888.93				32,888.93
Prize money to captors	429,352.17			429,352.17				429,352.17
Prize money to captors, Spanish War	28,076.74			28,076.74				28,076.74
Refund of stolen deposits of enlisted men of the Navy and Marine Corps	648.62			648.62				648.62
Reimbursements to enlisted men, Navy, for clothing and bedding destroyed	147.51			147.51				147.51
Relief of owners American schooner Walter B. Chester	269.64			269.64				269.64
Total	15,833,116.71			15,833,116.71		13,016.77	17.15	15,846,116.33

CONTRACTS BASED ON AUTHORIZATIONS FOR WHICH APPROPRIATIONS HAVE NOT BEEN MADE.

6113. Increase of the Navy, construction and machinery	*$13,775,000.00*		$13,775,000.00					
6115. Increase of the Navy, torpedo boats	*6,335,000.00*		6,335,000.00					
6420. Increase of the Navy, armor and armament	*9,000,000.00*		9,000,000.00					
6221. Navy yard, Norfolk, Va.:								
208. One hundred and fifty ton crane	*168,878.86*		168,878.86					
6232. Naval station, Pearl Harbor, Hawaii:								
37. Dry dock	*1,470,859.52*		1,470,859.52					
6624. High-power radio stations	*142,644.90*		142,644.90					
Total	*30,892,383.28*		30,892,383.28					

RECAPITULATION.

NOTE.—Figures in *italics*, column 1, represent appropriations overobligated; figures in *italics*, column 4, represent appropriation overexpended.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, Naval Supply Account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
Fiscal year 1916 and continuing appropriations	$18,546,445.97	$623,867.69	$33,016,300.42	$52,186,614.08	$1,192,853.87	$11,792,626.83	$5,311,423.32	$59,860,671.46
Fiscal year 1915	*572,223.40*	10,903.80	465,476.12	*95,843.48*	296,102.85	1,592,815.53	121,995.86	1,671,079.04
Fiscal year 1914	170,629.15			170,629.15	21,643.29	47,675.86	27,762.66	212,185.64
Fiscal year 1913 and prior years	27,476.53			27,476.53		10,445.87	119.28	37,803.12
Certified claims, etc	15,833,116.71			15,833,116.71		13,016.77	17.15	15,846,116.33
Contracts based on authorizations for which appropriations have not been made	*30,892,383.28*		30,892,383.28					
Total of appropriations and funds	3,113,061.68	634,771.49	64,374,159.82	68,121,992.99	1,510,600.01	13,456,580.86	5,461,318.27	77,627,855.59

Statement 40.—APPROPRIATIONS ACCOUNTS, BY TITLES.

RECAPITULATION.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$52,659,283.16							
Amount appropriated	152,693,313.53							
Miscellaneous receipts	30,054,649.92							
	235,407,246.61							
Net total expenditures by titles (naval appropriations)	156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Miscellaneous adjustments in appropriations*	8,674,093.76							
Total expenditures under naval appropriations	164,704,692.67	25,681,084.62		19,938,768.16	52,890,374.51	7,034,530.97	1,087,897.50	49,397,943.15
Carried to surplus fund	2,580,560.95							
Balance June 30, 1916	68,121,992.99							
	235,407,246.61							

RECONCILEMENT WITH STATEMENT 14 (GROSS EXPENDITURES BY YARDS AND TITLES).

Net total expenditures by titles (Statement 40)	$156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Other Government departments	954,885.15	433,857.24		172,245.62		348,782.29		
Special deposits	185,319.43	96,919.26		88,400.17				
Cash sales	57,802.65					57,802.65		
Proceeds of sales	41,418.24	36,431.08		4,987.16				
Purchases under naval supply account	24,092,615.47				24,092,615.47			
Issues naval supply account, title X, to naval supply account, title Z and labor applied to same	9,397,275.39	2,895,071.43		6,502,203.96				
Issues of stores previously charged to appropriations	28,908,520.51					28,908,520.51		
Total, Statement 14	219,668,435.75	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15

NOTE.—Statement 40 reconciles with Statement 1 (cost of the Navy) through the above reconcilement with Statement 14.

* Arming and equipping Naval Militia, 1916	$26,031.97	Clothing and ordnance stores transferred to the Naval Militia.
Arms, uniforms, etc., Naval Militia, 1916	100,578.95	Clothing and ordnance stores transferred to the Naval Militia.
Navy fines and forfeitures	522,271.11	Transferred to naval hospital fund.
Maintenance naval auxiliaries, 1916	66,541.95	Provisions transferred to masters, naval auxiliaries.
Increase of the Navy, equipment (Nav.)	144,476.58	Balance transferred to appropriation Increase of the Navy (C. and M.).
Ordnance and ordnance stores, 1916	491,076.71	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, armor and armament	213,308.38	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Ammunition for ships of the Navy	211,613.22	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, equipment (C. and R)	427,658.57	Balance transferred to appropriation Increase of the Navy (C. and M.).
Increase of the Navy, equipment (S. E.)	376,935.34	Balance transferred to appropriation Increase of the Navy (C. and M.).
Provisions Navy, 1916–17	381,039.75	Transfers to naval hospital fund on account of sick in hospitals, etc.
Provisions Navy, 1915–16	71,298.18	Transfers to naval hospital fund on account of sick in hospitals, etc.
Increase of the Navy, equipment (S. A.)	72,062.10	Balance transferred to appropriation Increase of the Navy (C. and M.).
Naval hospital fund	115,767.67	Provisions, etc., transferred to naval hospitals from stock carried under appropriation Provisions, Navy.
Maintenance, quartermaster's department, Marine Corps, 1916.	330,914.18	Transfer of stores originally purchased under naval appropriations.
Pay of the Navy, deposit fund	336,036.30	Repayment of deposits to enlisted men upon discharge.
Pay of the Marine Corps, deposit fund	282,406.60	Repayment of deposits to enlisted men upon discharge.
Pay Marine Corps, 1915	289,991.27	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Equipment of vessels, 1914	625,000.00	Transferred to appropriation Increase of the Navy, torpedo boats.
Construction and repair, 1914	900,000.00	Transferred to appropriation Aeronautics, Navy, 1916.
Steam machinery, 1914	275,000.00	Transferred to appropriation Aeronautics, Navy, 1916, and Increase of the Navy, torpedo boats.
Pay, Marine Corps, 1914	42,099.06	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Navy pension fund, interest	441,119.20	Transferred to appropriation, Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pension .
Navy pension fund, Spanish War	727,936.82	Transferred to Navy pension fund, principal trust fund.
Other appropriations	1,202,929.85	Miscellaneous adjustments made by the accounting officers of the Treasury, etc.
	8,674,093.76	

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES Continued.

CURRENT APPROPRIATIONS.

6101. Pay, Miscellaneous, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$1,000,000.00							
Miscellaneous receipts	16,725.78							
	1,016,725.78							
Expenditures by titles:								
[illegible]	41,997.53				$41,993.45	$4.08		
[illegible]	1,[illegible].28			$62.50	1,924.78			
[illegible]	1,[illegible].27				1,021.25			
[illegible]	159,046.8[illegible]	$143,065.63		6,240.50	9,800.67			
[illegible]	276,985.5[illegible]	68,788.32	$59.47	34,997.66	104,706.44	1,431.65		
[illegible]	619,006.23	2,064.29	24.42	14,560.44	587,221.28	2,692.36	$11,148.91	$1,294.53
Less expenses deducted	85.89		85.89					
Miscellaneous adjustment	19,747.10							
Total expenditures	1,052,705.84	213,858.24		55,861.10	746,667.87	4,128.09	11,148.91	1,294.53
Balance	5,966.06							
	1,016,725.78							

6102. Contingent, Navy, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$46,000.00							
Miscellaneous receipts	171.65							
	46,171.65							
Expenditures by titles:								
[illegible]	1,598.77					$1,598.77		
[illegible]	1,352.48				$1,296.72	45.56		$10.20
[illegible]	35.10	$26.33		$8.77				
[illegible]	15,732.75	188.20	$35.10	3,193.58	11,090.43	703.05	$522.39	
[illegible]	*1,613.69*					*1,613.69*		
Less expense deducted	*35.10*		*35.10*					
Miscellaneous adjustments	690.05							
Total expenditures	17,760.36	214.53		3,202.35	12,387.15	731.69	522.39	10.20
Balance	28,411.29							
	46,171.65							

5103. Contingent, Navy, 1915-16.

July 1, 1915	$102,211.23							
eous adjustments	748.63							
	101,462.60							
	102,211.23							

6104. Care of lepers, etc., Guam, 1916.

nt appropriated	$14,000.00							
cellaneous receipts	75.58							
	14,075.58							
Expenditures by titles:								
S	4,917.41	$3,143.06		$1,774.35				
V	2,176.18				$1,648.27	$527.91		
Miscellaneous adjustments	6,120.90							
Total expenditures	13,214.49	3,143.06		1,774.35	1,648.27	527.91		
Balance	861.09							
	14,075.58							

6105. Committee to investigate cost of United States armor plant, 1916.

Amount appropriated	$4,581.57							
Balance	4,581.57							

6106. Aeronautics, Navy, 1916.

Amount appropriated	$1,000,000.00							
Miscellaneous receipts	3.62							
	1,000,003.62							
Expenditures by titles:								
A	113,570.16	$164.82		$47,062.11	$66,343.23			
B	1,977.18	1.85		1,866.53		$108.80		
C	5,874.57	7.52		5,867.05				
D	23,137.68	1,821.01		21,316.67				

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6106. Aeronautics, Navy, 1916—Continued.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Expenditures by titles—Continued.								
K	$32,621.68	$3,337.01		$29,284.67				
P	513.17	124.43		3.25	$385.49			
E	22,101.15	9,117.53	$2,629.78	10,353.84				
R	164,862.89	18,773.87	1,178.28	31,369.21	113,541.53			
G	14,735.05	11,906.73		2,828.32				
S	74,449.10	33,919.74	2.94	37,715.17	2,811.25			
V	32,257.54	16,250.92	6,782.69	7,807.25	1,412.11	$4.57		
Indirect expense deducted	*10,593.69*		*10,593.69*					
Total expenditures	475,506.48	95,425.43		195,474.07	184,493.61	113.37		
Balance	524,497.14							
	1,000,003.62							

6107. Advisory committee for aeronautics, 1916.

Amount appropriated	$5,000.00							
Expenditures by titles:								
V	2,066.65				$1,738.09	$27.04	$301.52	
Balance	2,933.35							
	5,000.00							

6108. Arming and equipping Naval Militia, 1916.

Amount appropriated	$250,000.00							
Miscellaneous receipts	1,052.06							
	251,052.06							
Expenditures by titles:								
B	1,426.32					$1,426.32		
C	22,407.52				$22,310.16	90.76		$6.60
V	156,851.45				149,919.78	1,459.61	$3,808.86	1,663.20

X	*1,761.33*					*1,761.33*		
Miscellaneous adjustments[1]	26,031.97							
Total expenditures	204,955.93				172,229.94	1,215.36	3,808.86	1,669.80
Balance	46,096.13							
	251,052.06							

6109. Arms, uniforms, equipment, etc., Naval Militia, 1916.

Amount appropriated	$200,000.00							
Miscellaneous receipts	8,474.74							
	208,474.74							
Expenditures by titles:								
B	17,798.31					$17,798.31		
C	19,856.14				$1,022.19	18,833.95		
G	290.94	$244.88		$46.06				
S	25.51	21.52		3.99				
V	51,852.87	301.51	$86.53	447.77	25,148.04	19,749.60	$6,119.42	
X	*9,560.64*					*9,560.64*		
Indirect expense deducted	*86.53*		*86.53*					
Miscellaneous adjustments[1]	100,578.95							
Total expenditures	180,755.55	567.91		497.82	26,170.23	46,821.22	6,119.42	
Balance	27,719.19							
	208,474.74							

6110. Relief of inhabitants, American Samoa, hurricane damages, 1915-16.

Balance July 1, 1915	$4,783.86							
Miscellaneous adjustments	3,118.82							
Balance	1,665.04							
	4,783.86							

6112. Repair, preservation, and exhibition of Navy trophy flags.

Balance July 1, 1915	$2,399.60							
Carried to surplus fund	2,399.60							

[1] Clothing and ordnance stores transferred to the Naval Militia.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6113. Increase of the Navy, C. and M.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$11,361,948.97							
Amount appropriated	20,664,459.00							
Miscellaneous receipts	2,135,616.08							
	34,162,024.05							
Expenditures by titles:								
A	16,698,642.26	$2,700,650.48	$743,059.10	$2,394,566.24	$10,794,701.09	$65,132.84	$539.51	
B	906,128.00				1,038.75	905,089.25		
C	30,292.45					30,292.45		
P	81.76	51.80	17.85	12.11				
E	34,496.31	10,066.85	1,971.23	4,690.00	17,768.23			
G	1,534,545.46	1,202,589.82		326,116.12	5,839.52			
S	538.28	329.46	72.23	136.59				
V	41,920.89	2,629.99	1,400.36	9,627.89	10,321.38	5,624.82	12,316.45	
X	47,396.62				47,396.62			
Indirect expense deducted	*746,520.77*		*746,520.77*					
Total expenditures	18,547,528.26	3,916,318.40		2,735,148.95	10,877,065.59	1,066,139.36	12,855.96	
Balance	15,614,495.79							
	34,162,024.05							

6114. Increase of the Navy, colliers.

Balance July 1, 1915	$112,011.51							
Expenditures by titles:								
G	44.02			$44.02				
Carried to surplus fund	111,967.49							
	112,011.51							

6115. Increase of the Navy, torpedo boats.

Balance July 1, 1915	$3,906,877.24							
Amount appropriated	6,231,344.00							
Miscellaneous receipts	10,184.50							
	10,148,405.74							
Expenditures by titles:								
A	3,129,004.92	$119,572.01	$32,312.56	$102,147.08	$2,874,557.21	$416.06		
B	6,613.48					6,613.48		
C	203.97					203.97		
G	65,981.78	54,879.41		11,093.41	8.96			
V	3,576.90				120.81	2,286.12	$1,169.97	
Indirect expense deducted	*32,312.56*		*32,312.56*					
Miscellaneous adjustments	80.00							
Total expenditures	3,173,148.49	174,451.42		113,240.49	2,874,686.98	9,519.63	1,169.97	
Balance	6,975,257.25							
	10,148,405.74							

6117. Navy fines and forfeitures (special fund).

Balance July 1, 1915	$588,630.01							
Miscellaneous receipts	761,418.03							
	1,350,048.04							
Expenditures by titles:								
V	140,900.04				$3,798.70		$10,460.47	$126,640.87
Miscellaneous adjustments [1]	522,271.11							
Total expenditures	663,171.15				3,798.70		10,460.47	126,650.87
Balance	686,876.89							
	1,350,048.04							

[1] Transferred to the naval hospital fund.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6119. Relief and transportation of American citizens in Mexico.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$8.00							
Amount appropriated	3,225.00							
	3,233.00							
Expenditures by titles:								
V	3,225.00						$3,225.00	
Miscellaneous adjustments	8.00							
Total expenditures	3,233.00							

6121. Purchase of land, Penobscot Bay, Me.

Balance July 1, 1915	$693.34							
Balance	693.34							

6122. Naval Observatory, purchase of land.

Balance July 1, 1915	$0.30							
Balance	.30							

6116. Increase of the Navy, equipment (S. O.).

Balance July 1, 1915	$582,122.54							
Miscellaneous adjustments	582,122.54							

6201. Maintenance, Yards and Docks, 1916.

Amount appropriated	$1,647,496.00							
Miscellaneous receipts	19,125.42							
	1,666,621.42							
Expenditures by titles:								
E	88,655.96	$12,730.37	$2,278.90	$37,577.93	$35,243.76		$825.00	
R	31,364.20	2,259.88	111.78	22,099.42	5,393.36	$58.05	1,441.71	
G	1,078,344.46	855,953.68		198,463.61	23,927.17			
S	308,891.32	208,621.06	399.06	88,049.02	11,379.30	346.50	84.00	$12.38
V	60,348.49	50,582.10	378.13	1,682.77	2,475.62	1,124.65	4,105.22	
X	*6.60*					*6.60*		
Indirect expense deducted	*3,167.87*		*3,167.87*					
Miscellaneous adjustments	3,513.08							
Total expenditures	1,567,943.04	1,130,147.09		347,872.75	78,419.21	1,522.60	6,455.93	12.38
Balance	98,678.38							
	1,666,621.42							

6202. Repairs and preservation, 1916.

Amount appropriated	$1,097,436.00							
Miscellaneous receipts	54.56							
	1,097,490.56							
Expenditures by titles:								
E	73,122.07	$33,061.24	$5,385.21	$33,438.28	$1,237.34			
R	8,333.45	3,046.97	361.22	4,065.85	858.96	$0.45		
G	800,956.98	519,308.19		257,810.91	23,837.88			
S	209,446.82	131,938.41	1,779.39	60,722.71	14,486.24	520.07		
V	2,565.98	128.78	35.44	148.97	5.56	2,247.29		
X	*.50*					*.50*		
Indirect expense deducted	*7,561.26*		*7,561.26*					
Total expenditures	1,086,863.54	687,483.59		356,186.72	40,425.92	2,767.31		
Balance	10,627.02							
	1,097,490.56							

Statement 39.—APPROPRIATION BALANCES—Continued.

CERTIFIED CLAIMS, ETC.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, naval supply account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
Pay, miscellaneous (certified claims)	*$17.92*			*$17.92*		$17.92		
Transportation, navigation (certified claims)	*3,481.33*			*3,481.33*		3,481.33		
Outfits on first enlistment (certified claims)	*45.00*			*45.00*		45.00		
Construction and repair (certified claims)	5.46			5.46				$5.46
Freight, supplies, and accounts (certified claims)	*9,472.52*			*9,472.52*		9,472.52		
Bounty for destruction of enemies' vessels	52,351.52			52,351.52				52,351.52
Bounty for destruction of enemies' vessels (certified claims)	.56			.56				.56
Claims for damages by collision with Naval vessels	175.00			175.00				175.00
Claims reported by Court of Claims under Bowman and Tucker Acts, etc	649.22			649.22				649.22
Indemnity for lost property, naval service	170.58			170.58				170.58
Judgments, bounty for destruction of enemies' vessels	60,379.28			60,379.28				60,379.28
Judgments, Court of Claims, Navy	5,525.38			5,525.38				5,525.38
Navy pension fund, interest	435,725.04			435,725.04				435,725.04
Navy pension fund, principal trust fund	14,767,725.43			14,767,725.43			13.65	14,767,711.78
Navy pension fund, sale of material at Naval Home	3.50			3.50			3.50	
Payment of certain claims arising under the Navy Department	2,372.59			2,372.59				2,372.59
Payment for certain services arising under the Navy Department	1,174.13			1,174.13				1,174.13
Payment for Japanese award	28,492.18			28,492.18				28,492.18
Prize money, battle of Manila Bay	32,888.93			32,888.93				32,888.93
Prize money to captors	429,352.17			429,352.17				429,352.17
Prize money to captors, Spanish War	28,076.74			28,076.74				28,076.74
Refund of stolen deposits of enlisted men of the Navy and Marine Corps	648.62			648.62				648.62
Reimbursements to enlisted men, Navy, for clothing and bedding destroyed	147.51			147.51				147.51
Relief of owners American schooner Walter B. Chester	269.64			269.64				269.64
Total	15,833,116.71			15,833,116.71		13,016.77	17.15	15,846,116.33

CONTRACTS BASED ON AUTHORIZATIONS FOR WHICH APPROPRIATIONS HAVE NOT BEEN MADE.

6113. Increase of the Navy, construction and machinery	*$13,775,000.00*		$13,775,000.00					
6115. Increase of the Navy, torpedo boats	*6,335,000.00*		6,335,000.00					
6420. Increase of the Navy, armor and armament	*9,000,000.00*		9,000,000.00					
6221. Navy yard, Norfolk, Va.:								
208. One hundred and fifty ton crane	*168,878.86*		168,878.86					
6232. Naval station, Pearl Harbor, Hawaii:								
37. Dry dock	*1,470,859.52*		1,470,859.52					
6624. High-power radio stations	*142,644.90*		142,644.90					
Total	*30,892,383.28*		30,892,383.28					

RECAPITULATION.

NOTE.—Figures in *italics*, column 1, represent appropriations overobligated; figures in *italics*, column 4, represent appropriation overexpended.

Appropriations.	Unallotted balances.	Unencumbered balance of allotments.	Unliquidated requisitions and contracts.	Unexpended balances.	Unaudited expenditures, Naval Supply Account.	Other unaudited expenditures.	Unaudited reimbursements.	Treasury balance.
	1	2	3	4	5	6	7	8
Fiscal year 1916 and continuing appropriations	$18,546,445.97	$623,867.69	$33,016,300.42	$52,186,614.08	$1,192,853.87	$11,792,626.83	$5,311,423.32	$59,860,671.46
Fiscal year 1915	*572,223.40*	10,903.80	465,476.12	*95,843.48*	296,102.85	1,592,815.53	121,995.86	1,671,079.04
Fiscal year 1914	170,629.15			170,629.15	21,643.29	47,675.86	27,762.66	212,185.64
Fiscal year 1913 and prior years	27,476.53			27,476.53		10,445.87	119.28	37,803.12
Certified claims, etc	15,833,116.71			15,833,116.71		13,016.77	17.15	15,846,116.33
Contracts based on authorizations for which appropriations have not been made	*30,892,383.28*		30,892,383.28					
Total of appropriations and funds	3,113,061.68	634,771.49	64,374,159.82	68,121,992.99	1,510,600.01	13,456,580.86	5,461,318.27	77,627,855.59

Statement 40.—APPROPRIATIONS ACCOUNTS, BY TITLES.

RECAPITULATION.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$52,659,283.16							
Amount appropriated	152,693,313.53							
Miscellaneous receipts	30,054,649.92							
	235,407,246.61							
Net total expenditures by titles (naval appropriations)	156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Miscellaneous adjustments in appropriations*	8,674,093.76							
Total expenditures under naval appropriations	164,704,692.67	25,681,084.62		19,938,768.16	52,890,374.51	7,034,530.97	1,087,897.50	49,397,943.15
Carried to surplus fund	2,580,560.95							
Balance June 30, 1916	68,121,992.99							
	235,407,246.61							

RECONCILEMENT WITH STATEMENT 14 (GROSS EXPENDITURES BY YARDS AND TITLES).

Net total expenditures by titles (Statement 40)	$156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Other Government departments	954,885.15	433,857.24		172,245.62		348,782.29		
Special deposits	185,319.43	96,919.26		88,400.17				
Cash sales	57,802.65					57,802.65		
Proceeds of sales	41,418.24	36,431.08		4,987.16				
Purchases under naval supply account	24,092,615.47				24,092,615.47			
Issues naval supply account, title X, to naval supply account, title Z and labor applied to same	9,397,275.39	2,895,071.43		6,502,203.96				
Issues of stores previously charged to appropriations	28,908,520.51					28,908,520.51		
Total, Statement 14	219,668,435.75	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15

NOTE.—Statement 40 reconciles with Statement 1 (cost of the Navy) through the above reconcilement with Statement 14.

* Arming and equipping Naval Militia, 1916	$26,031.97	Clothing and ordnance stores transferred to the Naval Militia.
Arms, uniforms, etc., Naval Militia, 1916	100,578.95	Clothing and ordnance stores transferred to the Naval Militia.
Navy fines and forfeitures	522,271.11	Transferred to naval hospital fund.
Maintenance naval auxiliaries, 1916	66,541.95	Provisions transferred to masters, naval auxiliaries.
Increase of the Navy, equipment (Nav.)	144,476.58	Balance transferred to appropriation Increase of the Navy (C. and M.).
Ordnance and ordnance stores, 1916	491,076.71	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, armor and armament	213,308.38	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Ammunition for ships of the Navy	211,613.22	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, equipment (C. and R)	427,658.57	Balance transferred to appropriation Increase of the Navy (C. and M.).
Increase of the Navy, equipment (S. E.)	376,935.34	Balance transferred to appropriation Increase of the Navy (C. and M.).
Provisions Navy, 1916–17	381,039.75	Transfers to naval hospital fund on account of sick in hospitals, etc.
Provisions Navy, 1915–16	71,298.18	Transfers to naval hospital fund on account of sick in hospitals, etc.
Increase of the Navy, equipment (S. A.)	72,062.10	Balance transferred to appropriation Increase of the Navy (C. and M.).
Naval hospital fund	115,767.67	Provisions, etc., transferred to naval hospitals from stock carried under appropriation Provisions, Navy.
Maintenance, quartermaster's department, Marine Corps, 1916.	330,914.18	Transfer of stores originally purchased under naval appropriations.
Pay of the Navy, deposit fund	336,036.30	Repayment of deposits to enlisted men upon discharge.
Pay of the Marine Corps, deposit fund	282,406.60	Repayment of deposits to enlisted men upon discharge.
Pay Marine Corps, 1915	289,991.27	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Equipment of vessels, 1914	625,000.00	Transferred to appropriation Increase of the Navy, torpedo boats.
Construction and repair, 1914	900,000.00	Transferred to appropriation Aeronautics, Navy, 1916.
Steam machinery, 1914	275,000.00	Transferred to appropriation Aeronautics, Navy, 1916, and Increase of the Navy, torpedo boats.
Pay, Marine Corps, 1914	42,099.06	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Navy pension fund, interest	441,119.20	Transferred to appropriation, Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pension .
Navy pension fund, Spanish War	727,936.82	Transferred to Navy pension fund, principal trust fund.
Other appropriations	1,202,929.85	Miscellaneous adjustments made by the accounting officers of the Treasury, etc.
	8,674,093.76	

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS.

6101. Pay, Miscellaneous, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$1,000,000.00							
Miscellaneous receipts	46,725.78							
	1,046,725.78							
Expenditures by titles:								
C	41,997.53				$41,993.45	$4.08		
E	1,987.28			$62.50	1,924.78			
R	1,021.25				1,021.25			
G	159,046.80	$143,005.63		6,240.50	9,800.67			
S	209,963.54	68,788.32	$59.47	34,997.66	104,706.44	1,431.65		
V	619,006.23	2,064.29	24.42	14,560.44	587,221.28	2,692.36	$11,148.91	$1,294.53
Indirect expense deducted	*83.89*		*83.89*					
Miscellaneous adjustments	19,747.10							
Total expenditures	1,052,705.84	213,858.24		55,861.10	746,667.87	4,128.09	11,148.91	1,294.53
Balance	*5,980.06*							
	1,046,725.78							

6102. Contingent, Navy, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$46,000.00							
Miscellaneous receipts	171.65							
	46,171.65							
Expenditures by titles:								
B	1,598.77					$1,598.77		
C	1,352.48				$1,296.72	45.56		$10.20
G	35.10	$26.33		$8.77				
V	15,732.75	188.20	$35.10	3,193.58	11,090.43	703.05	$522.39	
X	*1,613.69*					*1,613.69*		
Indirect expense deducted	*35.10*		*35.10*					
Miscellaneous adjustments	600.05							
Total expenditures	17,760.36	214.53		3,202.35	12,387.15	733.69	522.39	10.20
Balance	28,411.29							
	46,171.65							

5103. Contingent, Navy, 1915-16.

Balance July 1, 1915	$102,211.23							
Miscellaneous adjustments	748.63							
Balance	101,462.60							
	102,211.23							

6104. Care of lepers, etc., Guam, 1916.

Amount appropriated	$14,000.00							
Miscellaneous receipts	75.58							
	14,075.58							
Expenditures by titles:								
S	4,917.41	$3,143.06		$1,774.35				
V	2,176.18				$1,648.27	$527.91		
Miscellaneous adjustments	6,120.90							
Total expenditures	13,214.49	3,143.06		1,774.35	1,648.27	527.91		
Balance	861.09							
	14,075.58							

6105. Committee to investigate cost of United States armor plant, 1916.

Amount appropriated	$4,581.57							
Balance	4,581.57							

6106. Aeronautics, Navy, 1916.

Amount appropriated	$1,000,000.00							
Miscellaneous receipts	3.62							
	1,000,003.62							
Expenditures by titles:								
A	113,570.16	$164.82		$47,062.11	$66,343.23			
B	1,977.18	1.85		1,866.53		$108.80		
C	5,874.57	7.52		5,867.05				
D	23,137.68	1,821.01		21,316.67				

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6106. Aeronautics, Navy, 1916—Continued.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Expenditures by titles—Continued.								
K	$32,621.68	$3,337.01		$29,284.67				
P	513.17	124.43		3.25	$385.49			
E	22,101.15	9,117.53	$2,629.78	10,353.84				
R	164,862.89	18,773.87	1,178.28	31,369.21	113.541.53			
G	14,735.05	11,906.73		2,828.32				
S	74,449.10	33,919.74	2.94	37,715.17	2,811.25			
V	32,257.54	16,250.92	6,782.69	7,807.25	1,412.11	$4.57		
Indirect expense deducted	*10,593.69*		*10,593.69*					
Total expenditures	475,506.48	95,425.43		195,474.07	184,493.61	113.37		
Balance	524,497.14							
	1,000,003.62							

6107. Advisory committee for aeronautics, 1916.

Amount appropriated	$5,000.00							
Expenditures by titles:								
V	2,066.65				$1,738.09	$27.04	$301.52	
Balance	2,933.35							
	5,000.00							

6108. Arming and equipping Naval Militia, 1916.

Amount appropriated	$250,000.00							
Miscellaneous receipts	1,052.06							
	251,052.06							
Expenditures by titles:								
B	1,426.32					$1,426.32		
C	22,407.52				$22,310.16	90.76		$6.60
V	156,851.45				149,919.78	1,459.61	$3,808.86	1,663.20

X	1,761.85					1,761.85		
Miscellaneous adjustments[1]	26,081.97							
Total expenditures	204,955.93				172,229.94	1,216.86	8,808.86	1,609.80
Balance	46,096.13							
	251,052.06							

6100. Arms, uniforms, equipment, etc., Naval Militia, 1916.

Amount appropriated	[illegible]							
Miscellaneous receipts	[illegible]							
	[illegible]							
Expenditures by titles:								
B	[illegible]							
C	[illegible]				[illegible]	[illegible]		
G	[illegible]	[illegible]		[illegible]				
S	[illegible]	[illegible]		[illegible]				
V	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
X	[illegible]							
Indirect expense det intel	[illegible]		[illegible]					
Miscellaneous adjustments[1]	[illegible]							
Total expenditures	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
Balance	[illegible]							
	[illegible]							

6[illegible] Relief of inhabitants, American Samoa, hurricane damages 1915-16

Balance July 1, 1915	[illegible]							
Miscellaneous adjustments	[illegible]							
Balance	[illegible]							
	[illegible]							

6112 Repair, preservation, and exhibition of Wave trophy flags

Balance July 1, 1915	[illegible]							
Carried to surplus fund	[illegible]							

[1] Clothing and ordnance stores transferred to the Naval Militia.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6113. Increase of the Navy, C. and M.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$11,361,948.97							
Amount appropriated	20,664,459.00							
Miscellaneous receipts	2,135,616.08							
	34,162,024.05							
Expenditures by titles:								
A	16,698,642.26	$2,700,650.48	$743,059.10	$2,394,566.24	$10,794,701.09	$65,132.84	$539.51	
B	906,128.00				1,038.75	905,089.25		
C	30,292.45					30,292.45		
P	81.76	51.80	17.85	12.11				
E	34,496.31	10,066.85	1,971.23	4,690.00	17,768.23			
G	1,534,545.46	1,202,589.82		326,116.12	5,839.52			
S	538.28	329.46	72.23	136.59				
V	41,920.89	2,629.99	1,400.36	9,627.89	10,321.38	5,624.82	12,316.45	
X	47,396.62				47,396.62			
Indirect expense deducted	*746,520.77*		*746,520.77*					
Total expenditures	18,547,528.26	3,916,318.40		2,735,148.95	10,877,065.59	1,006,139.36	12,855.96	
Balance	15,614,495.79							
	34,162,024.05							

6114. Increase of the Navy, colliers.

Balance July 1, 1915	$112,011.51							
Expenditures by titles:								
G	44.02			$44.02				
Carried to surplus fund	111,967.49							
	112,011.51							

6115. Increase of the Navy, torpedo boats.

Balance July 1, 1915	$3,906,877.24							
Amount appropriated	6,231,344.00							
Miscellaneous receipts	10,184.50							
	10,148,405.74							
Expenditures by titles:								
A	3,129,004.92	$119,572.01	$32,312.56	$102,147.08	$2,874,557.21	$416.06		
B	6,613.48					6,613.48		
C	203.97					203.97		
G	65,981.78	54,879.41		11,093.41	8.96			
V	3,576.90				120.81	2,286.12	$1,169.97	
Indirect expense deducted	*32,312.56*		*32,312.56*					
Miscellaneous adjustments	80.00							
Total expenditures	3,173,148.49	174,451.42		113,240.49	2,874,686.98	9,519.63	1,169.97	
Balance	6,975,257.25							
	10,148,405.74							

6117. Navy fines and forfeitures (special fund).

Balance July 1, 1915	$588,630.01							
Miscellaneous receipts	761,418.03							
	1,350,048.04							
Expenditures by titles:								
V	140,900.04				$3,798.70		$10,460.47	$126,640.87
Miscellaneous adjustments [1]	522,271.11							
Total expenditures	663,171.15				3,798.70		10,460.47	126,650.87
Balance	686,876.89							
	1,350,048.04							

[1] Transferred to the naval hospital fund.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6119. Relief and transportation of American citizens in Mexico.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$8.00							
Amount appropriated	3,225.00							
	3,233.00							
Expenditures by titles:								
V	3,225.00						$3,225.00	
Miscellaneous adjustments	8.00							
Total expenditures	3,233.00							

6121. Purchase of land, Penobscot Bay, Me.

Balance July 1, 1915	$693.34							
Balance	693.34							

6122. Naval Observatory, purchase of land.

Balance July 1, 1915	$0.30							
Balance	.30							

6116. Increase of the Navy, equipment (S. O.).

Balance July 1, 1915	$582,122.54							
Miscellaneous adjustments	582,122.54							

6201. Maintenance, Yards and Docks, 1916.

Amount appropriated	$1,647,496.00							
Miscellaneous receipts	19,125.42							
	1,666,621.42							
Expenditures by titles:								
E	88,655.96	$12,730.37	$2,278.90	$37,577.93	$35,243.76		$825.00	
R	31,364.20	2,259.88	111.78	22,099.42	5,393.36	$58.05	1,441.71	
G	1,078,344.46	855,953.68		198,463.61	23,927.17			
S	308,891.32	208,621.06	399.06	88,049.02	11,379.30	346.50	84.00	$12.38
V	60,348.49	50,582.10	378.13	1,682.77	2,475.62	1,124.65	4,105.22	
X	*6.60*					*6.60*		
Indirect expense deducted	*3,167.87*		*3,167.87*					
Miscellaneous adjustments	3,513.08							
Total expenditures	1,567,943.04	1,130,147.09		347,872.75	78,419.21	1,522.60	6,455.93	12.38
Balance	98,678.38							
	1,666,621.42							

6202. Repairs and preservation, 1916.

[illegible]unt appropriated	$1,097,436.00							
[illegible]ellaneous receipts	54.56							
	1,097,490.56							
[illegible]enditures by titles:								
[illegible]	73,122.07	$33,061.24	$5,385.21	$33,438.28	$1,237.34			
[illegible]	8,333.45	3,046.97	361.22	4,065.85	858.96	$0.45		
[illegible]	800,956.98	519,308.19		257,810.91	23,837.88			
[illegible]	209,446.82	131,938.41	1,779.39	60,722.71	14,486.24	520.07		
V	2,565.98	128.78	35.44	148.97	5.56	2,247.29		
[illegible]	*.50*					*.50*		
[illegible] expense deducted	*7,561.26*		*7,561.26*					
[illegible] expenditures	1,086,863.54	687,483.59		356,186.72	40,425.92	2,767.31		
[illegible]	10,627.02							
	1,097,490.56							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6208. Contingent, Yards and Docks, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$50,000.00							
Expenditures by titles:								
E	31,265.93	$15,309.51	$2,884.65	$13,071.77				
R	7,028.77	2,915.16	24.54	4,089.07				
G	9,717.93	5,356.14		4,359.55	$2.24			
S	1,873.51	1,101.62	77.65	694.24				
V	83.13	67.96		15.17				
Indirect expense deducted	*2,986.84*		*2,986.84*					
Total expenditures	46,982.43	24,750.39		22,229.80	2.24			
Balance	3,017.57							
	50,000.00							

6210. Four timber dry docks.

Balance July 1, 1915	$11,365.43							
Balance	11,365.43							

6211. Consolidating power plants, navy yards, and stations.

Balance July 1, 1915	$1,912.15							
Expenditures by titles:								
E	387.17	$267.21	$86.76	$33.20				
Indirect expense deducted	*86.76*		*86.76*					
Total expenditures	300.41							
Balance	1,611.74							
	1,912.15							

6212. Floating derrick.

Balance July 1, 1915	$8,464.56							
Balance	8,464.56							

6213. Marine Corps rifle range, Winthrop, Md.

Balance July 1, 1915	$12,998.12							
Expenditures by titles:								
R	6,716.91				$6,716.91			
S	4,221.89	$90.75			4,131.14			
Total expenditures	10,938.80	90.75			10,848.05			
Balance	2,059.32							
	12,998.12							

6214. Rifle range, naval station, Bremerton, Wash.

Balance, July 1, 1915	$7,000.00							
Balance	7,000.00							

6215. Navy yard, Portsmouth, N. H.

Balance July 1, 1915	$24,468.33							
Expenditures by titles:								
E	*140.07*	$267.67		*$407.74*				
G	618.17	436.39		171.78	$10.00			
Total expenditures	478.10	704.06		*235.96*	10.00			
Carried to surplus fund	21,006.51							
Balance	2,983.72							
	24,468.33							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6216. Navy yard, Boston, Mass.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$74,223.56							
Amount appropriated	25,000.00							
Miscellaneous receipts	32.77							
	99,256.33							
Expenditures by titles:								
E	74,200.34	$15,224.71	$3,581.19	$15,520.17	$39,874.27			
R	120.00				120.00			
G	11,550.00	7,034.97		2,945.04	1,569.99			
Indirect expense deducted	*3,581.19*		*3,581.19*					
Total expenditures	82,299.15	22,259.68		18,465.21	41,564.26			
Carried to surplus fund	14.71							
Balance	16,952.47							
	99,256.33							

6217. Naval station, Narragansett Bay, R. I.

Balance July 1, 1915	$3,025.61							
Expenditures by titles:								
R	3,007.93	$1,999.04		$410.21	$598.68			
Balance	17.68							
	3,025.61							

6218. Navy yard, New York, N. Y.

Balance July 1, 1915	$86,900.01							
Amount appropriated	135,000.00							
	221,900.01							

Expenditures by titles:								
E	128,692.59	$14,657.71	$2,571.91	$15,442.70	$96,020.27			
G	27,711.87	1,767.34		944.62	24,999.91			
Indirect expense deducted	*2,571.91*		*2,571.91*					
Total expenditures	153,832.55	16,425.05		16,387.32	121,020.18			
Carried to surplus fund	11,072.04							
Balance	56,995.42							
	221,900.01							

6219. Navy yard, Philadelphia, Pa.

Balance July 1, 1915	$81,526.65							
Amount appropriated	55,000.00							
	136,526.65							
Expenditures by titles:								
E	59,277.51	$25,374.86	$4,490.70	$11,673.59	$17,738.36			
G	3,517.34	2,768.10		749.24				
Indirect expense deducted	*4,490.70*		*4,490.70*					
Total expenditures	58,304.15	28,142.96		12,422.83	17,738.36			
Carried to surplus fund	.14							
Balance	78,222.36							
	136,526.65							

6220. Navy yard, Washington, D. C.

[illegible]nce July 1, 1915	$244,251.24							
[illegible]unt appropriated	145,000.00							
	389,251.24							
[illegible]ditures by titles:								
[illegible]	204,248.39	$5,719.76	$852.72	$18,211.15	$179,464.76			
[illegible]	2,737.20	1,945.00		792.20				
[illegible]pense deducted	*852.72*		*852.72*					
[illegible] expenditures	206,132.87	7,664.76		19,003.35	179,464.76			
[illegible]rplus fund	206.37							
[illegible]	182,912.00							
	389,251.24							

Statement 46.—APPROPRIATION ACCOUNTS BY TITLES. (Continued.)

CURRENT APPROPRIATIONS. (Continued.)

6221. Navy yard, Norfolk, Va.

	Civil	Labor	Interior	Navy	Public Works	Miscellaneous	Auditor's	Pay and
Balance, July 1, 1915	[illegible]							
Amount appropriated	[illegible]							
Miscellaneous receipts	[illegible]							
	[illegible]							
Expenditures by titles:								
E	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
R	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
G	[illegible]	[illegible]	[illegible]	[illegible]				
Indirect expense deducted			[illegible]					
Total expenditures	[illegible]	[illegible]		[illegible]	[illegible]			
Carried to surplus fund	[illegible]							
Balance	[illegible]							
	[illegible]							

6222. Navy yard, Charleston, S. C.

	Civil	Labor	Interior	Navy	Public Works	Miscellaneous	Auditor's	Pay and
Balance, July 1, 1915	[illegible]							
Amount appropriated	[illegible]							
	[illegible]							
Expenditures by titles:								
E	153,901.46	99,919.17	81,421.69	87,169.09	130,393.26			
R	459.68	866.88	[illegible]	14.68				
G	11,003.39	8,793.23		2,240.16				
Indirect expense deducted	[illegible]		1,313.03					
			14.14					
Indirect divided		10.64		3.54				
Total expenditures	165,120.18	17,726.95		9,400.09	130,393.26			
Carried to surplus fund	1,787.80							
Balance	[illegible]							
	[illegible]							

6223. Naval station, Key West, Fla.

July 1, 1915	$16,725.08							
appropriated	5,000.00							
neous receipts	26.00							
	21,751.08							
nditures by titles:								
R	12,080.01			$74.00	$12,006.01			
S	3,866.17	$1,985.31		1,880.86				
Total expenditures	15,946.18	1,985.31		1,954.86	12,006.01			
Balance	5,804.90							
	21,751.08							

6224. Naval station, Pensacola, Fla.

Balance July 1, 1915	$49,554.22							
Amount appropriated	15,000.00							
	64,554.22							
Expenditures by titles:								
R	24,513.97	$2,913.54		$2,324.19	$19,276.24			
S	9,339.21	556.67		49.08	8,733.46			
Total expenditures	33,853.18	3,470.21		2,373.27	28,009.70			
Carried to surplus fund	6,387.65							
Balance	24,313.39							
	64,554 22							

6225. Naval station, New Orleans, La.

Balance July 1, 1915	$193,760.39							
Expenditures by titles:								
R	3,537.13	$1,513.93		$2,073.20				
S	81,885.93	40,108.77		26,820.05	$14,937.11			
Total expenditures	85,453.06	41,622.70		28,893.25	14,937.11			
Balance	108,307.33							
	193,760.39							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6208. Contingent, Yards and Docks, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$50,000.00							
Expenditures by titles:								
E	31,265.93	$15,309.51	$2,884.65	$13,071.77				
R	7,028.77	2,915.16	24.54	4,089.07				
G	9,717.93	5,356.14		4,359.55	$2.24			
S	1,873.51	1,101.62	77.65	694.24				
V	83.13	67.96		15.17				
Indirect expense deducted	*2,986.84*		*2,986.84*					
Total expenditures	46,982.43	24,750.39		22,229.80	2.24			
Balance	3,017.57							
	50,000.00							

6210. Four timber dry docks.

Balance July 1, 1915	$11,365.43							
Balance	11,365.43							

6211. Consolidating power plants, navy yards, and stations.

Balance July 1, 1915	$1,912.15							
Expenditures by titles:								
E	387.17	$267.21	$86.76	$33.20				
Indirect expense deducted	*86.76*		*86.76*					
Total expenditures	300.41							
Balance	1,611.74							
	1,912.15							

6212. Floating derrick.

Balance July 1, 1915	$8,464.56							
Balance	8,464.56							

6213. Marine Corps rifle range, Winthrop, Md.

Balance July 1, 1915	$12,998.12							
Expenditures by titles:								
R	6,716.91				$6,716.91			
S	4,221.89	$90.75			4,131.14			
Total expenditures	10,938.80	90.75			10,848.05			
Balance	2,059.32							
	12,998.12							

6214. Rifle range, naval station, Bremerton, Wash.

Balance, July 1, 1915	$7,000.00							
Balance	7,000.00							

6215. Navy yard, Portsmouth, N. H.

Balance July 1, 1915	$24,468.33							
Expenditures by titles:								
E	*140.07*	$267.67		*$407.74*				
G	618.17	436.39		171.78	$10.00			
Total expenditures	478.10	704.06		*235.96*	10.00			
Carried to surplus fund	21,006.51							
Balance	2,983.72							
	24,468.33							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6216. Navy yard, Boston, Mass.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$74,223.56							
Amount appropriated	25,000.00							
Miscellaneous receipts	32.77							
	99,256.33							
Expenditures by titles:								
E	74,200.34	$15,224.71	$3,581.19	$15,520.17	$39,874.27			
R	120.00				120.00			
G	11,550.00	7,034.97		2,945.04	1,569.99			
Indirect expense deducted	*3,581.19*		*3,581.19*					
Total expenditures	82,289.15	22,259.68		18,465.21	41,564.26			
Carried to surplus fund	14.71							
Balance	16,952.47							
	99,256.33							

6217. Naval station, Narragansett Bay, R. I.

Balance July 1, 1915	$3,025.61							
Expenditures by titles:								
R	3,007.93	$1,999.04		$410.21	$598.68			
Balance	17.68							
	3,025.61							

6218. Navy yard, New York, N. Y.

Balance July 1, 1915	$86,900.01							
Amount appropriated	135,000.00							
	221,900.01							

Expenditures by titles:								
E	128,692.59	$14,657.71	$2,571.91	$15,442.70	$96,020.27			
G	27,711.87	1,767.34		944.62	24,999.91			
Indirect expense deducted	*2,571.91*		*2,571.91*					
Total expenditures	153,832.55	16,425.05		16,387.32	121,020.18			
Carried to surplus fund	11,072.04							
Balance	56,995.42							
	221,900.01							

6219. Navy yard, Philadelphia, Pa.

Balance July 1,1915	$81,526.65							
Amount appropriated	55,000.00							
	136,526.65							
Expenditures by titles:								
E	59,277.51	$25,374.86	$4,490.70	$11,673.59	$17,738.36			
G	3,517.34	2,768.10		749.24				
Indirect expense deducted	*4,490.70*		*4,490.70*					
Total expenditures	58,304.15	28,142.96		12,422.83	17,738.36			
Carried to surplus fund	.14							
Balance	78,222.36							
	136,526.65							

6220. Navy yard, Washington, D. C.

Balance July 1, 1915	$244,251.24							
Amount appropriated	145,000.00							
	389,251 24							
Expenditures by titles:								
E	204,248.39	$5,719.76	$852.72	$18,211.15	$179,464.76			
G	2,737.20	1,945.00		792.20				
Indirect expense deducted	*852.72*		*852.72*					
Total expenditures	206,132.87	7,664.76		19,003.35	179,464.76			
Carried to surplus fund	206.37							
Balance	182,912.00							
	389,251.24							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6221. Navy yard, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$333,348.32							
Amount appropriated	130,000.00							
Miscellaneous receipts	38.46							
	463,386.78							
Expenditures by titles:								
E	333,792.14	$27,118.99	$4,803.32	$30,760.20	$271,109.63			
R	34,695.26	4,192.33	797.80	6,582.27	23,122.86			
G	8,311.22	4,121.58		1,659.09	2,530.55			
Indirect expense deducted	*5,601.12*		*5,601.12*					
Total expenditures	371,197.50	35,432.90		39,001.56	296,763.04			
Carried to surplus fund	2,788.76							
Balance	89,400.52							
	463,386.78							

6222. Navy yard, Charleston, S. C.

Balance July 1, 1915	$158,696.26							
Amount appropriated	95,000.00							
	253,696.26							
Expenditures by titles:								
E	153,901.46	$8,919.17	$1,421.03	$7,168.00	$136,393.26			
R	*439.66*	*366.22*	*61.22*	*11.62*				
G	11,003.39	8,763.23		2,240.16				
Indirect expense deducted	*1,345.03*		*1,345.03*					
			14.18					
Indirect divided		10.64		3.54				
Total expenditures	163,120.16	17,326.82		9,400.08	136,393.26			
Carried to surplus fund	1,767.80							
Balance	88,808.30							
	253,696.26							

6223. Naval station, Key West, Fla.

Balance July 1, 1915	$16,725.08							
Amount appropriated	5,000.00							
Miscellaneous receipts	26.00							
	21,751.08							
Expenditures by titles:								
R	12,080.01			$74.00	$12,006.01			
S	3,866.17	$1,985.31		1,880.86				
Total expenditures	15,946.18	1,985.31		1,954.86	12,006.01			
Balance	5,804.90							
	21,751.08							

6224. Naval station, Pensacola, Fla.

Balance July 1, 1915	$49,554.22							
Amount appropriated	15,000.00							
	64,554.22							
Expenditures by titles:								
R	24,513.97	$2,913.54		$2,324.19	$19,276.24			
S	9,339.21	556.67		49.08	8,733.46			
Total expenditures	33,853.18	3,479.21		2,373.27	28,009.70			
Carried to surplus fund	6,387.65							
Balance	24,313.39							
	64,554 22							

6225. Naval station, New Orleans, La.

Balance July 1, 1915	$193,760.39							
Expenditures by titles:								
R	3,587.13	$1,513.93		$2,073.20				
S	81,865.93	40,108.77		26,820.05	$14,937.11			
Total expenditures	85,453.06	41,622.70		28,893.25	14,937.11			
Balance	108,307.33							
	193,760.39							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6226. Navy yard, Mare Island, Cal.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$40,850.57							
Amount appropriated	65,000.00							
	105,850.57							
Expenditures by titles:								
E	25,337.03	$11,141.44	$854.20	$7,457.67	$5,883.72			
G	17,200.56	13,483.61		3,716.95				
V	990.00						$990.00	
Indirect expense deducted	*854.20*		*854.20*					
Total expenditures	42,673.39	24,625.05		11,174.62	5,883.72		990.00	
Carried to surplus fund	2,943.12							
Balance	60,234.06							
	105,850.57							

6227. Navy yard, Puget Sound, Wash.

Balance July 1, 1915	$75,753.36							
Amount appropriated	60,000.00							
	135,753.36							
Expenditures by titles:								
E	89,541.52	$19,648.01	$4,734.14	$28,199.57	$36,959.80			
G	6,356.88	2,389.29		3,967.59				
Indirect expense deducted	*4,734.14*		*4,734.14*					
Total expenditures	91,164.26	22,037.30		32,167.16	36,959.80			
Carried to surplus fund	2,500.00							
Balance	42,089.10							
	135,753.36							

6228. Naval station, Cavite, P. I.

Balance July 1, 1915	$2,819.14							
Expenditures by titles:								
G	2,604.20	$2,099.62		$504.58				
Balance	214.94							
	2,819.14							

6229. Naval station, Guam, L. I.

Balance July 1, 1915	$13,058.43							
Expenditures by titles:								
R	456.76	$301.14		$155.62				
V	53.36						$53.36	
Total expenditures	510.12	301.14		155.62				
Balance	12,548.31							
	13,058.43							

6230. Naval station, Guantanamo, Cuba.

Balance July 1, 1915	$53,200.04							
Expenditures by titles:								
R	40,782.87	$15,632.94		$25,149.93				
V	35.69					$35.69		
Total expenditures	40,818.56	15,632.94		25,149.93		35.69		
Balance	12,381.48							
	53,200.04							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6231. Naval station, Olongapo, P. I.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$12,056.64							
Miscellaneous receipts	229.50							
	12,286.14							
Expenditures by titles:								
E	8,957.20	$4,613.86	$1,741.43	$2,601.91				
G	2,966.93	1,939.21		1,027.72				
Indirect expense deducted	*1,741.43*		*1,741.43*					
Total expenditures	10,182.70	6,553.07		3,629.63				
Balance	2,103.44							
	12,286.14							

6232. Naval station, Pearl Harbor, Hawaii.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$2,517,558.03							
Miscellaneous receipts	14,804.55							
	2,532,362.58							
Expenditures by titles:								
R	951,397.65	$70,191.54		$75,958.07	$805,248.04			
S	4,432.86				4,438.92	*$6.06*		
V	371.02					371.02		
Miscellaneous adjustment	59.85							
Total expenditures	956,261.38	70,191.54		75,958.07	809,686.96	364.96		
Carried to surplus fund	.59							
Balance	1,576,100.61							
	2,532,362.58							

6233. Naval training station, Rhode Island, buildings.

Balance July 1, 1915	$1,887.88							
Miscellaneous receipts	10.54							
	1,898.42							
Expenditures by titles:								
R	1,250.26				$1,250.26			
S	70.80				70.80			
Total expenditures	1,321.06				1,321.06			
Carried to surplus fund	79.79							
Balance	497.57							
	1,898.42							

6234. Naval training station, California, buildings.

Amount appropriated	$15,000.00							
Expenditures by title:								
R	10,060.45				$10,060.45			
S	2.40							$2.40
Total expenditures	10,062.85				10,060.45			2.40
Balance	4,937.15							
	15,000.00							

6235. Naval magazine, New England coast.

Balance July 1, 1915	$1,905.23							
Expenditures by titles:								
R	30.85	$30.85						
Carried to surplus fund	614.60							
Balance	1,259.78							
	1,905.23							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6231. Naval station, Olongapo, P. I.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$12,056.64							
Miscellaneous receipts	229.50							
	12,286.14							
Expenditures by titles:								
E	8,957.20							
G								
Indirect expense deducted								
Total expenditures								

	57.10			$57.10				

6242. Naval magazine, Puget Sound, Wash.

Balance July 1, 1915	$5,641.13							
Amount appropriated	58,000.00							
	63,641.13							
Expenditures by titles:								
R	39,233.44	$5,604.44		$7,399.47	$26,229.53			
S	83.20	83.20						
Total expenditures	39,316.64	5,687.64		7,399.47	26,229.53			
Balance	24,324.49							
	63,641.13							

6244. Naval magazine, Kuahua, Hawaii.

Balance July 1, 1915	$108,094.73							
Miscellaneous receipts	221.48							
	108,316.21							
Expenditures by titles:								
R	6,990.29	$2,942.17		$1,598.12	$2,450.00			
Miscellaneous adjustments	47.10							
Total expenditures	7,037.39							
Carried to surplus fund	66,832.62							
Balance	34,446.20							
	108,316.21							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6236. Naval magazine, New York Harbor.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$44.99							
Carried to surplus fund	44.99							

6239. Naval magazine, Fort Mifflin, Pa.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$64,000.00							
Expenditures by titles:								
R	39,231.21				$39,231.21			
S	190.98			$190.98				
Total expenditures	39,422.19			190.98	39,231.21			
Balance	24,577.81							
	64,000.00							

6240. Naval magazine, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$19,500.60							
Amount appropriated	20,000.00							
	39,500.60							
Expenditures by titles:								
R	26,573.15	$1,523.55		$3,935.21	$21,114.39			
X	*10.79*					*$10.79*		
Total expenditures	26,562.36							
Balance	12,938.24							
	39,500.60							

6241. Naval magazine, Mare Island, Cal.

Balance July 1, 1915	$57.10							
Expenditures by titles:								
R	57.10			$57.10				

6242. Naval magazine, Puget Sound, Wash.

Balance July 1, 1915	$5,641.13							
Amount appropriated	58,000.00							
	63,641.13							
Expenditures by titles:								
R	39,233.44	$5,604.44		$7,399.47	$26,229.53			
S	83.20	83.20						
Total expenditures	39,316.64	5,687.64		7,399.47	26,229.53			
Balance	24,324.49							
	63,641.13							

6244. Naval magazine, Kuahua, Hawaii.

Balance July 1, 1915	$108,094.73							
Miscellaneous receipts	221.48							
	108,316.21							
Expenditures by titles:								
R	6,990.29	$2,942.17		$1,598.12	$2,450.00			
Miscellaneous adjustments	47.10							
Total expenditures	7,037.39							
Carried to surplus fund	66,832.62							
Balance	34,446.20							
	108,316.21							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6245. Naval magazine, Olongapo, P. I.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$2,030.60							
Expenditures by titles:								
R	355.07	$230.40	$97.21	$27.46				
G	96.57	64.55		32.02				
Indirect expense deducted	*97.21*		*97.21*					
Miscellaneous adjustments	50.91							
Total expenditures	405.34	294.95		59.48				
Carried to surplus fund	1,576.17							
Balance	49.09							
	2,030.60							

6246. Marine barracks, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$200,000.00							
Expenditures by titles:								
R	51,473.80	$127.78	$31.53	$548.74	$50,765.75			
G	9,455.04	43.49		10.52	9,401.03			
Indirect expense deducted	*31.53*		*31.53*					
Total expenditures	60,897.31	171.27		559.26	60,166.78			
Balance	139,102.69							
	200,000.00							

6247. Marine barracks, Philadelphia, Pa.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$911.46							
Expenditures by titles:								
R	412.43	$86.29	$16.95	$309.19				
G	.38	.34		.04				
Indirect expense deducted	*16.95*		*16.95*					
Total expenditures	395.86	86.63		309.23				

Carried to surplus fund	9.50							
Balance	506.10							
	911.46							

6249. Marine barracks, Pearl Harbor, Hawaii.

Balance July 1, 1915	$45,000.00							
Miscellaneous receipts	51.99							
	45,051.99							
Balance	45,051.99							

Marine barracks, Isthmus of Panama.

Balance July 1, 1915	$400,000.00							
Miscellaneous adjustments	400,000.00							

6250. Marine barracks, Mare Island, Cal.

Amount appropriated	$200,000.00							
Expenditures by titles:								
E	2,115.00				$2,115.00			
R	68,144.32	$1,740.82	$251.76	$1,361.73	64,790.01			
G	990.79	787.91		121.64	81.24			
S	251.52	218.24	33.28					
V	29.90				29.90			
Indirect expense deducted	*285.04*		*285.04*					
Total expenditures	71,246.49	2,746.97		1,483.37	67,016.15			
Balance	128,753.51							
	200,000.00							

Statement 40.—APPROPRIATION ACCOUNTS BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6251. Depots for coal.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$605,056.25							
Amount appropriated	500,000.00							
Miscellaneous receipts	67.74							
	1,105,123.99							
Expenditures by titles:								
E	85,910.02	$12,532.54	$1,942.34	$10,078.30	$61,356.84			
R	136,793.12	37,862.30		63,631.11	34,680.35	$619.36		
G	4,148.68	2,353.52		790.89	1,004.27			
S	1,788.33	899.64		809.41	79.28			
V	6,044.74	1,910.34	64.07	65.60	3,873.18	128.43	$3.12	
Indirect expense deducted	*2,006.41*		*2,006.41*					
Miscellaneous adjustment	237.50							
Total expenditures	232,915.98	55,558.34		75,375.31	100,993.92	747.79	3.12	
Balance	872,208.01							
	1,105,123.99							

6252. Naval coal depot, Melville Station, R. I.

Balance July 1, 1915	$10,000.00							
Expenditures by titles:								
R	5,591.57	$1,217.84		$722.65	$3,651.08			
Balance	4,408.43							
	10,000.00							

6253. Buildings and grounds, Naval Academy, Annapolis, Md.

Balance July 1, 1915	$17,947.77							
Carried to surplus fund	10,822.18							
Balance	7,125.59							
	17,947.77							

6254. Building, engineering experimental station, Annapolis, Md.

Miscellaneous receipts	$409.32							
Expenditures by titles:								
R	2.72			$2.72				
Miscellaneous adjustments	235.00							
Total expenditures	237.72							
Carried to surplus fund	171.60							
	409.32							

6255. Naval disciplinary barracks.

Balance July 1, 1915	$71,009.62							
Expenditures by titles:								
R	37,554.70			$411.64	$37,143.06			
S	11,726.05			9,641.66	802.60	$1,281.79		
V	1.76					1.76		
Total expenditures	49,282.51			10,053.30	37,945.66	1,283.55		
Balance	21,727.11							
	71,009.62							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6236. Naval magazine, New York Harbor.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$44.99							
Carried to surplus fund	44.99							

6239. Naval magazine, Fort Mifflin, Pa.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$64,000.00							
Expenditures by titles:								
R	39,231.21				$39,231.21			
S	190.98			$190.98				
Total expenditures	39,422.19			190.98	39,231.21			
Balance	24,577.81							
	64,000.00							

6240. Naval magazine, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$19,500.60							
Amount appropriated	20,000.00							
	39,500.60							
Expenditures by titles:								
R	26,573.15	$1,523.55		$3,935.21	$21,114.39			
X	*10.79*					*$10.79*		
Total expenditures	26,562.36							
Balance	12,938.24							
	39,500.60							

6241. Naval magazine, Mare Island, Cal.

Balance July 1, 1915	$57.10							
Expenditures by titles:								
R	57.10			$57.10				

6242. Naval magazine, Puget Sound, Wash.

Balance July 1, 1915	$5,641.13							
Amount appropriated	58,000.00							
	63,641.13							
Expenditures by titles:								
R	39,233.44	$5,604.44		$7,399.47	$26,229.53			
S	83.20	83.20						
Total expenditures	39,316.64	5,687.64		7,399.47	26,229.53			
Balance	24,324.49							
	63,641.13							

6244. Naval magazine, Kuahua, Hawaii.

Balance July 1, 1915	$108,094.73							
Miscellaneous receipts	221.48							
	108,316.21							
Expenditures by titles:								
R	6,990.29	$2,942.17		$1,598.12	$2,450.00			
Miscellaneous adjustments	47.10							
Total expenditures	7,037.39							
Carried to surplus fund	66,832.62							
Balance	34,446.20							
	108,316.21							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6945. Naval magazine, Olongapo, P. I.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$2,030.60							
Expenditures by titles:								
R	355.07	$230.40	$97.21	$27.46				
G	96.57	64.55		32.02				
Indirect expense deducted	*97.21*		*97.21*					
Miscellaneous adjustments	50.91							
Total expenditures	405.34	294.95		59.48				
Carried to surplus fund	1,576.17							
Balance	49.09							
	2,030.60							

6946. Marine barracks, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$200,000.00							
Expenditures by titles:								
R	51,473.80	$127.78	$31.53	$548.74	$50,765.75			
G	9,455.04	43.49		10.52	9,401.03			
Indirect expense deducted	*31.53*		*31.53*					
Total expenditures	60,897.31	171.27		559.26	60,166.78			
Balance	139,102.69							
	200,000.00							

6947. Marine barracks, Philadelphia, Pa.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$911.46							
Expenditures by titles:								
R	412.43	$86.29	$16.95	$309.19				
G	.38	.34		.04				
Indirect expense deducted	*16.95*		*16.95*					
Total expenditures	395.86	86.63		309.23				

Carried to surplus fund	9.50							
Balance	506.10							
	911.46							

6249. Marine barracks, Pearl Harbor, Hawaii.

Balance July 1, 1915	$45,000.00							
Miscellaneous receipts	51.99							
	45,051.99							
Balance	45,051.99							

Marine barracks, Isthmus of Panama.

Balance July 1, 1915	$400,000.00							
Miscellaneous adjustments	400,000.00							

6250. Marine barracks, Mare Island, Cal.

[illegible]ount appropriated	$200,000.00							
[illegible]enditures by titles:								
[illegible]	2,115.00				$2,115.00			
[illegible]	68,144.32	$1,740.82	$251.76	$1,361.73	64,790.01			
[illegible]	990.79	787.91		121.64	81.24			
[illegible]	251.52	218.24	33.28					
[illegible]	29.90				29.90			
[illegible]ect expense deducted	*285.04*		*285.04*					
[illegible]tal expenditures	71,246.49	2,746.97		1,483.37	67,016.15			
[illegible]	128,753.51							
	200,000.00							

Statement 40.—APPROPRIATION ACCOUNTS BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6251. Depots for coal.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$605,056.25							
Amount appropriated	500,000.00							
Miscellaneous receipts	67.74							
	1,105,123.99							
Expenditures by titles:								
E	85,910.02	$12,532.54	$1,942.34	$10,078.30	$61,356.84			
R	136,793.12	37,862.30		63,631.11	34,680.35	$619.36		
G	4,148.68	2,353.52		790.89	1,004.27			
S	1,788.33	899.64		809.41	79.28			
V	6,044.74	1,910.34	64.07	65.60	3,873.18	128.43	$3.12	
Indirect expense deducted	*2,006.41*		*2,006.41*					
Miscellaneous adjustment	237.50							
Total expenditures	232,915.98	55,558.34		75,375.31	100,993.92	747.79	3.12	
Balance	872,208.01							
	1,105,123.99							

6252. Naval coal depot, Melville Station, R. I.

Balance July 1, 1915	$10,000.00							
Expenditures by titles:								
R	5,591.57	$1,217.84		$722.65	$3,651.08			
Balance	4,408.43							
	10,000.00							

6253. Buildings and grounds, Naval Academy, Annapolis, Md.

Balance July 1, 1915	$17,947.77							
Carried to surplus fund	10,822.18							
Balance	7,125.59							
	17,947.77							

6254. Building, engineering experimental station, Annapolis, Md.

Miscellaneous receipts	$409.32							
Expenditures by titles:								
R	2.72			$2.72				
Miscellaneous adjustments	235.00							
Total expenditures	237.72							
Carried to surplus fund	171.60							
	409.32							

6255. Naval disciplinary barracks.

Balance July 1, 1915	$71,009.62							
Expenditures by titles:								
R	37,554.70			$411.64	$37,143.06			
S	11,726.05			9,641.66	802.60	$1,281.79		
V	1.76					1.76		
Total expenditures	49,282.51			10,053.30	37,945.66	1,283.55		
Balance	21,727.11							
	71,009.62							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6256. Torpedo station, buildings.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$166,514.11							
Miscellaneous receipts	43.50							
	166,557.61							
Expenditures by titles:								
R	146,366.60	$31,225.24		$30,252.19	$84,889.17			
S	347.90	168.48			179.42			
Total expenditures	146,714.50	31,393.72		30,252.19	85,068.59			
Carried to surplus fund	8,436.14							
Balance	11,406.97							
	166,557.61							

6257. Pacific coast torpedo station.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$69,249.19							
Expenditures by titles:								
R	37,739.13	$1,790.50	$12.92	$1,165.98	$34,769.73			
S	8.80				8.80			
Indirect expense deducted	*12.92*		*12.92*					
Total expenditures	37,735.01	1,790.50		1,165.98	34,778.53			
Balance	31,514.18							
	69,249.19							

6258. Naval proving ground, Indianhead, Md.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$155,316.19							
Amount appropriated	158,380.00							
Miscellaneous receipts	50,294.80							
	363,990.99							

Expenditures by titles:								
R	222,166.99	$21,253.04		$47,498.58	$153,415.37			
G	10.86	10.41		.45				
X	38,868.92				38,868.92			
Z	11,885.44	1,165.57	$449.36	10,270.51				
			449.36					
Indirect divided		340.78		108.58				
Total expenditures	272,932.21	22,769.80		57,878.12	192,284.29			
Balance	91,058.78							
	363,990.99							

6259. Naval hospital, New York, N. Y.

Amount appropriated	$15,000.00							
Expenditures by titles:								
R	14,901.60				$14,901.60			
Balance	98.40							
	15,000.00							

6301. Contingent, navigation, 1916.

Amount appropriated	$10,000.00							
Expenditures by titles:								
C	138.26				$38.26			$100.00
R	9.50					$9.50		
S	74.59			$62.09	12.50			
V	7,378.35			9.25	4,915.70	78.30	$2,375.10	
Total expenditures	7,600.70			71.34	4,966.46	87.80	2,375.10	100.00
Balance	2,399.30							
	10,000.00							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6302. Transportation, navigation, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$750,000.00							
Miscellaneous receipts	35,968.95							
	785,968.95							
Expenditures by titles:								
C	1,180.94				$1,130.94	$50.00		
S	289.00				289.00			
V	675,790.77				265,870.94		$85,715.64	$324,204.19
Miscellaneous adjustments	2,231.79							
Total expenditures	679,492.50				267,290.88	50.00	85,715.64	324,204.19
Balance	106,476.45							
	785,968.95							

6303. Recruiting, navigation, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$130,000.00							
Miscellaneous receipts	358.17							
	130,358.17							
Expenditures by titles:								
C	1.58					$1.58		
R	125.00				$125.00			
G	90.65	$72.79		$17.86				
S	141.62			141.62				
V	121,959.86	201.23	$38.36	1,057.14	118,629.53	1,669.23	$364.37	
Indirect expense deducted	*38.36*		*38.36*					
Total expenditures	122,280.35	274.02		1,216.62	118,754.53	1,670.81	364.37	
Balance	8,077.82							
	130,358.17							

6304. Maintenance, naval auxiliaries, 1916.

Amount appropriated	$800,000.00							
Miscellaneous receipts	29,444.82							
	829,444.82							
Expenditures by titles:								
C	759,540.31				$84,172.26			$675,368.05
V	1,756.74				1,117.72		$639.02	
X	113,810.47				113,795.83	$14.64		
Miscellaneous adjustments[1]	66,541.95							
Total expenditures	941,649.47				199,085.81	14.64	$639.02	675,368.05
Balance	*112,204.65*							
	829,444.82							

6305. Gunnery exercises, 1916.

Amount appropriated	$99,800.00							
Miscellaneous receipts	1,298.00							
	101,098.00							
Expenditures by titles:								
B	33.05					$33.05		
C	2,574.57				$992.97	1,581.60		
R	4,841.95	$1,074.01		$3,767.94				
G	1,402.01	1,110.31		291.70				
S	28,012.57	21,310.73	$336.42	6,244.92	120.50			
V	51,094.65	2,166.15	635.13	864.27	5,043.53	136.85	$9,330.43	$32,918.29
Indirect expense deducted	*971.55*		*971.55*					
Total expenditures	86,987.25	25,661.20		11,168.83	6,157.00	1,751.50	9,330.43	32,918.29
Balance	14,110.75							
	101,098.00							

[1] Provisions transferred to masters of naval auxiliaries.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6311. Naval training station, Rhode Island, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$85,000.00							
Miscellaneous receipts	5,360.05							
	90,360.05							
Expenditures by titles:								
R	4,990.53	$1,353.34		$3,637.19				
S	84,900.62	25,178.77		55,130.22	$4,566.88	$24.75		
Miscellaneous adjustments	41.34							
Total expenditures	89,932.49	26,532.11		58,767.41	4,566.88	24.75		
Balance	427.56							
	90,360.05							

6312. Naval training station, St. Helena, Va., 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$25,000.00							
Miscellaneous receipts	25.20							
	25,025.20							
Expenditures by titles:								
R	736.15			$0.10	$86.00	$650.05		
G	169.71	$204.73		*35.02*				
S	23,967.24	572.99	$121.81	8,642.23	1,536.43	13,093.78		
Indirect expense deducted	*121.81*		*121.81*					
Miscellaneous adjustments	37.65							
Total expenditures	24,788.94	777.72		8,607.31	1,622.43	13,743.83		
Balance	236.26							
	25,025.20							

6313. Naval training station, Great Lakes, 1916.

Amount appropriated	$80,000.00							
Miscellaneous receipts	4,527.14							
	84,527.14							
Expenditures by titles:								
R	199.01				$199.01			
S	83,619.26	$41,552.52		$37,644.97	4,421.77			
V	3.04					$3.04		
Miscellaneous adjustments	25.46							
Total expenditures	83,846.77	41,552.52		37,644.97	4,620.78	3.04		
Balance	680.37							
	84,527.14							

6314. Naval training station, California, 1916.

Amount appropriated	$70,000.00							
Miscellaneous receipts	40.67							
	70,040.67							
Expenditures by titles:								
R	1,738.23			$1,738.23				
S	66,494.85	$39,240.24		24,150.70	$3,021.21			$82.70
V	4.23					$4.23		
Total expenditures	68,237.31	39,240.24		25,888.93	3,021.21	4.23		82.70
Balance	1,803.36							
	70,040.67							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6315. Naval War College, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$28,850.00							
Expenditures by titles:								
R	1,695.57				$1,653.32	$42.25		
S	23,439.45	$16,710.99		$657.56	5,607.31	463.59		
V	250.84				226.48		$24.36	
Miscellaneous adjustments	1,738.10							
Total expenditures	27,123.96	16,710.99		657.56	7,487.11	505.84	24.36	
Balance	1,726.04							
	28,850.00							

6316. Naval Home, Philadelphia, Pa., 1916.

Amount appropriated	$77,117.00							
Miscellaneous receipts	7,127.13							
	84,244.13							
Expenditures by titles:								
R	768.32				$736.87	$31.45		
G	48.09	$40.54		$7.55				
S	70,940.70	28,316.84	$32.17	2,709.25	39,153.45	728.99		
V	1,553.33				366.90		$1,186.43	
Indirect expense deducted	*32.17*		*32.17*					
Miscellaneous adjustments	3,138.15							
Total expenditures	76,416.42	28,357.38		2,716.80	40,257.22	760.44	1,186.43	
Balance	7,827.71							
	84,244.13							

6317. Pay, Naval Academy, 1916.

Amount appropriated	$186,034.00							
Expenditures by titles:								
S	184,540.37	$184,540.37						
Balance	1,493.63							
	186,034.00							

6318. Current and miscellaneous expenses, Naval Academy, 1916.

Amount appropriated	$33,500.00							
Expenditures by titles:								
R	556.81				$556.81			
S	18,683.86	$549.65		$17,326.11	808.10			
V	2,025.08				1,836.96	$3.11	$185.01	
Miscellaneous adjustments	51.06							
Total expenditures	21,316.81	549.65		17,326.11	3,201.87	3.11	185.01	
Balance	12,183.19							
	33,500.00							

6319. Maintenance and repairs, Naval Academy, 1916.

Amount appropriated	$279,116.00							
Miscellaneous receipts	11,556.59							
	290,672.59							
Expenditures by titles:								
S	285,028.95	$181,995.20		$98,492.73	$2,132.75			$2,408.27
V	948.07				1.40			946.67
Miscellaneous adjustments	477.87							
Total expenditures	286,454.89	181,995.20		98,492.73	2,134.15			3,354.94
Balance	4,217.70							
	290,672.59							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6330. Increase of the Navy equipment (navigation).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$144,476.58							
Miscellaneous adjustments [1]	144,476.58							

6332. Naval training station, Great Lakes, buildings.

Balance July 1, 1915	$27,575.14							
Balance	27,575.14							

6334. Medals for officers and men, Navy and Marine Corps. War with Spain.

Balance July 1, 1915	$9,963.50							
Expenditures by titles:								
V	102.40						$102.40	
Balance	9,861.10							
	9,963.50							

6401. Ordnance and ordnance stores, 1916.

Amount appropriated	$7,940,420.00							
Miscellaneous receipts	981,329.24							
	8,921,749.24							

Expenditures by titles:								
A	33,462.10	$13,685.31	$3,104.56	$16,672.23				
C	1,514,748.18				$387.74	$1,513,046.79	$5.63	$1,308.02
D	176,418.29	96,589.38	27,810.15	51,868.16	150.60			
K	165,800.28	93,206.57	26,621.76	45,328.85		643.10		
P	151,727.08	98,477.95	28,865.13	21,653.63	2,729.95	.42		
E	117,073.22	43,379.21	12,363.09	47,427.81	13,903.11			
R	402,812.98	105,684.32	188.43	185,017.76	111,582.27	340.20		
G	985,056.73	829,589.62		149,156.97	6,310.14			
S	823,960.80	646,397.24	187.63	170,691.65	9,642.21	42.07		
V	1,645,375.04	605,313.65	89,166.95	430,146.55	47,154.05	457,080.21	16,479.83	33.80
B, X, and Z	1,679,976.38	1,111,605.14	273,851.68	4,994,748.80	492,081.48	*5,200,735.08*	8,415.36	
Indirect expense deducted	*241,895.65*		*241,895.65*					
			220,263.75					
Indirect divided		168,883.88		51,379.87				
Miscellaneous adjustments [1]	491,076.71							
Total expenditures	7,948,583.16	3,812,812.27		6,164,092.28	683,941.55	*3,229,582.29*	24,900.82	1,341.82
Balance	973,166.08							
	8,921, 49.24							

6402. Contingent, ordnance, 1916.

Amount appropriated	$9,500.00							
Miscellaneous receipts	120.57							
	9,620.57							
Expenditures by titles:								
R	45.59			$45.59				
G	93.25	$38.82		54.43				
S	4,374.34	329.01		3,930.28	$115.05			
V	1,644.22	76.27	$22.88	4.11	1,181.32	$359.64		
X	136.08				136.08			
Indirect expense deducted	*22.88*		*22.88*					
Total expenditures	6,270.60	444.10		4,034.41	1,432.45	359.64		
Balance	3,349.97							
	9,620.57							

[1] Balance transferred to appropriation Increase of the Navy, C. and M. [2] Ordnance stores transferred from other ordnance appropriations and purchases from the Army.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6403. Repairs, ordnance, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$30,000.00							
Expenditures by titles:								
R	4,189.70	$1,115.32		$2,948.49	$125.89			
G	452.43	339.97		112.46				
S	20,278.92	4,906.28	$48.45	11,735.26	3,588.93			
X and Z	361.64	773.24	131.92	412.29		*$955.81*		
Indirect expense deducted	*48.45*		*48.45*					
			131.92					
Indirect divided		105.52		26.40				
Total expenditures	25,234.24	7,240.33		15,234.90	3,714.82	*955.81*		
Balance	4,765.76							
	30,000.00							

6404. Torpedo station, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$130,000.00							
Miscellaneous receipts	14,544.69							
	144,544.69							
Expenditures by titles:								
R	46,169.81	$10,601.40		*$3,600.89*	$39,169.30			
S	55,893.02	39,782.15		11,053.97	5,056.90			
V	448.32				448.32			
X	15,523.55				2,081.00	$13,442.55		
Total expenditures	118,034.70	50,383.55		7,453.08	46,755.52	13,442.55		
Balance	26,509.99							
	144,544.69							

6405. Naval Gun Factory, Washington, D. C., 1916.

Amount appropriated	$75,000.00							
Expenditures by titles:								
E	33,107.30				$33,107.30			
Balance	41,892.70							
	75,000.00							

6406. Experiments, ordnance, 1916.

Amount appropriated	$100,000.00							
Miscellaneous receipts	29,822.37							
	129,822.37							
Expenditures by titles:								
C	1,557.17					$1,557.17		
R	110.50				$110.50			
G	10,071.70	$8,167.12		$1,880.85	23.73			
V	66,069.50	24,140.18	$2,569.87	35,409.77	3,740.24		$209.44	
B, X, and Z	33,709.15	17,821.59	5,288.90	8,596.37	2,022.29	20.00		
Indirect expense deducted	*4,513.59*		*4,513.59*					
			3,345.18					
Indirect divided		2,508.88		836.30				
Total expenditures	107,004.43	52,637.77		46,723.29	5,896.76	1,537.17	209.44	
Balance	22,817.94							
	129,822.37							

6409. New batteries for ships of the Navy, 1916–17.

Amount appropriated	$100,000.00							
Expenditures by titles:								
X	11,840.80				$11,840.80			
Balance	88,159.20							
	100,000.00							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

5410. New batteries for ships of the Navy, 1915-16.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$120,233.99							
Miscellaneous receipts	38,895.80							
	159,129.79							
Expenditures by titles:								
D	2,422.26	$1,517.74	$401.39	$503.13				
P	5,499.80	2,485.41	933.32	2,081.07				
E	784.72	410.88	123.14	250.70				
G	18,835.20	14,671.18	14,784.10	4,164.02				
V	138,389.84	52,605.76		57,689.96	$13,310.02			
B, X, and Z	*15,948.96*	*47,715.77*	*13,084.75*	*19,455.80*	64,307.36			
Indirect expense deducted	*16,427.74*		*16,427.74*					
			13,270.54					
Indirect divided		*9,952.91*		*3,317.63*				
Miscellaneous adjustments	19,515.00							
Total expenditures	153,070.12	14,022.29		41,915.45	77,617.38			
Balance	6,059.67							
	159,129.79							

6411. Torpedoes and appliances, 1916-1918.

Amount appropriated	$1,000,000.00							
Miscellaneous receipts	33,931.54							
	1,033,931.54							
Expenditures by titles:								
C	534.41					$510.41		$24.00
R	95.00				$95.00			

G	2,291.44	$2,023.26		$268.18				
V	358.89	173.44	164.83	100.62		20.00		
B, X, and Z	91,549.32	9,894.62	2,900.55	52,295.52	59,697.95	33,507.32		
Indirect expense deducted	451.77		451.77					
			2,581.61					
Indirect divided		1,954.79		626.82				
Total expenditures	94,377.29	14,046.11		53,291.14	59,792.95	33,776.91		24.00
Balance	939,554.25							
	1,033,931.54							

5411. Torpedoes and appliances, 1915-1917.

Balance July 1, 1915	$807,751.99							
Miscellaneous receipts	9,396.70							
	817,148.69							
Expenditures by titles:								
S	26,327.72	$26,327.72						
Z	488,569.34	252,618.95		$184,579.53	$135,045.10	83,674.24		
Total expenditures	514,897.06	278,946.67		184,579.53	135,045.10	83,674.24		
Balance	302,251.63							
	817,148.69							

6420. Increase of the Navy, armor and armament.

Balance July 1, 1915	$9,347,388.59							
Amount appropriated	$18,957,998.00							
Miscellaneous receipts	2,243,408.22							
	30,548,794.81							
Expenditures by titles:								
A	8,326,783.54	$401,677.46	$121,845.03	$302,552.94	$7,500,708.11			
C	1,710.33					$1,710.33		
P	1,182.98	709.64	234.97	238.37				
E	32,603.43	15,011.16	5,107.02	12,485.25				
R	70.56				70.56			

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6420. Increase of the Navy, armor and armament—Continued.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Expenditures—Continued.								
[illegible]	$580,384.32	$441,426.78		$135,638.77	$3,318.77			
	67,685.94	51,539.99	$0.60	16,145.35				
	[illegible]	37,902.50	7,586.62	106,662.26	2,662.36	$2,538.97		
	[illegible]	1,027,268.20	353,235.96	2,886,574.57	5,588,313.80	*602,242.91*	$2.70	
	[illegible]		*264,090.90*					
			223,919.30					
		170,887.03		53,032.27				
	[illegible]							
	[illegible]	[illegible]		3,513,329.78	13,095,073.60	*597,993.61*	2.70	

[illegible]nition for ships of the Navy.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
	[illegible]							
	[illegible]							
	[illegible]							
	[illegible]							
	$34,860.35					$34,860.35		
	3,880.78	$2,261.88	$981.58	$637.32				
	17,190.89	14,145.80		3,045.09				
	14,452.76	12,831.61		1,621.15				
	104,888.13	19,320.93	59.07	85,425.63		82.50		
	1,314,970.11	163,459.62	22,146.41	535,313.01	$897,561.09	*303,510.02*		
	11,494.26		*11,494.26*					
			11,692.80					

		8,928.18		2,764.62				
	211,613.22							
	1,690,361.98	220,948.02		628,806.82	897,561.09	268,567.17		
	6,610,423.58							
	8,300,785.56							

6422. Ordnance material, proceeds of sales.

	$589,287.33							
	28,800.17							
	618,087.50							
by titles:								
	4.80			$4.80				
	69,009.39				$69,014.19	*$4.80*		
Total expenditures	69,014.19							
Balance	549,073.31							
	618,087.50							

6425. Powder factory, Indianhead, Md.

Amount appropriated	$141,620.00							
Miscellaneous receipts	19,039.00							
	160,659.00							
Expenditures by titles:								
R	81,674.05	$9,835.86		$39,087.42	$32,750.77			
X	20,020.23				20,020.23			
Total expenditures	101,694.28	9,835.86		39,087.42	52,771.00			
Balance	58,964.72							
	160,659.00							

[1] Ordnance stores transferred from other Ordnance appropriations and purchases from the Army.

CURRENT APPROPRIATIONS Continued.

[illegible] Construction and Repair, 1904.

	Total.	Labor	Indirect.	Material.	Public vouchers	Miscellaneous material
[illegible]	[illegible]	.....	.....	.....	.....	.....
[illegible]	[illegible]	.....	.....	.....	.....	.....
[illegible]	[illegible]	.....	.....	.....	.....	.....
[illegible] by titles						
A	[illegible]	$[illegible]	$[illegible]	$[illegible]	[illegible]	[illegible]
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
P	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
R	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
G	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
S	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
V	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
X	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Indirect expense deducted	[illegible]					
Miscellaneous adjustments	[illegible]					
Total expenditures	[illegible]	[illegible]		[illegible]	[illegible]	
Balance	[illegible]					
	[illegible]					

[illegible] Improvement plants at [illegible]

Amount appropriated	$[illegible]
Miscellaneous receipts	[illegible]
	[illegible]

Expenditures by titles:								
E	61,184.03	$16,374.61	$5,084.28	$23,351.82	$16,373.32			
G	27,038.80	16,797.14		10,241.66				
Indirect expense deducted	*5,084.28*		*5,084.28*					
Miscellaneous adjustments	65.20							
Total expenditures	83,203.75	33,171.75		33,593.48	16,373.32			
Balance	27,082.47							
	110,286.22							

6510. Construction plant, navy yard, Portsmouth, N. H.

Balance July 1, 1915	$3,044.93							
Expenditures by titles:								
E	1,986.14	$644.93	$164.29	$1,176.92				
G	981.07	469.51		511.56				
Indirect expense deducted	*164.29*		*164.29*					
Total expenditures	2,802.92	1,114.44		1,688.48				
Balance	242.01							
	3,044.93							

6511. Construction plant, navy yard, Boston, Mass.

Balance July 1, 1915	$3,610.66							
Expenditures by titles:								
E	2,649.01	$928.79	$360.21	$1,141.61	$218.40			
G	886.39	728.13		158.26				
Indirect expense deducted	*360.21*		*360.21*					
Total expenditures	3,175.19	1,656.92		1,299.87	218.40			
Balance	435.47							
	3,610.66							

6512. Construction plant, navy yard, Philadelphia.

Balance July 1, 1915	$133.71							
Expenditures by titles:								
E	133.71			$133.71				

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6501. Construction and Repair, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$9,835,077.00							
Miscellaneous receipts	269,739.39							
	10,104,816.39							
Expenditures by titles:								
A	189,534.81	$140,779.10	$16,994.56	$31,682.21	$78.94			
B	1,293,816.41				5,000.48	$1,281,191.96	$7,623.97	
C	1,120,409.19	345.42	144.16	3,135.08	5,562.12	1,098,857.05	11,569.34	$796.02
D	2,251,309.69	1,318,495.89	355,749.50	531,609.04	42,777.74	1,024.37	1,653.15	
K	1,444,918.14	805,172.57	235,056.80	402,524.99	1,015.12	1,148.66		
P	294,260.20	166,998.81	52,726.97	72,286.36	2,044.67		203.39	
F	340,536.14	154,857.03	44,716.32	136,054.79	4,703.97	204.01		
R	102,87...23	5,639.52	*1,285.59*	32,947.67	6,689.63	58,884.00		
G	2,797,926.68	2,283,628.11		496,809.18	17,534.44	554.95		
S	214,392.48	111,561.95	1,951.50	85,547.63	15,331.40			
V	691,471.85	435,811.92	56,247.70	61,447.02	9,263.87	125,518.02	3,163.32	20.00
X	*90,220.24*				49.00	*90,269.24*		
Indirect expense deducted	*762,301.92*		*762,301.92*					
Miscellaneous adjustments	3,393.17							
Total expenditures	9,892,321.83	5,422,690.34		1,854,043.97	110,051.38	2,477,113.78	24,213.17	816.02
Balance	212,494.56							
	10,104,816.39							

6502. Construction plants at navy yards, 1916.

Amount appropriated	$110,000.00							
Miscellaneous receipts	286.22							
	110,286.22							

Expenditures by titles:								
E	61,184.03	$16,374.61	$5,084.28	$23,351.82	$16,373.32			
G	27,038.80	16,797.14		10,241.66				
Indirect expense deducted	*5,084.28*		*5,084.28*					
Miscellaneous adjustments	65.20							
Total expenditures	83,203.75	33,171.75		33,593.48	16,373.32			
Balance	27,082.47							
	110,286.22							

6510. Construction plant, navy yard, Portsmouth, N. H.

Balance July 1, 1915	$3,044.93							
Expenditures by titles:								
E	1,986.14	$644.93	$164.29	$1,176.92				
G	981.07	469.51		511.56				
Indirect expense deducted	*164.29*		*164.29*					
Total expenditures	2,802.92	1,114.44		1,688.48				
Balance	242.01							
	3,044.93							

6511. Construction plant, navy yard, Boston, Mass.

Balance July 1, 1915	$3,610.66							
Expenditures by titles:								
E	2,649.01	$928.79	$360.21	$1,141.61	$218.40			
G	886.39	728.13		158.26				
Indirect expense deducted	*360.21*		*360.21*					
Total expenditures	3,175.19	1,656.92		1,299.87	218.40			
Balance	435.47							
	3,610.66							

6512. Construction plant, navy yard, Philadelphia.

Balance July 1, 1915	$133.71							
Expenditures by titles:								
E	133.71			$133.71				

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6513. Construction plant, navy yard, Norfolk, Va.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$1,764.80							
Expenditures by title:								
E	840.69	$458.05	$145.76	$236.88				
G	1,040.12	208.78		831.34				
Indirect expense deducted	*145.76*		*145.76*					
Total expenditures	1,735.05	666.83		1,068.22				
Balance	29.75							
	1,764.80							

6515. Construction plant, navy yard, Pensacola, Fla.

Balance July 1, 1915	$62,276.52							
Balance	62,276.52							

6518. Construction plant, navy yard, Puget Sound, Wash.

Balance July 1, 1915	$102.33							
Expenditures by titles:								
G	102.33	$18.74		$83.59				

6519. Construction plant, naval station, Pearl Harbor, Hawaii.

Balance July 1, 1915	$5,016.37							
Expenditures by titles:								
R	2,607.03				$2,607.03			
Balance	2,409.34							
	5,016.37							

6521. Increase of the Navy, equipment (C. and R.).

Balance July 1, 1915	$426,931.43							
Miscellaneous receipts	727.14							
Miscellaneous adjustments [1]	427,658.57							

6601. Engineering, 1916.

Amount appropriated	$8,681,593.40							
Miscellaneous receipts	272,876.81							
	8,954,470.21							
Expenditures by titles:								
A	149,238.86	$90,038.01	$15,499.44	$43,701.41				
B	665,149.33				$7,487.54	$657,457.60	$204.19	
C	1,366,481.37	94.11	29.82	2,381.43	9,310.30	1,352,931.51	904.98	$829.22
D	2,694,282.76	1,509,087.67	413,704.46	720,763.04	27,888.07	20,610.73	2,228.79	
K	892,470.27	310,205.16	77,357.39	471,895.14	3,513.69	29,498.89		
P	110,943.81	61,481.79	17,689.91	28,776.55	2,800.98	172.67	21.91	
E	191,145.19	54,233.09	15,825.56	93,996.21	27,056.51	33.82		
R	237,498.70	15,819.70	2,681.11	98,975.29	45,621.45	74,352.51	48.64	
G	1,859,628.77	1,520,105.89		327,717.39	11,185.34	620.15		
S	448,687.89	161,773.76	9,471.22	240,315.66	22,881.15	1,402.01	12,844.09	
V	421,562.89	263,486.31	9,011.88	39,297.18	7,837.83	86,413.59	15,495.70	20.40
X	*72,084.46*					*72,084.46*		
Indirect expense deducted	*561,270.79*		*561,270.79*					
Miscellaneous adjustments	2,347.85							
Total expenditures	8,406,082.44	3,986,325.49		2,067,819.30	165,582.86	2,151,409.02	31,748.30	849.62
Balance	548,387.77							
	8,954,470.21							

[1] Balance transferred to appropriation Increase of the Navy, C. and M.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6602. Engineering experimental station, Annapolis, Md., 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$80,000.00							
Miscellaneous receipts	235.00							
	80,235.00							
Expenditures by titles:								
R	11,920.76	$3,756.94		$727.72	$7,436.10			
S	48,312.49	33,610.73		14,148.75	553.01			
V	17,861.20	16,779.04		1,021.48	60.10	$0.58		
Total expenditures	78,094.45	54,146.71		15,897.95	8,049.21	.58		
Balance	2,140.55							
	80,235.00							

5603. Development of heavy-oil engine, 1915-16.

Balance July 1, 1915	$6,419.60							
Expenditures by titles:								
V	6,419.60				$6,419.60			

6610. Machinery plant, navy yard, Portsmouth, N. H.

Balance July 1, 1915	$300.00							
Balance	300.00							

6626. Machinery plant, navy yard, Boston, Mass.

Balance July 1, 1915	$10,791.88							
Expenditures by titles:								
E	8,430.40	$14.90	$5.05	$109.83	$8,300.62			
G	289.84	82.99		206.85				
Indirect expense deducted	*5.05*		*5.05*					
Total expenditures	8,715.19	97.89		316.68	8,300.62			
Balance	2,076.69							
	10,791.88							

6611. Machinery plant, navy yard, New York, N. Y.

Balance July 1, 1915	$368.17							
Expenditures by titles:								
E	471.56	$150.18	$41.35	$109.03	$171.00			
G	42.85	28.79		14.06				
Indirect expense deducted	*41.35*		*41.35*					
Total expenditures	473.06	178.97		123.09	171.00			
Balance	*104.89*							
	368.17							

6612. Machinery plant, navy yard, Philadelphia, Pa.

Balance July 1, 1915	$54.88							
Balance	54.88							

6613. Machinery plant, navy yard, Norfolk, Va.

Balance July 1, 1915	$8,710.11							
Expenditures by title:								
E	3,126.73				$3,126.73			
Balance	5,583.38							
	8,710.11							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6602. Engineering experimental station, Annapolis, Md., 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$80,000.00							
Miscellaneous receipts	235.00							
	80,235.00							
Expenditures by titles:								
R	11,920.76	$3,756.94		$727.72	$7,436.10			
S	48,312.49	33,610.73		14,148.75	553.01			
V	17,861.20	16,779.04		1,021.48	60.10	$0.58		
Total expenditures	78,094.45	54,146.71		15,897.95	8,049.21	.58		
Balance	2,140.55							
	80,235.00							

5603. Development of heavy-oil engine, 1915-16.

Balance July 1, 1915	$6,419.60							
Expenditures by titles:								
V	6,419.60				$6,419.60			

6610. Machinery plant, navy yard, Portsmouth, N. H.

Balance July 1, 1915	$300.00							
Balance	300.00							

6626. Machinery plant, navy yard, Boston, Mass.

Balance July 1, 1915	$10,791.88							
Expenditures by titles:								
E	8,430.40	$14.90	$5.05	$109.83	$8,300.62			
G	289.84	82.99		206.85				
Indirect expense deducted	*5.05*		*5.05*					
Total expenditures	8,715.19	97.89		316.68	8,300.62			
Balance	2,076.69							
	10,791.88							

6611. Machinery plant, navy yard, New York, N. Y.

Balance July 1, 1915	$368.17							
Expenditures by titles:								
E	471.56	$150.18	$41.35	$109.03	$171.00			
G	42.85	28.79		14.06				
Indirect expense deducted	*41.35*		*41.35*					
Total expenditures	473.06	178.97		123.09	171.00			
Balance	*104.89*							
	368.17							

6612. Machinery plant, navy yard, Philadelphia, Pa.

Balance July 1, 1915	$54.88							
Balance	54.88							

6613. Machinery plant, navy yard, Norfolk, Va.

Balance July 1, 1915	$8,710.11							
Expenditures by title:								
E	3,126.73				$3,126.73			
Balance	5,583.38							
	8,710.11							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6614. Machinery plant, navy yard, Charleston, S. C.

	Total.	Labor.	Indirect. Indirect.	Material. Material.	Public vouchers.			
Balance July 1, 1915	$3,777.74							
Expenditures by titles:								
E	746.20	$365.51	$85.11	$295.58				
G	188.65	145.11		43.54				
Indirect expense deducted	85.11		85.11					
Total expenditures	849.74	510.62		339.12				
Balance	2,928.00							
	3,777.74							

6615. Machinery plant, navy yard, Pensacola, Fla.

Balance July 1, 1915	$16,610.67							
Balance	16,610.67							

6617. Machinery plant, navy yard, Mare Island, Cal.

Balance July 1, 1915	$430.13							
Balance	430.13							

6619. Machinery plant, naval station, Cavite, P. I.

Balance July 1, 1915	$33,260.00							
Balance	33,260.00							

6620. Machinery plant, Naval station, Olongapo, P. I.

Balance July 1, 1915	$22,083.24							
Expenditures by titles:								
E	877.97				$877.97			
Balance	21,205.27							
	22,083.24							

6621. Machinery plant, naval station, Pearl Harbor, Hawaii.

Balance July 1, 1915	$17,408.04							
Expenditures by title:								
R	13,639.80	$7,035.01		$4,137.34	$2,467.45			
V	27.74						$27.74	
Total expenditures	13,667.54	7,035.01		4,137.34	2,467.45		27.74	
Balance	3,740.50							
	17,408.04							

6623. Increase of the Navy, equipment (S. E.).

Balance July 1, 1915	$376,935.34							
Miscellaneous adjustments [1]	376,935.34							

6624. High-power radio stations.

Balance July 1, 1915	$471,892.15							
Amount appropriated	400,000.00							
Miscellaneous receipts	39.66							
	871,931.81							
Expenditures by titles:								
R	346,685.49	$14,843.00	$708.37	$6,269.27	$324,864.85			
G	690.43	405.97		283.47	.99			
S	31,544.28				331.53		$31,212.75	
V	730.18				207.00	$20.14	503.04	
Indirect expense deducted	*708.37*		*708.37*					
Total expenditures	378,942.01	15,248.97		6,552.74	325,404.37	20.14	31,715.79	
Balance	492,989.80							
	871,931.81							

[1] Balance transferred to appropriation "Increase of the Navy, C. and M."

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6625. Building, Bureau of Steam Engineering, Annapolis, Md.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$5,400.19							
Miscellaneous receipts	13.55							
	5,413.74							
Expenditures by titles:								
R	2.20			$2.20				
Miscellaneous adjustments	164.15							
Total expenditures	166.35							
Balance	5,247.39							
	5,413.74							

6701. Pay of the Navy, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$41,240,563.00							
Miscellaneous receipts	294,394.00							
	41,534,957.00							
Expenditures by titles:								
C	29,046,061.29				$1,408.00			$29,044,653.29
G	1,164,880.27							1,164,880.27
S	4,149,797.28				3,783.72		$141.92	4,145,871.64
V	8,665,862.16				60,542.05		22,133.47	8,583,186.64
Miscellaneous adjustments	20.75							
Total expenditures	43,026,621.75				65,733.77		22,275.39	42,938,591.84
Balance	*1,491,664.75*							
	41,534,957.00							

6702. Provisions, Navy, 1916-17.

Amount appropriated	$7,601,014.00							
Miscellaneous receipts	2,297,532.11							
	9,898,546.11							
Expenditures by titles:								
C	640,276.04				$581,220.92			$59,055.12
R	245.00				245.00			
S	239,283.76				109,209.96			130,073.80
V	269,255.79				257,963.60	$125.24	$10,791.05	375.90
X	8,037,353.63				7,975,773.18	60,245.49	1,334.96	
Z	1,116.00	$1,116.00						
Miscellaneous adjustments [1]	381,039.75							
Total expenditures	9,568,569.97	1,116.00			8,924,412.66	60,370.73	12,126.01	189,504.82
Balance	329,976.14							
	9,898,546.11							

5702. Provisions, Navy, 1915-16.

Balance, July 1, 1915	$1,063 839.82							
Miscellaneous receipts	62,105.02							
	1,125,944.84							
Expenditures by titles:								
C	23,132.64				$23,132.64			
S	14,577.60				14,577.60			
V	9,649.20				7,420.36		$2,228.84	
X	893,569.49				891,581.73	$1,987.76		
Miscellaneous adjustments [1]	71,298.18							
Total expenditures	1,012,227.11				936,712.33	1,987.76	2,228.84	
Carried to surplus fund	52.04							
Balance	113,665.69							
	1,125,944.84							

[1] Transfers to naval hospital fund on account of sick in hospitals, etc.

[illegible]

[illegible] Freight, Supplies and Accounts [illegible]

Expenditures by titles:

K. [illegible]

S. [illegible]

R. [illegible]

S. [illegible]

X. [illegible]

Indirect expense [illegible]

Miscellaneous adjustments [illegible]

Total expenditures [illegible]

Balance [illegible]

[illegible]ropriated [illegible]

[illegible] receipts [illegible]

[illegible] by titles: [illegible]

[illegible]	1,720.15	1,704.20		15.95				
[illegible]	593,753.01	2,942.31			425,047.07		$165,763.63	
[illegible]	*4.50*					*$4.50*		
Total expenditures	647,697.15	55,905.20		803.11	425,229.71	*4.50*	165,763.63	
[illegible]nce	*21,207.28*							
	626,489.87							

6708. Fuel and transportation, 1916.

Amount appropriated	$4,500,000.00							
Miscellaneous receipts	54,041.63							
	4,554,041.63							
Expenditures by titles:								
C	4,950,295.30			$12,756.58	$169,921.67	$4,767,025.36	$591.69	
E	62.50			62.50				
R	85.19	$73.16		.13	11.90			
G	168,783.12	86,981.65		80,568.10	174.29	1,059.08		
S	168,149.41	100,850.98		54,171.36	11,389.49	564.44	1,173.14	
V	29,770.82	484.40	$137.02	851.06	1,468.31	26,733.43	96.60	
X	41.32				41.32			
Indirect expense deducted	*137.02*		*137.02*					
Miscellaneous adjustments	1,426.39							
Total expenditures	5,318,477.03	188,390.19		148,409.73	183,006.98	4,795,382.31	1,861.43	
Balance	*764,435.40*							
	4,554,041.63							

5710. Naval reserve, 1915–16.

Balance July 1, 1915	$129,334.03							
Miscellaneous receipts	498.42							
	129,832.45							
Expenditures by titles:								
V	13,827.37				$5,639.34		$2,208.33	$5,979.70
Miscellaneous adjustments	225.85							
Total expenditures	14,053.22							
Balance	115,779.23							
	129,832.45							

BY TITLES—Continued.

						Miscellaneous material.	Auditor's settlements.	Pay and allowances.
							$50.50	
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]							

6717. Ships-store profits, Navy.

Balance July 1, 1915	$3,362.74							
Miscellaneous receipts	146,371.88							
	149,734.62							

Expenditures by titles:								
R	852.44	$150.09		$702.35				
S	273.72	273.72						
V	84,347.58				$84,347.58			
X	348.14					$348.14		
Miscellaneous adjustments	7,412.22							
Total expenditures	93,234.10	423.81		702.35	84,347.58	348.14		
Balance	56,500.52							
	149,734.62							

6718. Naval supply fund.

Balance July 1, 1915	$6,543.12							
Carried to surplus fund	6,543.12							

6801. Medical Department, 1916.

Amount appropriated	$525,000.00							
Miscellaneous receipts	825.32							
	525,825.32							
Expenditures by titles:								
B	.65					$0.65		
C	4,472.25				$4,365.55	106.70		
R	1,174.33				1,170.99	3.34		
G	741.63	$652.01		$77.61	12.01			
S	272,023.32	213,418.91	$1.65	1,340.31	27,155.20	107.25		
V	21,111.39			8.32	13,990.34	7.56	$7,105.17	
X	194,047.24				194,047.24			
Indirect expense deducted	*1.65*		*1.65*					
Miscellaneous adjustments	2,703.79							
Total expenditures	496,272.95	244,070.92		1,426.24	240,741.33	225.50	7,105.17	
Balance	29,552.37							
	525,825.32							

[1] Balance transferred to appropriation "Increase of the Navy, C. and M."

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6715. Increase of the Navy, equipment (S. and A.).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$71,820.95							
Miscellaneous receipts	241.15							
	72,062.10							
Miscellaneous adjustments [1]	72,062.10							

6716. Clothing and small-stores fund.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$1,556,042.49							
Miscellaneous receipts	2,115,800.03							
	3,671,842.52							
Expenditures by titles:								
E	1,181.67	$123.20	$19.72	$298.03	$740.72			
R	299.96	140.56	32.90	126.50				
G	4,316.96	4,596.12		*279.16*				
S	3,689.33	3,256.36	8.38	424.59				
V	8,029.07				5,386.14	$2,492.45		$150.48
X	1,697,351.22				1,635,944.88	40,859.58	$20,546.76	
Z	501,794.61	340,138.61	3,695.59	157,960.41				
Indirect divided		3,688.72		67.87				
Miscellaneous adjustments	2,507.13							
Total expenditures	2,219,169.95	351,943.57	3,756.59	158,598.24	1,642,071.74	43,352.03	20,546.76	150.48
Balance	1,452,672.57							
	3,671,842.52							

6717. Ships-store profits, Navy.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$3,362.74							
Miscellaneous receipts	146,371.88							
	149,734.62							

Expenditures by titles:								
R	852.44	$150.09		$702.35				
S	273.72	273.72						
V	84,347.58				$84,347.58			
X	348.14					$348.14		
Miscellaneous adjustments	7,412.22							
Total expenditures	93,234.10	423.81		702.35	84,347.58	348.14		
Balance	56,500.52							
	149,734.62							

6718. Naval supply fund.

Balance July 1, 1915	$6,543.12							
Carried to surplus fund	6,543.12							

6801. Medical Department, 1916.

Amount appropriated	$525,000.00							
Miscellaneous receipts	825.32							
	525,825.32							
Expenditures by titles:								
B	.65					$0.65		
C	4,472.25				$4,365.55	106.70		
R	1,174.33				1,170.99	3.34		
G	741.63	$652.01		$77.61	12.01			
S	272,023.32	243,418.91	$1.65	1,340.31	27,155.20	107.25		
V	21,111.39			8.32	13,990.34	7.56	$7,105.17	
X	194,047.24				194,047.24			
Indirect expense deducted	*1.65*		*1.65*					
Miscellaneous adjustments	2,703.79							
Total expenditures	496,272.95	244,070.92		1,426.24	240,741.33	225.50	7,105.17	
Balance	29,552.37							
	525,825.32							

[1] Balance transferred to appropriation "Increase of the Navy, C. and M."

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6802. Contingent, Medicine and Surgery, 1916.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
[illegible]	$142,000.00							
[illegible]	50.45							
	142,050.45							
[illegible]	3.39					$3.39		
[illegible]	9,760.26				$8,733.02	1,027.24		
[illegible]	122.62				17.50	105.12		
[illegible]	13,947.48	$332.19	$0.91	$1,958.28	11,656.10			
[illegible]	990.03	690.32		218.91	76.80	4.00		
[illegible]	71,634.57	8,549.40	130.12	24,359.99	36,816.42	1,483.54	$295.10	
[illegible]	22,945.89	91.28	18.88	598.05	8,867.92	334.58	13,035.18	
[illegible]	21,007.54				21,007.54			
[illegible]	*149.91*		*149.91*					
[illegible]	292.52							
[illegible]	140,554.39	9,663.19		27,135.23	87,175.30	2,957.87	13,330.28	
[illegible]	1,496.06							
[illegible]	142,050.45							

[illegible] home remains of officers, etc., Navy Department, 1916–17.

[illegible]	$15,000.00							
[illegible]	14,494.44			$254.34	$12,360.28	$505.05	$1,374.77	
[illegible]	139.30							
[illegible]	14,633.74							
[illegible]	366.26							
	15,000.00							

home remains of officers, etc., Navy Department, 1915–16.

	$4,180.06							
	3.34							
	4,183.40							
	5,119.73				$4,925.70		$194.03	
	936.33							
	4,183.40							

6810. Naval hospital, Chelsea, Mass.

	$11,533.37							
	8,687.65	$709.72	$139.48	$3,787.05	$4,051.40			
	892.47	691.64		200.83				
	2,058.23	147.95	32.51	1,631.77	246.00			
deducted	*171.99*		*171.99*					
Total expenditures	11,466.36	1,549.31		5,619.65	4,297.40			
Balance	67.01							
	11,533.37							

6811. Naval hospital, Newport, R. I.

Balance July 1, 1915	$20,000.00							
Balance	20,000.00							

6812. Naval hospital, Pensacola, Fla.

Balance July 1, 1915	$25,000.00							
Miscellaneous adjustments	15,000.00							
Balance	10,000.00							
	25,000.00							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

6813. Naval hospital, Great Lakes.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$11,536.42							
Balance	11,536.42							

6814. Bringing home remains of officers, etc., Navy Department.

Balance July 1, 1915	$409.00							
Expenditures by title:								
V	44.45						$44.45	
Balance	364.55							
	409.00							

6815. Naval hospital fund.

Balance July 1, 1915	*$321,112.51*							
Miscellaneous receipts	1,069,684.34							
	768,571.83							
Expenditures by titles:								
B	83.53					$83.53		
C	1,182.42				$581.00	601.42		
R	47,510.78	$1,318.58	$123.44	$6,170.60	36,598.09	3,094.07	$206.00	
G	576.96	445.37		131.59				
S	731,617.27	20,798.92	246.78	116,862.53	576,364.37	15,481.45	1,863.22	
V	12,924.94	2,153.02	5.98	1,462.47	5,540.90	278.25	3,345.82	$138.50
X	18,375.82				18,375.82			
Indirect expense deducted	*239.59*		*239.59*					
			136.61					

Indirect divided		109.30		27.31				
Miscellaneous adjustments [1]	115,767.67							
Total expenditures	927,799.80	24,825.19		124,654.50	637,460.18	19,538.72	5,415.04	138.50
Balance	*159,227.97*							
	768,571.83							

6901. Pay, Marine Corps, 1916.

Amount appropriated	$4,510,834.33							
Miscellaneous receipts	51,091.79							
	4,561,926.12							
Expenditures by titles:								
C	753,043.64							$753,043.64
Marine Corps	3,427,339.73				$15,721.62		$6,499.48	3,405,118.63
Total expenditures	4,180,383.37				15,721.62		6,499.48	4,158,162.27
Balance	381,542.75							
	4,561,926.12							

6902. Maintenance, quartermaster department, Marine Corps, 1916.

Amount appropriated	$3,000,000.00							
Miscellaneous receipts	134,611.99							
	3,134,611.99							
Expenditures by titles:								
Marine Corps	2,828,177.13	$21,634.81	$3,144.66	$15,701.27	$2,662,104.40	$67,401.98	$47,978.16	$10,211.85
Indirect divided		2,519.19		625.47				
Miscellaneous adjustments [2]	330,914.18							
Total expenditures	3,159,091.31	24,154.00		16,326.74	2,662,104.40	67,401.98	47,978.16	10,211.85
Balance	*24,479.32*							
	3,134,611.99							

[1] Provisions, etc., transferred to naval hospitals from stock carried under appropriation Provisions, Navy.
[2] Transfer of provisions and other stores originally purchased under naval appropriations.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CURRENT APPROPRIATIONS—Continued.

0015. Barracks and quarters, Marine Corps.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$18,942.68							
Expenditures by titles:								
Marine Corps	495.06	$38.78		$456.28				
Balance	18,447.62							
	18,942.68							

Pay of the Navy, deposit fund.

Balance July 1, 1915	$253,692.34							
Miscellaneous receipts	458,403.79							
	712,096.13							
Miscellaneous adjustments[1]	336,036.30							
Balance	376,059.83							
	712,096.13							

Pay of the Marine Corps, deposit fund.

Balance July 1, 1915	$396,109.86							
Miscellaneous receipts	199,209.94							
	595,319.80							
Miscellaneous adjustments[1]	282,406.60							
Balance	312,913.20							
	595,319.80							

FISCAL YEAR 1915.

5101. Pay, miscellaneous, 1915.

Balance July 1, 1915	$102,305.87							
Miscellaneous receipts	5,713.30							
	108,019.17							
Expenditures by title:								
C	3,758.30				$1,149.45		$2,608.85	
E	786.09				786.09			
R	166.23				166.23			
G	1,283.79	$2.08		$390.84	890.87			
S	7,502.72	912.52		13.51	6,576.69			
V	69,334.94			298.99	66,521.19	$191.99	2,245.85	$76.92
Miscellaneous adjustments	2,398.38							
Total expenditures	85,230.45	914.60		703.34	76,090.52	191.99	4,854.70	76.92
Carried to surplus fund	430.05							
Balance	22,358.67							
	108,019.17							

5102. Contingent, Navy, 1915.

Balance July 1, 1915	$38,590.56							
Miscellaneous receipts	98.97							
	38,689.53							
Expenditures by titles:								
R	685.00				$685.00			
V	16,885.77				16,492.37	$89.43	$303.97	
Miscellaneous adjustments	37.60							
Total expenditures	17,608.37				17,177.37	89.43	303.97	
Balance	21,081.16							
	38,689.53							

Repayment of deposits to enlisted men upon discharge.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5104. Care of lepers, etc., Guam, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
	$1,698.99							
	190.10			$190.10				
	290.18	$213.68		*146.08*		$222.58		
	655.56				$648.84		$6.72	
	191.39							
	1,327.23	213.68		44.02	648.84	222.58	6.72	
	371.76							
	1,698.99							

5105. Committee to investigate cost of United States armor plant, 1915.

	$4,581.57							
Adjustments	4,581.57							

5107. Advisory committee for aeronautics, 1915.

Balance July 1, 1915	$4,679.02							
Expenditures by titles:								
V	2,638.65				$2,638.65			
Balance	2,040.37							
	4,679.02							

5108. Arming and equipping Naval Militia, 1915.

Balance July 1, 1915	$18,991.52							
Miscellaneous receipts	2,575.29							
	21,566.81							
Expenditures by titles:								
B	672.23					$672.23		
C	13.10					13.10		
V	11,007.10	*$102.58*	*$24.44*	*$143.34*	$5,744.64	807.76	$4,725.06	
Indirect expense deducted	*19.78*		*19.78*					
			44.22					
Indirect divided		*35.15*		*9.07*				
Total expenditures	11,672.65	*137.73*		*152.41*	5,744.64	1,493.09	4,725.06	
Carried to surplus fund	15.50							
Balance	9,878.66							
	21,566.81							

5109. Arms, uniforms, equipment, etc., Naval Militia, 1915.

Balance July 1, 1915	$47,390.64							
Expenditures by titles:								
B	1,032.54					$1,032.54		
C	1,488.32				$50.82	1,437.50		
V	30,361.93	$102.58	$24.44	$143.34	19,666.56	837.93	$9,587.08	
Indirect expense added	19.78		19.78					
			44.22					
Indirect divided		35.15		9.07				
Miscellaneous adjustments	6,260.03							
Total expenditures	39,162.60	137.73		152.41	19,717.38	3,307.97	9,587.08	
Balance	8,228.04							
	47,390.64							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5201. Maintenance, Yards and Docks, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$23,991.69							
Miscellaneous receipts	3,246.62							
	27,238.31							
Expenditures by titles:								
E	3,739.05				$3,739.05			
R	8,128.91			$5,154.99	2,973.92			
G	4,956.43	$219.15			4,737.28			
S	5,118.61	1,681.90		2,000.81	1,017.70	$51.24	$366.96	
V	1,105.21				122.52	7.58	975.11	
Miscellaneous adjustments	17.48							
Total expenditures	23,065.69	1,901.05		7,155.80	12,590.47	58.82	1,342.07	
Carried to surplus fund	2,972.02							
Balance	1,200.60							
	27,238.31							

5202. Repairs and preservation, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$30,185.24							
Miscellaneous receipts	1,611.41							
	31,796.65							
Expenditures by titles:								
E	660.58				$660.58			
R	695.85				695.85			
G	23,162.63			*$251.09*	23,413.72			
S	1,866.48	$447.70		387.95	1,030.83			
V	15.72					$0.84	$14.88	
Total expenditures	26,401.26	447.70		136.86	25,800.98	.84	14.88	
Carried to surplus fund	1,604.30							
Balance	3,791.09							
	31,796.65							

5303. Contingent, Yards and Docks, 1915.

Balance July 1, 1915	$2,037.07							
Expenditures by titles:								
E	490.12				$490.12			
G	1,071.10				1,071.10			
Total expenditures	1,561.22				1,561.22			
Balance	475.85							
	2,037.07							

5301. Contingent, Navigation, 1915.

Balance July 1, 1915	$9,175.40							
Miscellaneous receipts	2.14							
	9,177.54							
Expenditures by titles:								
V	4,871.46				$2,531.36	$44.00	$2,296.10	
Balance	4,306.08							
	9,177.54							

5302. Transportation, Navigation, 1915.

alance July 1, 1915	$282,341.85							
iscellaneous receipts	148.13							
	282,489.98							
itures by titles:								
	55,888.76				$33,408.44		$21,319.01	$1,161.31
neous adjustments	5,258.30							
otal expenditures	61,122.86							
	221,367.12							
	282,489.98							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5303. Recruiting, Navigation, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$50,458.90							
Miscellaneous receipts	.35							
	50,459.25							
Expenditures by titles:								
V	12,910.81				$12,759.51	$151.30		
Miscellaneous adjustments	1,125.41							
Total expenditures	14,036.22							
Balance	36,423.03							
	50,459.25							

5304. Maintenance, naval auxiliaries, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$3,942.30							
Miscellaneous receipts	31,767.48							
	27,825.18							
Expenditures by titles:								
C	32.50				$32.50			
V	1,327.16				228.31	$60.85	$1,159.68	
X	2,492.55				2,501.67	9.12		
Miscellaneous adjustments	3,882.11							
Total expenditures	7,734.32				2,762.48	69.95	1,159.68	
Balance	20,090.86							
	27,825.18							

5310. Ocean and lake surveys, 1915.

Balance July 1, 1915	$22,437.80							
Miscellaneous receipts	6,252.40							
	28,690.20							
Expenditures by titles:								
S	5.00				$5.00			
V	8,318.33	$110.00			3,470.71		$4,737.62	
Miscellaneous adjustments	10,771.42							
Total expenditures	19,094.75	110.00			3,475.71		4,737.62	
Carried to surplus fund	13							
Balance	9,595.32							
	28,690.20							

5311. Naval training station, Rhode Island, 1915.

Balance July 1, 1915	$157.07							
Expenditures by titles:								
S	105.00				$105.00			
Miscellaneous adjustments	181.38							
Total expenditures	286.38							
Balance	*129.31*							
	157.07							

5312. Naval training station, St. Helena, Va., 1915.

Balance July 1, 1915	$379.98							
Expenditures by titles:								
S	33.75				$33.75			
Balance	346.23							
	379.98							

Statement 40. APPROPRIATION ACCOUNTS, BY TITLES (Continued).

FISCAL YEAR 1915 (Continued).

3500. Outfits on first enlistment, 1915.

	Total.	Labor.	Indirect.	Material.	Public quarters.	Miscellaneous material.	Uniform's settlements.	Pay and allowances.
Balance July 1, 1915	$[illegible]							
Expenditures by titles:								
V	[illegible]						[illegible]	[illegible]
Miscellaneous adjustments	[illegible]							
Total expenditures	[illegible]							
Balance	[illegible]							
	[illegible]							

3500. Instruments and supplies, 1915.

	Total.	Labor.	Indirect.	Material.	Public quarters.	Miscellaneous material.	Uniform's settlements.	Pay and allowances.
Balance July 1, 1915	$[illegible]							
Miscellaneous receipts	[illegible]							
	[illegible]							
Expenditures by titles:								
B	[illegible]				[illegible]	[illegible]	[illegible]	
C	[illegible]				[illegible]	[illegible]	[illegible]	
D	[illegible]				[illegible]			
P	[illegible]	[illegible]	[illegible]		[illegible]			
R	[illegible]				[illegible]		[illegible]	
G	1,177 16				1,177 16			
S	[illegible]	[illegible]			[illegible]			
V	[illegible]				[illegible]	[illegible]	[illegible]	
Indirect divided			[illegible]					
Miscellaneous adjustments	[illegible]			[illegible]				
Total expenditures	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	
Carried to surplus fund	[illegible]							
Balance	147,[illegible] 16							
	178,180.40							

5310. Ocean and lake surveys, 1915.

Balance July 1, 1915	$22,437.80							
Miscellaneous receipts	6,252.40							
	28,690.20							
Expenditures by titles:								
S	5.00				$5.00			
V	8,318.33	$110.00			3,470.71		$4,737.62	
Miscellaneous adjustments	10,771.42							
Total expenditures	19,094.75	110.00			3,475.71		4,737.62	
Carried to surplus fund	13							
Balance	9,595.32							
	28,690.20							

5311. Naval training station, Rhode Island, 1915.

Balance July 1, 1915	$157.07							
Expenditures by titles:								
S	105.00				$105.00			
Miscellaneous adjustments	181.38							
Total expenditures	286.38							
Balance	*129.31*							
	157.07							

5312. Naval training station, St. Helena, Va., 1915.

Balance July 1, 1915	$379.98							
Expenditures by titles:								
S	33.75				$33.75			
Balance	346.23							
	379.98							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR, 1915—Continued.

5313. Naval training station, Great Lakes, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances
Balance July 1, 1915	$22,290.64							
Miscellaneous receipts	20.34							
	22,310.98							
Expenditures by titles:								
R	1,200.00				$1,200.00			
S	1,621.65				1,621.65			
Miscellaneous adjustments	136.45							
Total expenditures	2,958.10				2,821.65			
Balance	19,352.88							
	22,310.98							

5314. Naval training station, California, 1915.

Balance July 1, 1915	$1,287.47							
Miscellaneous receipts	8.60							
	1,296.07							
Expenditures by titles:								
R	1,197.00				$1,197.00			
S	87.25				87.25			
Total expenditures	1,284.25				1,284.25			
Balance	11.82							
	1,296.07							

5315. Naval War College, 1915.

Balance July 1, 1915	$3,207.66							
Expenditures by titles:								
R	43.78				$43.78			
S	1,744.07				1,744.07			
V	232.12				232.12			
Total expenditures	2,019.97				2,019.97			
Balance	1,187.69							
	3,207.66							

5316. Naval Home, Philadelphia, Pa., 1915.

Balance July 1, 1915	$8,834.73							
Miscellaneous receipts	2,173.04							
	11,007.77							
Expenditures by titles:								
R	772.65				$772.65			
S	8,037.27				7,932.91	$104.36		
V	154.69				112.45		$42.24	
Total expenditures	8,964.61				8,818.01	104.36	42.24	
Balance	2,043.16							
	11,007.77							

5317. Pay, Naval Academy, 1915.

Balance July 1, 1915	$2,265.03							
Expenditures by titles:								
V	10.00						$10.00	
Miscellaneous adjustments	58.50							
Total expenditures	68.50							
Balance	2,196.53							
	2,265.03							

[illegible] and salaries, Naval Academy, 1916.

[illegible]	141.86					
	8,959.61					
Total expenditures	2,556.82					
Carried to surplus fund	384.05					
Balance	16.32					
	2,957.19			$2,556.82		
	124.38			384.05		
	5,878.04					
	8,959.61			2,940.87		610.44
						10.44

5401. Ordnance and ordnance stores, 1915.

Balance July 1, 1915	$1,568,899.82							
Miscellaneous receipts	17,415.75							
	1,586,315.57							
Expenditures by titles:								
B	2.30				$2.30			
C	544.83				62.50	$482.33		
D	619.69			$87.36	532.33			
K	*8.57*			*8.57*				
P	4,464.21			*88.11*	4,557.32			
E	50,035.57				50,035.57			
R	50,418.61	$741.22		322.03	49,355.36			
G	2,404.40	4.40			2,400.00			
S	5,083.55	138.15		205.18	4,394.29	334.93	$11.00	
V	18,836.32	.16			18,074.62	71.45	690.09	
X	1,222,667.73				1,217,526.56	2,115.41	3,025.76	
Miscellaneous adjustments	39.10							
Total expenditures	1,355,107.74	883.93		512.89	1,346,940.85	3,004.12	3,726.85	
Carried to surplus fund	1,343.79							
Balance	229,864.04							
	1,586,315.57							

5402. Contingent, Ordnance, 1915.

Balance July 1, 1915	$3,236.42							
Expenditures by titles:								
S	35.44			$4.94	$30.50			
V	94.41				94.41			
X	28.80				33.74	*$4.94*		
Total expenditures	158.65			4.94	158.65	*4.94*		
Balance	3,077.77							
	3,236.42							

5403. Repairs, Ordnance, 1915.

Balance July 1, 1915	$3,903.01							
Expenditures by titles:								
R	1,793.46				$1,793.46			
X	478.07				478.07			
Total expenditures	2,271.53				2,271.53			
Balance	1,631.48							
	3,903.01							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5312. Current and miscellaneous expenses, Naval Academy, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$7,478.44							
Expenditures by titles:								
R	1,664.94				$1,664.94			
S	59.07			$7.50	51.57			
V	27.75				27.75			
Miscellaneous adjustments	41.99							
Total expenditures	1,793.75			7.50	1,744.26			
Balance	5,684.69							
	7,478.44							

5319. Maintenance and repairs, Naval Academy, 1915.

Balance July 1, 1915	$8,817.76							
Miscellaneous receipts	141.85							
	8,959.61							
Expenditures by titles:								
R	2,556.82				$2,556.82			
S	384.05				384.05			
V	16.32						$16.32	
Total expenditures	2,957.19				2,940.87		16.32	
Carried to surplus fund	124.38							
Balance	5,878.04							
	8,959.61							

5401. Ordnance and ordnance stores, 1915.

Balance July 1, 1915	$1,568,899.82							
Miscellaneous receipts	17,415.75							
	1,586,315.57							
Expenditures by titles:								
B	2.30				$2.30			
C	544.83				62.50	$482.33		
D	619.69			$87.36	532.33			
K	*8.57*			*8.57*				
P	4,464.21			*93.11*	4,557.32			
E	50,035.57				50,035.57			
R	50,418.61	$741.22		322.03	49,355.36			
G	2,404.40	4.40			2,400.00			
S	5,083.55	138.15		205.18	4,394.29	334.93	$11.00	
V	18,836.32	.16			18,074.62	71.45	690.09	
X	1,222,667.73				1,217,526.56	2,115.41	3,025.76	
Miscellaneous adjustments	39.10							
Total expenditures	1,355,107.74	883.93		512.89	1,346,940.85	3,004.12	3,726.85	
Carried to surplus fund	1,343.79							
Balance	229,864.04							
	1,586,315.57							

5402. Contingent, Ordnance, 1915.

Balance July 1, 1915	$3,236.42							
Expenditures by titles:								
S	35.44			$4.94	$30.50			
V	94.41				94.41			
X	28.80				33.74	*$4.94*		
Total expenditures	158.65			4.94	158.65	*4.94*		
Balance	3,077.77							
	3,236.42							

5403. Repairs, Ordnance, 1915.

Balance July 1, 1915	$3,903.01							
Expenditures by titles:								
R	1,793.46				$1,793.46			
X	478.07				478.07			
Total expenditures	2,271.53				2,271.53			
Balance	1,631.48							
	3,903.01							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5303. Recruiting, Navigation, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$50,458.90							
Miscellaneous receipts	.35							
	50,459.25							
Expenditures by titles:								
V	12,910.81				$12,759.51	$151.30		
Miscellaneous adjustments	1,125.41							
Total expenditures	14,036.22							
Balance	36,423.03							
	50,459.25							

5304. Maintenance, naval auxiliaries, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	*$3,942.30*							
Miscellaneous receipts	31,767.48							
	27,825.18							
Expenditures by titles:								
C	32.50				$32.50			
V	1,327.16				228.31	*$60.85*	$1,159.68	
X	2,492.55				2,501.67	*9.12*		
Miscellaneous adjustments	3,882.11							
Total expenditures	7,734.32				2,762.48	*69.95*	1,159.68	
Balance	20,090.86							
	27,825.18							

5305. Gunnery exercises, 1915.

Balance July 1, 1915	$18,440.30							
Miscellaneous receipts	1.00							
	18,441.30							
Expenditures by titles:								
R	2,309.50			$322.00	$1,987.50			
G	47.69				47.69			
V	4,513.28				312.05		$2,416.34	$1,784.89
Miscellaneous adjustments	943.23							
Total expenditures	7,813.70			322.00	2,347.24		2,416.34	1,784.89
Carried to surplus fund	.10							
Balance	10,627.50							
	18,441.30							

5306. Steaming exercises, 1915.

Balance July 1, 1915	$5,919.73							
Expenditures by titles:								
C	25.00							$25.00
V	2,306.10				$405.00		$1,807.14	93.96
Miscellaneous adjustments	33.60							
Total expenditures	2,364.70				405.00		1,807.14	118.96
Balance	3,555.03							
	5,919.73							

5307. Experiments in aviation, 1915.

Balance July 1, 1915	$6,782.81							
Expenditures by titles:								
K	146.86				$146.86			
R	1,464.11				1,464.11			
V	52.89				52.89			
Total expenditures	1,663.86				1,663.86			
Balance	5,118.95							
	6,782.81							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5308. Outfits on first enlistment, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
[illegible] 1915	$166,624.17							
[illegible]y titles:								
[illegible]	6,533.86						$51.93	$6,481.93
[illegible] adjustments	14,813.28							
[illegible] expenditures	21,347.14							
[illegible]	145,277.03							
	166,624.17							

5309. Instruments and supplies, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$168,638.56							
Miscellaneous	9,541.93							
	178,180.49							
[illegible] by titles:								
[illegible]	294.00				$239.00	$24.00	$31.00	
[illegible]	3,993.66				3,461.86	225.89	305.91	
[illegible]	11,608.00				11,608.00			
[illegible]	958.93	$7.68	$2.31		968.92			
[illegible]	103.27				74.95		28.32	
[illegible]	1,077.16				1,077.16			
[illegible]	160.00	161.20			1.20			
[illegible]	4,804.34				1,328.75	50.94	3,424.65	
[illegible]			2.31					
[illegible]		1.62		$69				
[illegible] adjustments	7.26							
Total expenditures	22,686.62	170.50		69	18,759.84	300.83	3,789.88	
[illegible] to surplus fund	7,636.71							
[illegible]	147,857.16							
	178,180.49							

5810. Ocean and lake surveys, 1915.

...ipts	$22,437.80 6,252.40							
	28,690.20							
...es by titles:								
...	5.00				$5.00			
...	8,318.33	$110.00			3,470.71		$4,737.62	
...aneous adjustments	10,771.42							
Total expenditures	19,094.75	110.00			3,475.71		4,737.62	
Carried to surplus fund	13							
Balance	9,595.32							
	28,690.20							

5811. Naval training station, Rhode Island, 1915.

Balance July 1, 1915	$157.07							
Expenditures by titles:								
S	105.00				$105.00			
Miscellaneous adjustments	181.38							
Total expenditures	286.38							
Balance	*129.31*							
	157.07							

5812. Naval training station, St. Helena, Va., 1915.

Balance July 1, 1915	$379.98							
Expenditures by titles:								
S	33.75				$33.75			
Balance	346.23							
	379.98							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR, 1915—Continued.

5313. Naval training station, Great Lakes, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$22,290.64							
Miscellaneous receipts	20.34						$51.93	$6,481.93
	22,310.98							
Expenditures by titles:								
R	1,200.00				$1,200.00			
S	1,621.65				1,621.65			
Miscellaneous adjustments	136.45							
Total expenditures	2,958.10				2,821.65			
Balance	19,352.88							
	22,310.98							

5314. Naval training station, California, 1915.

Balance July 1, 1915	$1,287.47							
Miscellaneous receipts	8.60							
	1,296.07							
Expenditures by titles:								
R	1,197.00				$1,197.00			
S	87.25				87.25			
Total expenditures	1,284.25				1,284.25			
Balance	11.82							
	1,296.07							

5315. Naval War College, 1915.

Balance July 1, 1915	$3,207.66							
Expenditures by titles:								
R	43.78				$43.78			
S	1,744.07				1,744.07			
V	232.12				232.12			
Total expenditures	2,019.97				2,019.97			
Balance	1,187.69							
	3,207.66							

5316. Naval Home, Philadelphia, Pa., 1915.

Balance July 1, 1915	$8,834.73							
Miscellaneous receipts	2,173.04							
	11,007.77							
Expenditures by titles:								
R	772.65				$772.65			
S	8,037.27				7,932.91	$104.36		
V	154.69				112.45		$42.24	
Total expenditures	8,964.61				8,818.01	104.36	42.24	
Balance	2,043.16							
	11,007.77							

5317. Pay, Naval Academy, 1915.

Balance July 1, 1915	$2,265.03							
Expenditures by titles:								
[illegible] adjustments	10.00						$10.00	
	58.50							
Total expenditures	68.50							
Balance	2,196.53							
	2,265.03							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR, 1915—Continued.

5313. Naval training station, Great Lakes, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances
Balance July 1, 1915	$22,290.64							
Miscellaneous receipts	20.34							
	22,310.98							
Expenditures by titles:								
R	1,200.00				$1,200.00			
S	1,621.65				1,621.65			
Miscellaneous adjustments	136.45							
Total expenditures	2,958.10				2,821.65			
Balance	19,352.88							
	22,310.98							

5314. Naval training station, California, 1915.

Balance July 1, 1915	$1,287.47							
Miscellaneous receipts	8.60							
	1,296.07							
[illegible]	1,197.00				$1,197.00			
[illegible]	87.25				87.25			
[illegible]	1,284.25				1,284.25			
[illegible]	11.82							
	1,296.07							

5315. Naval War College, 1915.

ly 1, 1915	207.66							
itures by titles								
	43.78				$43.78			
	1,744.07				1,744.07			
	232.12				232.12			
					2,019.97			

aval Home, Philadelphia, Pa., 1915.

	7.77							
	772.65				$772.65			
	8,037.27				7,932.91	$104.36		
	154.69				112.45		$42.24	
	8,964.61				8,818.01	104.36	42.24	
	2,043.16							
	11,007.77							

5317. Pay, Naval Academy, 1915.

	$2,265.03							
xpenditures by titles:								
V	10.00						$10.00	
Miscellaneous adjustments	58.50							
Total expenditures	68.50							
Balance	2,196.53							
	2,265.03							

Statement 40. APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1916—Continued.

5016. Current and miscellaneous expenses, Naval Academy, 1916.

	Total.	Labor.	Indirect	Material	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1916	$7,478.44							
Expenditures by titles:								
[illegible]	1,664.94				$1,664.94			
[illegible]	59.97			$7.50	51.57			
[illegible]	27.75				27.75			
Miscellaneous adjustments	41.00							
Total expenditures	1,794.76			7.50	1,744.26			
Balance	5,684.68							
	7,478.44							

5019. Maintenance and repairs, Naval Academy, 1916.

	Total.	Labor.	Indirect	Material	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1916	$8,817.76							
Miscellaneous receipts	141.85							
	8,959.61							
Expenditures by titles:								
[illegible]	8,555.82				$2,555.82			
[illegible]	384.05				384.05			
[illegible]	16.32						$16.32	
Total expenditures	8,957.19				2,940.87		16.32	
Carried to surplus fund	124.28							
Balance	8,878.04							
	8,959.61							

5401. Ordnance and ordnance stores, 1915.

Balance July 1, 1915	$1,568,899.82							
Miscellaneous receipts	17,415.75							
	1,586,315.57							
Expenditures by titles:								
B	2.30				$2.30			
C	544.83			$87.36	62.50	$482.33		
D	619.69			8.57	532.33			
E	8.57			93.11				
K	4,464.21				4,557.32			
P	50,035.57				50,035.57			
R	50,418.61	$741.22		322.03	49,355.36			
S	2,404.40	4.40			2,400.00			
T	5,083.55	138.15		205.18	4,394.29	334.93	$11.00	
V	18,836.32	.16			18,074.62	71.45	690.09	
X	1,222,667.73				1,217,526.56	2,115.41	3,025.76	
Miscellaneous adjustments	39.10							
	1,355,107.74	883.93		512.89	1,346,940.85	3,004.12	3,726.85	
Total expenditures	1,343.79							
Carried to surplus fund	229,864.04							
Balance	1,586,315.57							

5402. Contingent, Ordnance, 1915.

Balance July 1, 1915	$3,[illegible]							
Expenditures by titles:								
[illegible]	33.44			$4.94	$30.50			
[illegible]	94.41				94.41			
[illegible]	28.81				33.74	$4.94		
	[illegible]			4.94	158.65	4.94		
Total expenditures	[illegible]							
Balance	[illegible]							

5403. Repairs, ordnance, 1915.

Balance July 1, 1915	[illegible]							
Expenditures by titles:								
[illegible]	[illegible]				$1,[illegible]			
[illegible]	[illegible]				[illegible]			
[illegible]	[illegible]				[illegible]			
Total expenditures	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5404. Torpedo station, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$6,006.49							
Expenditures by titles:								
R	3,979.37			$3.00	$3,976.37			
S	81.29				81.29			
Total expenditures	4,060.66			3.00	4,057.66			
Balance	1,945.83							
	6,006.49							

5405. Naval Gun Factory, Washington, D. C., 1915.

Balance July 1, 1915	$43,488.76							
Expenditures by titles:								
E	34,688.74				$34,688.74			
Balance	8,800.02							
	43,488.76							

5406. Experiments, Ordnance, 1915.

Balance July 1, 1915	$62,921.69							
Expenditures by titles:								
V	22,611.90				$22,611.90			
X	760.00				760.00			
Miscellaneous adjustments	46.26							
Total expenditures	23,418.16				23,371.90			
Balance	39,503.53							
	62,921.69							

5400. New batteries for ships of the Navy, 1915.

Balance July 1, 1915	$43,698.76							
Miscellaneous receipts	1,844.35							
	45,543.11							
Expenditures by titles:								
V	25,365.40				$25,365.40			
X	13,049.21				13,049.21			
Z	*92.04*			*$92.04*				
Total expenditures	38,322.57			*92.04*	38,414.61			
Balance	7,220.54							
	45,543.11							

5501. Construction and Repair, 1915.

Balance July 1, 1915	$423,083.27							
Miscellaneous receipts	120,630.26							
	543,713.53							
Expenditures by titles:								
A	36,640.82				$36,640.82			
B	6,382.15				233.75	$6,148.40		
C	19,363.57				406.10	13,220.84	$5,716.83	$19.80
D	25,034.29	*$136.36*	$2.37	*$3,500.57*	26,933.71		1,735.14	
K	32,548.86	294.08	73.87	31,343.45	837.46			
P	597.91	*7.72*	*2.16*	*53.34*	661.13			
E	85,493.12	15.40	4.47	*212.05*	85,687.30			
R	7,080.69				6,528.26	552.43		
G	7,317.80	*399.39*		*82.82*	7,800.01			
S	1,055.07	399.82		225.78	429.47			
V	19,433.37	6.16			14,057.08	859.42	4,505.91	4.80
X	222.60					222.60		
Indirect expense deducted	*73.87*		*73.87*					
			4.68					
Indirect divided		3.24		1.44				
Miscellaneous adjustments	750.15							
Total expenditures	241,848.53	175.23		27,721.89	180,215.09	21,003.69	11,957.88	24.60
Carried to surplus fund	108,491.41							
Balance	193,373.59							
	543,713.53							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5502. Construction plants at navy yards, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$46,771.73							
Expenditures by titles:								
E	26,493.56				$26,493.56			
G	47.93			$47.93				
Total expenditures	26,445.63							
Balance	20,326.10							
	46,771.73							

5601. Engineering, 1915.

Balance July 1, 1915	$83,535.95							
Miscellaneous receipts	135,228.82							
	218,764.77							
Expenditures by titles:								
A	371.20				$371.20			
B	325.11				715.66	$390.55		
C	14,141.58				187.27	12,963.91	$975.30	
D	2,893.14	$11.84	$2.37	$3,449.08	5,959.62		396.81	
K	923.25	409.20	93.98	305.07	15.00	100.00		
P	308.01			26.14	334.15			
E	3,390.37				3,390.37			
R	10,501.15	.50			10,420.15	80.50		
G	1,086.24	70.48		23.50	992.26			
S	26,112.91	617.93		364.69	3,273.56	211.61	21,645.12	
V	3,938.63			495.63	1,962.50	258.67	2,213.09	
X	267.95				267.95			
Indirect expense deducted	93.98		93.98					
			2.37					

Indirect divided		*1.62*		*.75*				
Miscellaneous adjustments	588.49							
Total expenditures	64,754.05	1,084.65		*3,278.34*	27,889.69			
Carried to surplus fund	113,254.79							
Balance	40,755.93							
	218,764.77							

5602. Engineering experimental station, Annapolis, Md., 1915.

Balance July 1, 1915	$9,766.66							
Expenditures by title:								
[illegible]	8,481.09			$235.00	$8,246.09			
Miscellaneous adjustments	21.00							
[illegible]tal expenditures	8,502.09							
[illegible]	1,264.57							
	9,766.66							

5701. Pay of the Navy, 1915.

[illegible]s	*$874,230.52*							
[illegible]pts	1,464.36							
	872,766.16							
[illegible]tles:								
[illegible]	30,873.46							$30,873.46
[illegible]	419.84							419.84
[illegible]	24,554.21							24,554.21
[illegible]	91,948.80				$21,782.14		$64,618.81	5,547.95
[illegible]tments	452.01							
[illegible]tures	148,248.42				21,782.14		64,618.81	61,395.46
[illegible]	*1,021,014.58*							
	872,766.16							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5502. Construction plants at navy yards, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$46,771.73							
Expenditures by titles:								
E	26,493.56				$26,493.56			
G	*47.93*			*$47.93*				
Total expenditures	26,445.63							
Balance	20,326.10							
	46,771.73							

5601. Engineering, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$83,535.95							
Miscellaneous receipts	135,228.82							
	218,764.77							
Expenditures by titles:								
A	371.20				$371.20			
B	325.11				715.66	*$390.55*		
C	14,141.58				187.27	12,963.91	$975.30	$15.10
D	2,893.14	*$11.84*	*$2.37*	*$3,449.08*	5,959.62		396.81	
K	923.25	409.20	93.98	305.07	15.00	100.00		
P	308.01			*26.14*	334.15			
E	3,390.37				3,390.37			
R	10,501.15	.50			10,420.15	80.50		
G	1,086.24	70.48		23.50	992.26			
S	26,112.91	617.93		364.69	3,273.56	211.61	21,645.12	
V	3,938.63			*495.63*	1,962.50	258.67	2,213.09	
X	267.95				267.95			
Indirect expense deducted	*93.98*		*93.98*					
			2.37					

Indirect divided		1.62		.75				
Miscellaneous adjustments	588.49							
Total expenditures	64,754.05	1,084.65		3,278.34	27,889.69	13,224.14	25,230.32	15.10
Carried to surplus fund	113,254.79							
Balance	40,755.93							
	218,764.77							

5602. Engineering experimental station, Annapolis, Md., 1915.

Balance July 1, 1915	$9,766.66							
Expenditures by title:								
R	8,481.09			$235.00	$8,246.09			
Miscellaneous adjustments	21.00							
Total expenditures	8,502.09							
Balance	1,264.57							
	9,766.66							

5701. Pay of the Navy, 1915.

Balance July 1, 1915	$871,230.52							
Miscellaneous receipts	1,464.36							
	872,766.16							
Expenditures by titles:								
C	30,873.46							$30,873.46
G	419.84							419.84
S	24,554.21							24,554.21
V	91,948.80				$21,782.14		$64,618.81	5,547.95
Miscellaneous adjustments	452.01							
Total expenditures	148,248.42				21,782.14		64,618.81	61,395.46
Balance	1,021,014.58							
	872,766.16							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

4703. Provisions, Navy, 1914-15.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	*$45,931.00*							
Miscellaneous receipts	570.14							
	45,360.86							
Expenditures by titles:								
C	2.70				$2.70			
V	469.86				30.00		$439.86	
X	301.70				301.70			
Miscellaneous adjustments	331.01							
Total expenditures	1,105.27				334.40		439.86	
Balance	*44,255.59*							
	45,360.86							

5704. Maintenance, Supplies and Accounts, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$186,145.42							
Miscellaneous receipts	8,799.91							
	194,945.33							
Expenditures by titles:								
B	1,178.32				$1,173.32	$5.00		
C	7,998.20				5,835.04	2,116.11	$47.05	
D	4.35				4.35			
P	595.06				595.06			
E	31,958.89			$350.00	31,608.89			
R	3,044.62				3,044.62			
G	6,748.99	$616.30		*7.19*	6,139.88			
S	7,169.21	755.54		35.18	6,378.49			
V	25,606.14				6,649.78	9,610.36	9,346.00	
X	90.00				90.00			
Miscellaneous adjustments	219.11							
Total expenditures	84,612.89	1,371.84		377.99	61,519.43	11,731.47	9,393.05	
Carried to surplus fund	8,304.90							
Balance	102,027.54							
	194,945.33							

5705. Freight, Supplies and Accounts, 1915.

[illegible]	$100,045.11							
[illegible]	33.71							
	100,078.82							
[illegible]	219,900.96	$99.17			$163,121.82		$56,679.97	
[illegible]	1,980.00							
[illegible]	221,881.96							
[illegible]	*121,803.14*							
	100,078.82							

5708. Coal and transportation, 1915.

[illegible]	*$884,842.64*							
[illegible] receipts	17,839.81							
	867,102.83							
[illegible] by titles:								
[illegible]	45,480.71			$1,697.89	$16,064.04	$27,630.27	$88.51	
[illegible]	154.12			14.12	140.00			
[illegible]	580.83	$106.94		160.05	313.84			
[illegible]	772.51				419.76	211.81	140.94	
[illegible] adjustments	18.50							
Total expenditures	47,006.67	106.94		1,872.06	16,937.64	27,842.08	229.45	
Carried to surplus fund	40.83							
Balance	*814,150.05*							
	867,102.83							

5709. Naval Academy dairy, Annapolis, Md. (reimbursable), 1915.

Balance July 1, 1915	$850.00							
Expenditures by titles:								
R	850.00				$850.00			

Statement 40.—**APPROPRIATION ACCOUNTS, BY TITLES**—Continued.

FISCAL YEAR 1915—Continued.

5801. Medical Department, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
	$67,709.71							
	1.66							
	67,711.37							
	251.49				$251.49			
	516.20				516.20			
	1,055.23	$279.70			775.37	$0.16		
	3,051.93				697.87		$2,354.06	
	69,667.74				69,667.74			
	989.47							
	75,532.06	279.70			71,908.67	.16	2,354.06	
	7,820.69							
	67,711.37							

5802. Contingent, Medicine and Surgery, 1915.

	$32,354.49							
	143.44							
	32,497.93							
	1,271.59				$1,271.59			
	2,640.39				2,616.99		$23.40	
	7,797.91				7,790.16	$7.75		
	2,546.18				1,543.57		1,004.61	
	2,996.99				2,996.99			
Miscellaneous adjustments	36.42							
Total expenditures	17,291.48				16,219.30	7.75	1,028.01	
Carried to surplus fund	18.11							
Balance	15,188.34							
	32,497.93							

5901. Pay, Marine Corps, 1915.

Balance July 1, 1915	$456,747.16							
Miscellaneous receipts	24.91							
	456,772.07							
Expenditures by titles:								
Marine corps	128,450.44				$2,266.38		$5,774.91	$120,409.15
Miscellaneous adjustments [1]	289,991.27							
Total expenditures	418,441.71							
Balance	38,330.36							
	456,772.07							

5902. Maintenance, quartermaster's department, Marine Corps, 1915.

Balance July 1, 1915	$261,926.47							
Miscellaneous receipts	72,791.02							
	334,717.49							
Expenditures by titles:								
Marine corps	310,716.30	$103.40			$273,625.90	$3,359.21	$33,627.79	
Miscellaneous adjustments	22,116.25							
Total expenditures	332,832.55							
Balance	1,884.94							
	334,717.49							

FISCAL YEAR 1914.

4101. Pay, miscellaneous, 1914.

Balance July 1, 1915	$2,854.29							
Miscellaneous receipts	3.40							
	2,857.69							
Expenditures by titles:								
C	2.49				$2.49			
S	4.75				4.75			
V	1,192.16				972.34		$219.82	
Miscellaneous adjustments	288.66							
Total expenditures	1,488.06				979.58		219.82	
Carried to surplus fund	43.86							
Balance	1,325.77							
	2,857.69							

[1] Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.

Statement 40.—APPROPRIATION ACCOUNTS BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4102. Contingent, Navy, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	**$220.97**							
Miscellaneous receipts	**174.15**							
	395.12							
Expenditures by titles:								
V	**36.76**				**$28.57**		**$8.19**	
Balance	**358.36**							
	395.12							

4104. Care of lepers, etc., Guam, 1914.

Balance July 1, 1915	***$310.69***							
Miscellaneous receipts	**323.24**							
	12.55							
Carried to surplus fund	**12.55**							

4107. Equipment of vessels, 1914.

Balance July 1, 1915	$803,080.11							
Miscellaneous receipts	4,179.72							
	807,259.83							
Expenditures by titles:								
C	16.00				$16.00			
D	5,205.00				5,205.00			
P	8,775.00				8,775.00			
R	15,591.56				15,591.56			
G	.07				.07			
V	276.18				93.50		$182.68	
Miscellaneous adjustments [1]	625,000.00							
Total expenditures	654,863.81				29,681.13		182.68	
Carried to surplus fund	152,396.02							
	807,259.83							

4108. Contingent, equipment, 1914.

1915	$7,732.01							
us fund	7,732.01							

4109. Coal and transportation, 1914.

	$10,572.43							
	255.89					$255.89		
	1,695.48				$1,695.48			
	34.01					18.00	$16.01	
	4,232.95							
8	6,218.33				1,695.48	273.89	16.01	
	16,790.76							
	10,572.43							

4201. Maintenance, Yards and Docks, 1914.

ly 1, 1915	*$3,279.85*							
ous receipts	1.50							
	3,278.35							
Expenditures by titles:								
E	*68.02*	*$24.16*	*$8.46*	*$35.40*				
V	30.48						$30.48	
			8.46					
Indirect divided		*6.35*		*2.11*				
Total expenditures	*97.54*	*30.51*		*37.51*			30.48	
Carried to surplus fund	157.71							
Balance	*3,023.52*							
	3,286.35							

[1] Transferred to appropriation Increase of the Navy, torpedo boats.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4202. Repairs and preservation, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$802.24							
Expenditures by titles:								
E	94.80	$20.48	$5.72	$68.60				
			5.72					
Indirect divided		4.29		1.43				
Total expenditures	94.80	24.77		70.03				
Carried to surplus fund	70.03							
Balance	777.47							
	802.24							

4203. Contingent, Yards and Docks, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$216.94							
Miscellaneous receipts	48.62							
	265.56							
Carried to surplus fund	265.56							

4205. Naval Observatory, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$0.18							
Carried to surplus fund	.18							

4301. Contingent, Navigation, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$8,096.34							
Miscellaneous adjustments	2.07							
Carried to surplus fund	8,094.27							
	8,096.34							

4302. Transportation, Navigation, 1914.

Balance, July 1, 1915	$163,569.57							
Miscellaneous receipts	6.57							
	163,576.14							
Expenditures by titles:								
[illegible]	331.83				$71.20		$260.63	
Miscellaneous adjustments	883.74							
Total expenditures	1,215.57							
[illegible]d to surplus fund	163,500.43							
[illegible]ce	*1,139.86*							
	163,576.14							

4303. Recruiting, Navigation, 1914.

[illegible] 1, 1915	$32,261.43							
[illegible] receipts	5.65							
	32,267.08							
[illegible]lus fund	32,341.30							
[illegible]	74.22							
	32,267.08							

4304. Maintenance, naval auxiliaries, 1914.

[illegible]ce, July 1 [illegible]	$17,445.30							
[illegible]	11,894.92							
	29,340.12							
Expenditures by titles:								
[illegible]	22.42						$22.42	
Carried to surplus fund	29,317.70							
	29,340.12							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5602. Construction plants at navy yards, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$46,771.73							
Expenditures by titles:								
E	26,493.56				$26,493.56			
G	*47.93*			*$47.93*				
Total expenditures	26,445.63							
Balance	20,326.10							
	46,771.73							

5601. Engineering, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$83,535.95							
Miscellaneous receipts	135,228.82							
	218,764.77							
Expenditures by titles:								
A	371.20				$371.20			
B	325.11				715.66	*$390.55*		
C	14,141.58				187.27	12,963.91	$975.30	$15.10
D	2,893.14	*$11.84*	*$2.37*	*$3,449.08*	5,959.62		396.81	
K	923.25	409.20	93.98	305.07	15.00	100.00		
P	308.01			*26.14*	334.15			
E	3,390.37				3,390.37			
R	10,501.15	.50			10,420.15	80.50		
G	1,086.24	70.48		23.50	992.26			
S	26,112.91	617.93		364.69	3,273.56	211.61	21,645.12	
V	3,938.63			*496.63*	1,962.50	258.67	2,213.09	
X	267.95				267.95			
Indirect expense deducted	*93.98*		*93.98*					
			2.37					

Indirect divided		1.62		.75				
Miscellaneous adjustments	588.49							
Total expenditures	64,754.05	1,084.65		3,278.34	27,889.69	13,224.14	25,230.32	15.10
Carried to surplus fund	113,254.79							
Balance	40,755.93							
	218,764.77							

5002. Engineering experimental station, Annapolis, Md., 1915.

Balance July 1, 1915	$9,766.66							
Expenditures by title:								
R	8,481.00			$[illegible]	$8,948.00			
Miscellaneous adjustments	21.00							
Total expenditures	8,502.00							
Balance	1,264.66							
	9,766.66							

[illegible] Day of the Navy, 1916

Balance July 1, 1915	[illegible]
Miscellaneous receipts	[illegible]
Expenditures by title:	
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Miscellaneous adjustments	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

4703. Provisions, Navy, 1914-15.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	*$45,931.00*							
Miscellaneous receipts	570.14							
	45,360.86							
Expenditures by titles:								
C	2.70				$2.70			
V	469.86				30.00		$439.86	
X	301.70				301.70			
Miscellaneous adjustments	331.01							
Total expenditures	1,105.27				334.40		439.86	
Balance	*44,255.59*							
	45,360.86							

5704. Maintenance, Supplies and Accounts, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$186,145.42							
Miscellaneous receipts	8,799.91							
	194,945.33							
Expenditures by titles:								
B	1,178.32				$1,173.32	$5.00		
C	7,998.20				5,835.04	2,116.11	$47.05	
D	4.35				4.35			
P	595.06				595.06			
E	31,958.89			$350.00	31,608.89			
R	3,044.62				3,044.62			
G	6,748.99	$616.30		*7.19*	6,139.88			
S	7,169.21	755.54		35.18	6,378.49			
V	25,606.14				6,649.78	9,610.36	9,346.00	
X	90.00				90.00			
Miscellaneous adjustments	219.11							
Total expenditures	84,612.89	1,371.84		377.99	61,519.43	11,731.47	9,393.05	
Carried to surplus fund	8,304.90							
Balance	102,027.54							
	194,945.33							

5705. Freight, Supplies and Accounts, 1915.

Balance July 1, 1915	$100,045.11							
Miscellaneous receipts	33.71							
	100,078.82							
Expenditures by titles:								
V	219,900.96	$99.17			$163,121.82		$56,679.97	
Miscellaneous adjustments	1,980.60							
Total expenditures	221,881.56							
Balance	*121,802.74*							
	100,078.82							

5708. Coal and transportation, 1915.

Balance July 1, 1915	*$284,942.64*							
Miscellaneous receipts	17,839.81							
	267,102.83							
Expenditures by titles:								
C	45,480.71			$1,697.89	$16,064.04	$27,630.27	$88.51	
G	154.12			14.12	140.00			
S	580.83	$106.94		160.05	313.84			
V	772.51				419.76	211.81	140.94	
Miscellaneous adjustments	18.50							
Total expenditures	47,006.67	106.94		1,872.06	16,937.64	27,842.08	229.45	
Carried to surplus fund	40.53							
Balance	*314,150.03*							
	267,102.83							

5709. Naval Academy dairy, Annapolis, Md. (reimbursable), 1915.

Balance July 1, 1915	$850.00							
Expenditures by titles:								
R	850.00				$850.00			

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1915—Continued.

5801. Medical Department, 1915.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$67,709.71							
Miscellaneous receipts	1.66							
	67,711.37							
Expenditures by titles:								
C	251.49				$251.49			
R	516.20				516.20			
S	1,055.23	$279.70			775.37	$0.16		
V	3,051.93				697.87		$2,354.06	
X	69,667.74				69,667.74			
Miscellaneous adjustments	989.47							
Total expenditures	75,532.06	279.70			71,908.67	.16	2,334.06	
Balance	*7,820.69*							
	67,711.37							

5802. Contingent, Medicine and Surgery, 1915.

Balance July 1, 1915	$32,354.49							
Miscellaneous receipts	143.44							
	32,497.93							
Expenditures by titles:								
C	1,271.59				$1,271.59			
R	2,640.39				2,616.99		$23.40	
S	7,797.91				7,790.16	$7.75		
V	2,546.18				1,543.57		1,004.61	
X	2,996.99				2,996.99			
Miscellaneous adjustments	36.42							
Total expenditures	17,291.48				16,219.30	7.75	1,028.01	
Carried to surplus fund	18.11							
Balance	15,188.34							
	32,497.93							

5901. Pay, Marine Corps, 1915.

Balance July 1, 1915	$456,747.16							
Miscellaneous receipts	24.91							
	456,772.07							
Expenditures by titles:								
Marine corps	128,450.44				$2,266.38		$5,774.91	$120,409.15
Miscellaneous adjustments [1]	289,991.27							
Total expenditures	418,441.71							
Balance	38,330.36							
	456,772.07							

5902. Maintenance, quartermaster's department, Marine Corps, 1915.

Balance July 1, 1915	$261,926.47							
Miscellaneous receipts	72,791.02							
	334,717.49							
Expenditures by titles:								
Marine corps	310,716.30	$103.40			$273,625.90	$3,359.21	$33,627.79	
Miscellaneous adjustments	22,116.25							
Total expenditures	332,832.55							
Balance	1,884.94							
	334,717.49							

FISCAL YEAR 1914.

4101. Pay, miscellaneous, 1914.

Balance July 1, 1915	$2,854.29							
Miscellaneous receipts	3.40							
	2,857.69							
Expenditures by titles:								
C	2.49				$2.49			
S	4.75				4.75			
V	1,192.16				972.34		$219.82	
Miscellaneous adjustments	288.66							
Total expenditures	1,488.06				979.58		219.82	
Carried to surplus fund	43.86							
Balance	1,325.77							
	2,857.69							

[1] Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.

Statement 40.—APPROPRIATION ACCOUNTS BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4102. Contingent, Navy, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$220.97							
Miscellaneous receipts	174.15							
	395.12							
Expenditures by titles:								
V	36.76				$28.57		$8.19	
Balance	358.36							
	395.12							

4104. Care of lepers, etc., Guam, 1914.

Balance July 1, 1915	$310.69							
Miscellaneous receipts	323.24							
	12.55							
Carried to surplus fund	12.55							

4107. Equipment of vessels, 1914.

Balance July 1, 1915	$803,080.11							
Miscellaneous receipts	4,179.72							
	807,259.83							
Expenditures by titles:								
C	16.00				$16.00			
D	5,205.00				5,205.00			
P	8,775.00				8,775.00			
R	15,591.56				15,591.56			
G	.07				.07			
V	276.18				93.50		$182.68	
Miscellaneous adjustments [1]	625,000.00							
Total expenditures	654,863.81				29,681.13		182.68	
Carried to surplus fund	152,396.02							
	807,259.83							

4108. Contingent, equipment, 1914.

Balance July 1, 1915	$7,732.01							
Carried to surplus fund	7,732.01							

4109. Coal and transportation, 1914.

Balance July 1, 1915	*$10,572.43*							
Expenditures by titles:								
C	255.89					$255.89		
E	1,695.48				$1,695.48			
V	34.01					18.00	$16.01	
Miscellaneous adjustments	4,232.95							
Total expenditures	6,218.33				1,695.48	273.89	16.01	
Balance	16,790.76							
	10,572.43							

4201. Maintenance, Yards and Docks, 1914.

Balance, July 1, 1915	*$3,279.85*							
Miscellaneous receipts	1.50							
	3,278.35							
Expenditures by titles:								
E	*68.02*	*$24.16*	*$8.46*	*$35.40*				
V	30.48						$30.48	
			8.46					
Indirect divided		*6.35*		*2.11*				
Total expenditures	*37.54*	*30.51*		*37.51*			30.48	
Carried to surplus fund	157.71							
Balance	*3,398.52*							
	3,286.35							

[1] Transferred to appropriation Increase of the Navy, torpedo boats.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4202. Repairs and preservation, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$802.24							
Expenditures by titles:								
E	94.80	$20.48	$5.72	$68.60				
			5.72					
Indirect divided		4.29		1.43				
Total expenditures	94.80	24.77		70.03				
Carried to surplus fund	70.03							
Balance	777.47							
	802.24							

4203. Contingent, Yards and Docks, 1914.

Balance, July 1, 1915	$216.94							
Miscellaneous receipts	48.62							
	265.56							
Carried to surplus fund	265.56							

4205. Naval Observatory, 1914.

Balance, July 1, 1915	$0.18							
Carried to surplus fund	.18							

4301. Contingent, Navigation, 1914.

Balance, July 1, 1915	$8,096.34							
Miscellaneous adjustments	2.07							
Carried to surplus fund	8,094.27							
	8,096.34							

4302. Transportation, Navigation, 1914.

Balance, July 1, 1915	$163,569.57							
Miscellaneous receipts	6.57							
	163,576.14							
Expenditures by titles:								
V	331.83				$71.20		$260.63	
Miscellaneous adjustments	883.74							
Total expenditures	1,215.57							
Carried to surplus fund	163,500.43							
Balance	*1,139.86*							
	163,576.14							

4303. Recruiting, Navigation, 1914.

Balance, July 1, 1915	$32,261.43							
Miscellaneous receipts	5.65							
	32,267.08							
Carried to surplus fund	32,341.30							
Balance	*74.22*							
	32,267.08							

4304. Maintenance, naval auxiliaries, 1914.

Balance, July 1, 1915	$17,445.20							
Miscellaneous receipts	11,894.92							
	29,340.12							
Expenditures by titles:								
V	22.42						$22.42	
Carried to surplus fund	29,317.70							
	29,340.12							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4305. Gunnery exercises, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance, July 1, 1915	$4,590.52							
Miscellaneous receipts	3,232.26							
	7,822.78							
Expenditures by titles:								
V	30.00						$30.00	
Carried to surplus fund	7,792.78							
	7,822.78							

4306. Steaming exercises, 1914.

Balance, July 1, 1915	$3,963.37							
Miscellaneous receipts	57.65							
	4,021.02							
Carried to surplus fund	4,021.02							

4307. Experiments in aviation, 1914.

Balance, July 1, 1915	$6,078.77							
Carried to surplus fund	6,078.77							

4303. Outfits on first enlistment, 1914.

Balance July 1, 1915	$9,902.83							
Miscellaneous receipts	8.05							
	9,910.88							

Expenditures by titles:								
V	390.20						84.04	$386.16
Miscellaneous adjustments	9,773.18							
Total expenditures	10,163.38							
Carried to surplus fund	29,417.46							
Balance	*29,669.96*							
	9,910.88							

4310. Ocean and lake surveys, 1914.

Balance July 1, 1915	$1,270.00							
Miscellaneous receipts	3,091.67							
	4,361.67							
Carried to surplus fund	4,361.67							

4311. Naval training station, Rhode Island, 1914.

Balance July 1, 1915	$23.69							
Carried to surplus fund	23.69							

4312. Naval training station, St. Helena, Va., 1914.

Balance July 1, 1915	$16,834.38							
Carried to surplus fund	16,834.38							

4313. Naval training station, Great Lakes, 1914.

ce July 1, 1915	$21,561.77							
llaneous adjustments	59.25							
d to surplus fund	21,502.52							
	21,561.77							

4314. Naval training station, California, 1914.

uly 1, 1915	$768.51							
surplus fund	768.51							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4315. Naval War College, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1916	$909.81							
Carried to surplus fund	909.81							

4316. Naval Home, Philadelphia, Pa., 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$4,184.39							
Miscellaneous receipts	83.21							
	4,267.60							
Miscellaneous adjustments	4,267.60							

4317. Pay, Naval Academy, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$6,557.23							
Carried to surplus fund	6,557.23							

4318. Current and miscellaneous expenses, Naval Academy, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$10,935.39							
Miscellaneous receipts	41.99							
	10,977.38							
Carried to surplus fund	10,977.38							

4319. Maintenance and repairs, Naval Academy, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$20,236.73							
Miscellaneous adjustments	73.07							
Carried to surplus fund	20,163.66							
	20,236.73							

4322. Battle compasses, ships of the Navy, 1914.

Balance July 1, 1915	$1,437.64							
Expenditures by titles:								
K	94.74				$94.74			
Carried to surplus fund	1,342.90							
	1,437.64							

4323. Campaign badges and ribbons, Navy and Marine Corps, 1914.

Balance July 1, 1915	$1.00							
Carried to surplus fund	1.00							

4401. Ordnance and ordnance stores, 1914.

Balance July 1, 1915	$203,774.32							
Expenditure by titles:								
P	26.00				$26.00			
G	292.50				292.50			
V	5,908.86				5,883.78		$25.08	
X	39,882.32				39,880.45	$1.87		
Miscellaneous adjustments	908.45							
Total expenditures	47,013.13				46,082.73	1.87	25.08	
Carried to surplus fund	158,757.28							
Balance	*1,996.04*							
	203,774.32							

4402. Contingent, Ordnance, 1914.

Balance July 1, 1915	$3,218.65							
Carried to surplus fund	3,218.65							

4403. Repairs, Ordnance, 1914.

Balance July 1, 1915	$3,839.12							
Carried to surplus fund	3,839.12							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4404. Torpedo station, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's accounts.	Pay and allowances.
	$1,346.81							
	1,346.81							

4405. Naval Gun Factory, Washington, D. C., 1914.

	$18,460.36							
	359.88				$359.88			
	18,100.48							
	18,460.36							

4406. Experiments, Ordnance, 1914.

	$82,869.72							
	21.60							
	82,891.32							
	450.00				$450.00			
	82,441.32							
	82,891.32							

4108. Arming and equipping Naval Militia, 1914.

	$16,291.28							
	455.27							
	15,836.01							
	16,291.28							

4109. Arms, uniforms, equipment, etc., Naval Militia, 1914.

July 1, 1915	$20,025.98							
Miscellaneous adjustments	.10							
Carried to surplus fund	20,025.88							
	20,025.98							

4409. New batteries for ships of the Navy, 1914.

Balance July 1, 1915	$81,579.10							
Expenditures by titles:								
X	3,470.67				$3,470.67			
Carried to surplus fund	78,108.43							
	81,579.10							

4411. Torpedoes and appliances, 1914.

Balance July 1, 1915	$164,591.73							
Expenditures by titles:								
X	115,317.93				$115,317.93			
Carried to surplus fund	49,273.80							
	164,591.73							

4412. Modernizing projectiles, 1914.

Balance July 1, 1915	$21,940.61							
Expenditures by titles:								
V	1,848.51			$1,848.51				
X	*1,848.51*					*$1,848.51*		
Total expenditures	0.00							
Carried to surplus fund	21,940.61							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
4404. Torpedo station, 1914.								
Balance July 1, 1915	$1,346.81							
Carried to surplus fund	1,346.81							
4405. Naval Gun Factory, Washington, D. C., 1914.								
Balance July 1, 1915	$18,460.36							
Expenditures by titles:								
E	359.88				$359.88			
Carried to surplus fund	18,100.48							
	18,460.36							
4406. Experiments, Ordnance, 1914.								
Balance July 1, 1915	$82,869.72							
Miscellaneous receipts	21.60							
	82,891.32							
Expenditures by titles:								
V	450.00				$450.00			
Carried to surplus fund	82,441.32							
	82,891.32							
4100. Arming and equipping Naval Militia, 1914.								
Balance July 1, 1915	$16,291.28							
Miscellaneous adjustments	455.27							
Carried to surplus fund	15,836.01							
	16,291.28							

4100. Arms, uniforms, equipment, etc., Naval Militia, 1914.

Balance July 1, 1915	$20,025.98							
Miscellaneous adjustments	.10							
Carried to surplus fund	20,025.88							
	20,025.98							

4409. New batteries for ships of the Navy, 1914.

Balance July 1, 1915	$81,579.10							
Expenditures by titles:								
X	3,470.67				$3,470.67			
Carried to surplus fund	78,108.43							
	81,579.10							

4411. Torpedoes and appliances, 1914.

Balance July 1, 1915	$164,591.73							
Expenditures by titles:								
X	115,317.93				$115,317.93			
Carried to surplus fund	49,273.80							
	164,591.73							

4412. Modernizing projectiles, 1914.

	$21,940.61							
	1,848.51			$1,848.51				
	1,848.51					*$1,848.51*		
	0.00							
	21,940.61							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4501. Construction and Repair, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
	$1,053,633.31							
	3,566.24							
	1,057,199.55							
	124.93				$124.93			
	312.17				300.50		$11.67	
	8.00				8.00			
	22,197.15				22,197.15			
	1,915.00				98.72	$1,769.72	46.56	
	900,000.00							
	924,557.25				22,729.30	1,769.72	58.23	
	132,642.30							
	1,057,199.55							

4502. Construction plants at navy yards, 1914.

	$20,195.63							
	20,195.63							

4601. Steam machinery, 1914.

	$403,700.75							
	4,079.43							
	407,780.18							
	151.40				$151.40			
	18,250.76				18,250.76			
	26.91						$26.91	
	76.22				48.22		28.00	

[illegible][2]	275,000.00							
[illegible]ditures	293,505.29				18,450.38		54.91	
[illegible]rplus fund	114,274.89							
	407,780.18							
4602. Engineering experimental station, Annapolis, Md., 1914.								
Balance July 1, 1915	$20.77							
Carried to surplus fund	20.77							
4701. Pay of the Navy, 1914.								
Balance July 1, 1915	$394,933.92							
Miscellaneous receipts	5.86							
	394,939.78							
Expenditures by titles:								
V	23,362.23				$918.66		$22,443.57	
Miscellaneous adjustments	3,705.46							
Total expenditures	27,067.69							
Carried to surplus fund	354,219.94							
Balance	13,652.15							
	394,939.78							
4704. Maintenance, Supplies and Accounts, 1914.								
Balance July 1, 1915	$36,631.01							
Miscellaneous receipts	134.02							
	36,765.03							
Expenditures by titles:								
C	24.01				$24.01			
G	15.04			*$1.85*	16.89			
V	8.25						$8.25	
Total expenditures	47.30			*1.85*	40.90		8.25	
Carried to surplus fund	36,717.73							
	36,765.03							

[1] Transferred to appropriation Aeronautics, Navy, 1916.

[2] Transferred to appropriations Aeronautics, Navy, 1916, and Increase of the Navy, torpedo boats.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4705. Freight, Supplies and Accounts, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$25,489.72							
Miscellaneous receipts	141.31							
	25,631.03							
Expenditures by titles:								
V	15,495.76							
Balance	10,135.27							
	25,631.03							

4801. Medical Department, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$12,217.76						$11.67	
Miscellaneous receipts	76.75						46.56	
	12,294.51						58.23	
Expenditures by titles:								
X	1,386.24				$1,386.24			
Carried to surplus fund	10,908.27							
	12,294.51							

4802. Contingent, Medicine and Surgery, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
ance July 1, 1915	$53,473.19							
cellaneous receipts	28.31							
	53,501.50							
ures by titles:								
	14.58				$14.58			
	2.00				2.00			
s adjustments	25.00							
xpenditures	41.58				16.58			
rplus fund	53,390.37							
	69.55							
	53,501.50							

4803. Bringing home remains of officers, etc., Navy Department, 1914.

1, 1915	$301.37							
receipts	.20							
	301.57							
by titles:								
	113.00				$113.00			
adjustments	31.00							
total expenditures	144.00							
	157.57							
	301.57							

4901. Pay, Marine Corps, 1914.

Balance July 1, 1915	$273,033.82							
Expenditures by titles:								
Marine Corps	384.80						$384.80	
Miscellaneous adjustments [1]	42,000.06							
[illegible]	42,[illegible]							
[illegible]	[illegible]							
[illegible]	$ 725.11							
	[illegible]							

[illegible]. Maintenance, quartermaster's department, Marine Corps, 1914.

[illegible]	[illegible]							
[illegible]	[illegible]							
	[illegible]							
[illegible]	$ [illegible]				$2 [illegible]		[illegible]	
[illegible]	[illegible]							
	[illegible]							

[1] Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1914—Continued.

4705. Freight, Supplies and Accounts, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$25,489.72							
Miscellaneous receipts	141.31							
	25,631.03							
Expenditures by titles:								
V	15,495.76				$10,496.54		$5,699.22	
Balance	10,135.27							
	25,631.03							

4801. Medical Department, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$12,217.76							
Miscellaneous receipts	76.75							
	12,294.51							
Expenditures by titles:								
X	1,386.24				$1,386.24			
Carried to surplus fund	10,908.27							
	12,294.51							

4802. Contingent, Medicine and Surgery, 1914.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$53,473.19							
Miscellaneous receipts	28.31							
	53,501.50							
Expenditures by titles:								
S	14.58				$14.58			
V	2.00				2.00			
Miscellaneous adjustments	25.00							
Total expenditures	41.58				16.58			
Carried to surplus fund	53,390.37							
Balance	69.55							
	53,501.50							

4903. Bringing home remains of officers, etc., Navy Department, 1914.

Balance July 1, 1915	$301.37							
Miscellaneous receipts	.20							
	301.57							
Expenditures by titles:								
V	113.00				$113.00			
Miscellaneous adjustments	31.00							
Total expenditures	144.00							
Balance	157.57							
	301.57							

4901. Pay, Marine Corps, 1914.

Balance July 1, 1915	$273,053.82							
Expenditures by titles:								
Marine Corps	384.80						$384.80	
Miscellaneous adjustments [1]	42,099.06							
Total expenditures	42,483.86							
Carried to surplus fund	226,844.85							
Balance	3,725.11							
	273,053.82							

4902. Maintenance, quartermaster's department, Marine Corps, 1914.

Balance July 1, 1915	$82,403.96							
Miscellaneous receipts	115,963.62							
	198,367.58							
Expenditures by titles:								
Marine Corps	3,315.38				$2,397.02		$918.36	
Balance	195,052.20							
	198,367.58							

[1] Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1913.

3101. Pay, miscellaneous, 1913.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$7,240.35							
Expenditures by titles:								
V	410.05				$27.36		$382.69	
Miscellaneous adjustments	71.68							
Total expenditures	481.73							
Balance	6,758.62							
	7,240.35							

3102. Contingent, Navy, 1913.

Balance July 1, 1915	$11,794.74							
Miscellaneous receipts	11,794.74							

3201. Maintenance, Yards and Docks, 1913.

us receipts	$22.76							
urplus fund	22.76							

3202. Repairs and preservations, 1913.

	$27.62							
d	27.62							

3302. Transportation, Navigation, 1913.

[illegible] 1, 1913	$409.35							
[illegible]	56.36							
	465.71							
[illegible] titles:								
[illegible]	*1,486.40*						*$1,486.40*	
[illegible] adjustments	1,887.75							
[illegible]	401.35							
[illegible] ins fund	6.50							
[illegible]	57.86							
	465.71							

3303. Recruiting, Navigation, 1913.

Balance July 1, 1915	$2,789.71							
Miscellaneous receipts	6.95							
	2,796.66							
Carried to surplus fund	2,789.71							
Balance	6.95							
	2,796.66							

3308. Outfits on first enlistment, 1913.

Balance July 1, 1915	***$81.82***							
Miscellaneous receipts	**125.30**							
	43.48							
Expenditures by titles:								
V	**32.76**							**$32.76**
Carried to surplus fund	**60.00**							
Balance	***49.28***							
	43.48							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1913—Continued.

3401. Ordnance and ordnance stores, 1913.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	*$3,065.96*							
Miscellaneous receipts	3,086.76							
	20.80							
Carried to surplus fund	20.80							

3501. Construction and Repair, 1913.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$40.00							
Miscellaneous receipts	27.67							
	67.67							
Miscellaneous adjustments	40.00							
Carried to surplus fund	27.67							
	67.67							

3601. Steam machinery, 1913.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	*$2,891.48*							
Miscellaneous receipts	9.92							
	2,881.56							
Carried to surplus fund	7.29							
Balance	*2,888.76*							
	2,881.56							

3701. Pay of the Navy, 1913.

Miscellaneous receipts	$71.98							
Expenditures by titles:								
V	82.50							
Carried to surplus fund	297.67							$82.50
Balance	*308.19*							
	71.98							

3702. Provisions, Navy, 1913.

Miscellaneous receipts	$500.49							
Miscellaneous adjustments	10.50							
Carried to surplus fund	489.99							
	500.49							

3705. Freight, Supplies, and Accounts, 1913.

Balance July 1, 1915	$19,728.06							
Miscellaneous receipts	4.39							
	19,732 45							
Expenditures by titles:								
V	288.74						$288.74	
Balance	19,443.71							
	19,732.45							

3706. Equipment of vessels, 1913 (S. and A.).

Miscellaneous receipts	$5.68							
Miscellaneous adjustments	5.68							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1913—Continued.

3706. Coal and transportation, 1913.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$4,516.76							
Miscellaneous receipts	210.72							
Balance	4,727.48							

3901. Pay, Marine Corps, 1913.

Miscellaneous receipts	$28.07							
Miscellaneous adjustments	17.17							
Carried to surplus fund	52.50							
Balance	*41.60*							
	28.07							

3904. Clothing, Marine Corps, 1913.

Miscellaneous receipts	$1,062.45							
Miscellaneous adjustments	994.82							
Carried to surplus fund	67.63							
	1,062.45							

3907. Transportation and recruiting, Marine Corps, 1913.

Miscellaneous receipts	$80.64							
Carried to surplus fund	80.64							

3911. Contingent, Marine Corps, 1912.

Miscellaneous receipts	$136.25							
Miscellaneous adjustments	102.10							
Carried to surplus fund	34.15							
	136.25							

FISCAL YEAR 1912 AND PRIOR.

2101. Pay, miscellaneous, 1912.

Balance July 1, 1915	$4.40							
Miscellaneous receipts	4.60							
	9.00							
Carried to surplus fund	7.00							
Balance	2.00							
	9.00							

2302. Transportation, Navigation, 1912.

Miscellaneous receipts	$142.03							
Expenditures by titles:								
V	3.50						$3.50	
Carried to surplus fund	121.51							
Balance	17.02							
	142.03							

2308. Outfits on first enlistment, 1912.

Balance July 1, 1915	*$19.22*							
Miscellaneous receipts	65.19							
	45.97							
Expenditures by titles:								
V	92.96							$92.96
Miscellaneous adjustments	5.42							
Total expenditures	98.38							
Balance	*52.41*							
	45.97							

Statement 40.—APPROPRIATION ACCOUNTS [illegible] ES—Continued.

FISCAL YEAR 1912 AND PRIOR [illegible]

2601. Ordnance and ordnance stores, 1912

	Total.	Labor.	Indirect	Material.	[illegible]	[illegible]ellaneous [illegible]rial.	Auditor's settlements.	Pay and allowances.
[illegible] receipts	$1,977.57							
[illegible] to surplus fund	1,977.57							
2601. Steam machinery, 1912.								
[illegible]	$33.00							
[illegible]	33.00							
2701. Pay of the Navy, 1912.								
1912	$148,459.10							
[illegible]eipts	36.95							
	148,496.05							
[illegible]	3,401.63						$3,401.63	
[illegible]	395.87							
[illegible]	3,797.50							
[illegible]	144,786.80							
[illegible]	88.25							
	148,496.05							
2702. Provisions, Navy, 1912.								
[illegible]	$1,263.07							
[illegible]	1,106.77							
[illegible]	156.30							
	1,263.07							

2705. Freight, Supplies and Accounts, 1912.

...pts	$5,534.25							
	5,517.44							
	16.81						$16.81	
	16.81							

...res by titles:

2901. Pay, Marine Corps, 1912.

Miscellaneous receipts	$34.49							
Miscellaneous adjustments	34.49							

2904. Clothing, Marine Corps, 1912.

Miscellaneous receipts	$10.19							
Miscellaneous adjustments	10.19							

2911. Contingent, Marine Corps, 1912.

Miscellaneous receipts	$35.42							
Miscellaneous adjustments	35.42							

1908. Outfits on first enlistment, 1913.

Miscellaneous receipts	$[illegible]							
Miscellaneous adjustments	[illegible]							
Balance, July 1, 1915	[illegible]							
Miscellaneous receipts	[illegible]							
Balance	[illegible]							

1909. Steam machinery, 1913.

Balance, July 1, 1915	$[illegible]							
Miscellaneous receipts	[illegible]							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1912 AND PRIOR—Continued.

2401. Ordnance and ordnance stores, 1912.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Miscellaneous receipts	$1,977.57							
Carried to surplus fund	1,977.57							

2601. Steam machinery, 1912.

Balance, July 1, 1915	*$33.00*							
Miscellaneous receipts	33.00							

2701. Pay of the Navy, 1912.

Balance, July 1, 1915	$148,459.10							
Miscellaneous receipts	36.95							
	148,496.05							
Expenditures by titles:								
V	3,401.63						$3,401.63	
Miscellaneous adjustments	395.87							
Total expenditures	3,797.50							
Carried to surplus fund	144,786.80							
Balance	*88.25*							
	148,496.05							

2702. Provisions, Navy, 1912.

Miscellaneous receipts	$1,263.07							
[illegible]	1,[illegible].77							
[illegible]	1[illegible].30							
	1,263.07							

2705. Freight, Supplies and Accounts, 1912.

Balance, July 1, 1915	*$5,534.25*							
Miscellaneous receipts	5,517.44							
	16.81							
Expenditures by titles:								
V	*16.81*						*$16.81*	

2901. Pay, Marine Corps, 1912.

	$34.49							
	34.49							

2904. Clothing, Marine Corps, 1912.

[illegible]ntingent, Marine Corps, 1912.

[illegible]rst enlistment, 1911.

[illegible] Steam machinery, 1911.

	[illegible]							
	[illegible].40							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

FISCAL YEAR 1912 AND PRIOR—Continued.

1701. Pay of the Navy, 1911.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
...eous receipts	$66.07							
...eous adjustments	15.82							
...to surplus fund	69.31							
...	*19.06*							
	66.07							

1702. Provisions, Navy, 1911.

...laneous receipts	$129.60							
...laneous adjustments	114.00							
... to surplus fund	15.60							
	129.60							

1705. Freight, Supplies and Accounts, 1911.

...nce July 1, 1915	*$739.19*							
...ellaneous receipts	739.19							

1911. Contingent, Marine Corps, 1911.

...iscellaneous receipts	$4.47							
...rried to surplus fund	4.47							

Miscellaneous receipts	$4.47								
Carried to surplus fund	4.47								

Pay of the Navy, 1910.

Miscellaneous receipts	$110.37								
Miscellaneous adjustments	95.48								
Carried to surplus fund	66.41								
Balance	51.52								
	110.37								

Clothing, Marine Corps, 1909.

Miscellaneous receipts	$17.87								
Carried to surplus fund	17.87								

Pay of the Navy, 1908.

Miscellaneous receipts	$2.35								
Miscellaneous adjustments	2.35								

Pay of the Navy, 1907.

Miscellaneous receipts	$5.35								
Miscellaneous adjustments	5.35								

Pay of the Marine Corps, 1907.

Miscellaneous receipts	$33.20								
Carried to surplus fund	33.20								

Pay of the Navy, 1906.

Miscellaneous receipts	$0.15								
Miscellaneous adjustments	.15								

Pay of the Navy, 1905.

Miscellaneous receipts	$58.33								
Carried to surplus fund	58.33								

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES (continued).

FISCAL YEAR 1912 AND PRIOR (continued).

1701. Pay of the Navy, 1911.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Miscellaneous receipts	$66.07							
Miscellaneous adjustments	15.82							
Carried to surplus fund	60.31							
Balance	*19.06*							
	66.07							

1702. Provisions, Navy, 1911.

Miscellaneous receipts	$129.60							
Miscellaneous adjustments	114.00							
Carried to surplus fund	15.60							
	129.60							

1705. Freight, Supplies and Accounts, 1911.

Balance July 1, 1915	*$789.19*							
Miscellaneous receipts	789.19							

1911. Contingent, Marine Corps, 1911.

Miscellaneous receipts	$4.47							
Carried to surplus fund	4.47							

Pay of the Navy, 1910.

Miscellaneous receipts	$110.37							
Miscellaneous adjustments	95.48							
Carried to surplus fund	66.41							
Balance	*51.52*							
	110.37							

Clothing, Marine Corps, 1909.

Miscellaneous receipts	$17.87							
Carried to surplus fund	17.87							

Pay of the Navy, 1908.

Miscellaneous receipts	$2.35							
Miscellaneous adjustments	2.35							

Pay of the Navy, 1907.

Miscellaneous receipts	$5.35							
Miscellaneous adjustments	5.35							

Pay of the Marine Corps, 1907.

Miscellaneous receipts	$33.20							
Carried to surplus fund	33.20							

Pay of the Navy, 1906.

Miscellaneous receipts	$0.15							
Miscellaneous adjustments	.15							

Pay of the Navy, 1905.

Miscellaneous receipts	$58.33							
Carried to surplus fund	58.33							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CERTIFIED CLAIMS.

Pay of the Navy (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
.....	$8,876.48	.....	.....	.....	.....	.....	.....	.....
.....	8,876.48	.....	.....	.....	.....	.....	$8,876.48	.....

Pay, miscellaneous (certified claims).

	$101.26	.....	.....	.....	.....	.....	.....	.....
	536.92	.....	.....	.....	.....	.....	.....	.....
	435.66	.....	.....	.....	.....	.....	.....	.....
.....	453.58	.....	.....	.....	.....	.....	$453.58	.....
.....	*17.92*	.....	.....	.....	.....	.....	.....	.....
	435.66	.....	.....	.....	.....	.....	.....	.....

Contingent, Navy (certified claims).

Amount appropriated	$8,750.22	.....	.....	.....	.....	.....	.....	.....
.....	8,750.22	.....	.....	.....	.....	.....	$8,750.22	.....

Maintenance, Yards and Docks (certified claims).

...s appropriated	$405.92	.....	.....	.....	.....	.....	.....	.....
Expenditures by title: V	405.92	.....	.....	.....	.....	.....	$405.92	.....

Contingent, Navigation (certified claims).

Balance July 1, 1915	$0.50							
Amount appropriated	.50							

Transportation, Navigation (certified claims).

Balance July 1, 1915	$705.08							
Amount appropriated	3,052.04							
	2,346.96							
Expenditures by titles:								
V	2,366.89						$2,366.89	
Miscellaneous adjustments	3,461.40							
Total expenditures	5,828.29							
Balance	3,481.33							
	2,346.96							

Recruiting, Navigation, (certified claims).

Balance July 1, 1915	$209.57							
Amount appropriated	203.66							
	5.91							
Expenditures by titles:								
V	5.91						$5.91	

Maintenance, naval auxiliaries (certified claims).

Balance July 1, 1915	$123.88							
Amount appropriated	208.06							
	84.18							
Expenditures by titles:								
V	84.18						$84.18	

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CERTIFIED CLAIMS.

The Navy (certified claims).

	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
				$3,876.48	
Ordnance and ordnance stores (certified claims).					
Amount appropriated	$441.76			$192.76	
Expenditures by titles	441.76			$441.76	

Construction &c.

Balance July 1, 1915	$5.46							
Amount appropriated	2,685.52							
	2,690.98							
Expenditures by titles:								
V	2,685.52						$2,685.52	
Balance	5.46							
	2,690.98							

Steam machinery (certified claims).

Amount appropriated	$221.13							
Expenditures by titles:								
V	221.13						$221.13	

Provisions, Navy (certified claims).

Amount appropriated	$156.00							
Expenditures by titles:								
V	156.00						$156.00	

Freight, Supplies and Accounts (certified claims).

Balance July 1, 1915	$2,098.57							
Amount appropriated	2,562.14							
	463.57							
Expenditures by titles:								
V	3,662.65						$3,662.65	
Miscellaneous adjustments	6,273.44							
Total expenditures	9,936.09							
Balance	9,472.52							
	463.57							

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

CERTIFIED CLAIMS—Continued.

Contingent, Medicine and Surgery (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$4.05							
Expenditures by titles:								
V	4.05						$4.05	
Pay, Marine Corps (certified claims).								
Amount a[illegible]ted	$12,846.73							
[illegible]	12,846.73						$12,846.73	
Provisions, Marine Corps (certified claims).								
[illegible]	$6.55							
[illegible]	6.55						$6.55	
Transportation and recruiting, Marine Corps (certified claims).								
[illegible]	$1.82							
[illegible]	1.82						$1.82	
Commutation of quarters, Marine Corps (certified claims).								
[illegible]	$12.80							
[illegible]	12.80						$12.80	

Contingent, Marine Corps (certified claims).

	$143.32					$143.32	
	143.32						

MISCELLANEOUS.

Bounty for destruction of enemies' vessels, act July 7, 1884.

	$52,351.52						
	52,351.52						

Bounty for destruction of enemies' vessels (certified claims).

	$0.56						
	.56						

Claims for damages by collision with naval vessels.

	$175.00						
	2,703.89						
	2,878.89						
	2,683.14						
	20.75						
	2,703.89						
	175.00						
	2,878.89						

Claims reported by Court of Claims, Bowman and Tucker Acts.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

MISCELLANEOUS—Continued.

Destruction of clothing and bedding for sanitary reasons (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
[illegible]nt appropriated	$38.28							
[illegible]tures by titles:								
[illegible]	38.28						$38.28	

Enlistment bounties to seamen (certified claims).

[illegible]unt appropriated	$75.00							
[illegible]xpenditures by titles:								
[illegible]V	75.00						$75.00	

Indemnity for lost property, naval service, act Mar. 2, 1895.

Balance July 1, 1915	$170.58							
Amount appropriated	558.87							
	729.45							
Expenditures by titles:								
V	558.87						$558.87	
Balance	170.58							
	729.45							

Judgments, bounty for destruction of enemies' vessels.

Balance July 1, 1915	$60,682.28							
Expenditures by titles:								
V	303.00						$303.00	
Balance	60,379.28							
	60,682.28							

Judgments, Court of Claims, Navy.

Balance July 1, 1915	$5,692.62							
Amount appropriated	97,373.74							
	103,066.36							
Expenditures by titles:								
V	97,540.98						$97,540.98	
Balance	5,525.38							
	103,066.36							

Navy pension fund, interest.

Balance July 1, 1915	$440,963.18							
Miscellaneous receipts	435,881.06							
	876,844.24							
Miscellaneous adjustments [1]	441,119.20							
Balance	435,725.04							
	876,844.24							

Navy pension fund, principal trust fund.

Miscellaneous receipts	$14,767,725.43							
Balance	14,767,725.43							

Navy pension fund, rentals, Naval Home.

Balance July 1, 1915	$1,500.00							
Miscellaneous receipts	600.00							
	2,100.00							
Miscellaneous adjustments	2,100.00							

[1] Transferred to appropriation Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pensions.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

MISCELLANEOUS—Continued.

Navy pension fund, sale material, Naval Home.

	Total	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$270.10							
Miscellaneous receipts	572.48						$38.28	
	842.58							
Miscellaneous adjustments	839.08							
Balance	3.50							
	842.58							

Navy pension fund, Spanish War.

Balance July 1, 1915	**$727,936.82**							
Miscellaneous adjustments [1]	**727,936.82**							
							$75.00	

Payment of certain claims arising under the Navy Department.

Balance July 1, 1915	**$2,372.59**							
Balance	**2,372.59**							

Payment for certain services arising under the Navy Department.

ropriated	$1,174.13							
	1,174.13							

Payment of Japanese award.

1915	$28,492.18							
	28,492.18							

Prize money, Battle of Manila Bay.

July 1, 1915	$32,888.93							
	32,888.93							

Prize money to captors.

1, 1915	$429,354.74							
by titles:								
	2.57						$2.57	
	429,352.17							
	429,354.74							

Prize money to captors, Spanish War.

	$28,098.71							
	21.97						$21.97	
	28,076.74							
	28,098.71							

Refund of stolen deposits of enlisted men of the Navy and Marine Corps.

July 1, 1915	$721.96							
	73.34						$73.34	
	648.62							
	721.96							

Reimbursement of enlisted men, Navy, for clothing and bedding destroyed.

Balance July 1, 1915	$947.32							
Balance	947.32							

[1] Transferred to Navy pension fund, principal trust fund.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

MISCELLANEOUS—Continued.

Navy pension fund, sale material, Naval Home.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$270.10							
Miscellaneous receipts	572.48							
	842.58							
Miscellaneous adjustments	839.08							
Balance	3.50							
	842.58							

Navy pension fund, Spanish War.

Balance July 1, 1915	$727,936.82							
Miscellaneous adjustments [1]	727,936.82							

Payment of certain claims arising under the Navy Department.

Balance July 1, 1915	$2,372.59							
Balance	2,372.59							

Payment for certain services arising under the Navy Department.

Amount appropriated	$1,174.13							
Balance	1,174.13							

Payment of Japanese award.

Balance July 1, 1915	$28,492.18							
Balance	28,492.18							

Prize money, Battle of Manila Bay.

Balance July 1, 1915	$32,888.93							
Balance	32,888.93							

Prize money to captors.

Balance July 1, 1915	$429,354.74							
Expenditures by titles:								
V	2.57						$2.57	
Balance	429,352.17							
	429,354.74							

Prize money to captors, Spanish War.

Balance July 1, 1915	$28,098.71							
Expenditures by titles:								
V	21.97						$21.97	
Balance	28,076.74							
	28,098.71							

Refund of stolen deposits of enlisted men of the Navy and Marine Corps.

Balance July 1, 1915	$721.96							
Expenditures by titles:								
V	73.34						$73.34	
Balance	648.62							
	721.96							

Reimbursement of enlisted men, Navy, for clothing and bedding destroyed.

Balance July 1, 1915	$147.51							
Balance	147.51							

[1] Transferred to Navy pension fund, principal trust fund.

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

MISCELLANEOUS—Continued.

Reimbursement to Samuel Butter & Co. (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$11,709.69							
Expenditures by titles:								
V	11,709.69						$11,709.69	

Relief of owners, American schooner Walter B. Chester.

Balance July 1, 1915	$269.64							
Balance	269.64							

Relief of officers and crew U. S. S. Charleston.

Amount appropriated	$9.86							
Expenditures by titles:								
V	9.86						$9.86	

Relief of widow and heirs of Patrick J. Fitzgerald for injuries.

Amount appropriated	$2,000.00							
Expenditures by titles:								
V	2,000.00						$2,000.00	

6995. Other Government departments.

Expenditures by titles:								
Other Government departments	$954,885.15	$362,684.04	$94,453.08	$148,965.74		$348,782.29		
			94,453.08					
Indirect divided		71,173.20		23,279.88				
Total expenditures	954,885.15	433,857.24		172,245.62		348,782.29		

6996. Special deposits.

Expenditures by titles:								
Special deposits	$185,319.43	$83,168.13	$17,698.70	$84,452.60				
			17,698.70					
Indirect divided		13,751.13		3,947.57				
Total expenditures	185,319.43	96,919.26		88,400.17				

6997. Proceeds of sales.

Expenditures by titles:								
Proceeds of sales	$41,418.24	$35,817.89	$774.25	$4,826.10				
			774.25					
Indirect divided		613.19		161.06				
Total expenditures	41,418.24	36,431.08		4,987.16				

6998. Cash sales.

Expenditures by titles:								
Cash sales	$57,802.65					$57,802.65		

6999. General account of advances—Naval supply account.

Expenditures by titles:								
X	$24,092,615.47				$24,092,615.47			
	9,397,275.39	$2,571,546.64	$408,243.44	$6,417,485.31				
			408,243.44					
ivided		323,524.79		84,718.65				
al expenditures	33,489,890.86	2,895,071.43		6,502,203.96	24,092,615.47			

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

RECAPITULATION.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$52,659,283.16							
Amount appropriated	152,693,313.53							
Miscellaneous receipts	30,054,649.92							
	235,407,246.61							
Net total expenditures by titles (naval appropriations)	156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Miscellaneous adjustments in appropriations*	8,674,093.76							
Total expenditures under naval appropriations	164,704,692.67	25,681,084.62		19,938,768.16	52,890,374.51	7,034,530.97	1,087,897.50	49,397,943.15
Carried to surplus fund	2,580,560.95							
Balance June 30, 1916	68,121,992.99							
	235,407,246.61							

RECONCILEMENT WITH STATEMENT 14 (GROSS EXPENDITURES BY YARDS AND TITLES).

Net total expenditures by titles (Statement 40)	$156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Other Government departments	954,885.15	433,857.24		172,245.62		348,782.29		
Special deposits	185,319.43	96,919.26		88,400.17				
Cash sales	57,802.65					57,802.65		
Proceeds of sales	41,418.24	36,431.08		4,987.16				
Purchases under naval supply account	24,092,615.47				24,092,615.47			
Issues naval supply account, title X, to naval supply account, title Z and labor applied to same	9,397,275.39	2,895,071.43		6,502,203.96				
Issues of stores previously charged to appropriations	28,908,520.51					28,908,520.51		
Total, Statement 14	219,668,435.75	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15

NOTE.—Statement 40 reconciles with Statement 1 (cost of the Navy) through the above reconcilement with Statement 14.

* Arming and equipping Naval Militia, 1916	$26,031.97	Clothing and ordnance stores transferred to the Naval Militia.
Arms, uniforms, etc., Naval Militia, 1916	100,578.95	Clothing and ordnance stores transferred to the Naval Militia.
Navy fines and forfeitures	522,271.11	Transferred to naval hospital fund.
Maintenance naval auxiliaries, 1916	66,541.95	Provisions transferred to masters, naval auxiliaries.
Increase of the Navy, equipment (Nav.)	144,476.58	Balance transferred to appropriation Increase of the Navy (C. and M.).
Ordnance and ordnance stores, 1916	491,076.71	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, armor and armament	213,308.38	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Ammunition for ships of the Navy	211,613.22	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, equipment (C. and R)	427,658.57	Balance transferred to appropriation Increase of the Navy (C. and M.).
Increase of the Navy, equipment (S. E.)	376,935.34	Balance transferred to appropriation Increase of the Navy (C. and M.).
Provisions Navy, 1916-17	381,039.75	Transfers to naval hospital fund on account of sick in hospitals, etc.
Provisions Navy, 1915-16	71,298.18	Transfers to naval hospital fund on account of sick in hospitals, etc.
Increase of the Navy, equipment (S. A.)	72,062.10	Balance transferred to appropriation Increase of the Navy (C. and M.).
Naval hospital fund	115,767.67	Provisions, etc., transferred to naval hospitals from stock carried under appropriation Provisions, Navy.
Maintenance, quartermaster's department, Marine Corps, 1916.	330,914.18	Transfer of stores originally purchased under naval appropriations.
Pay of the Navy, deposit fund	336,036.30	Repayment of deposits to enlisted men upon discharge.
Pay of the Marine Corps, deposit fund	282,406.60	Repayment of deposits to enlisted men upon discharge.
Pay Marine Corps, 1915	289,991.27	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Equipment of vessels, 1914	625,000.00	Transferred to appropriation Increase of the Navy, torpedo boats.
Construction and repair, 1914	900,000.00	Transferred to appropriation Aeronautics, Navy, 1916.
Steam machinery, 1914	275,000.00	Transferred to appropriation Aeronautics, Navy, 1916, and Increase of the Navy, torpedo boats.
Pay, Marine Corps, 1914	42,099.06	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Navy pension fund, interest	441,119.20	Transferred to appropriation, Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pensions.
Navy pension fund, Spanish war	727,936.82	Transferred to Navy pension fund, principal trust fund.
Other appropriations	1,202,929.85	Miscellaneous adjustments made by the accounting officers of the Treasury, etc.
	8,674,093.76	

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

MISCELLANEOUS—Continued.

Destruction of clothing and bedding for sanitary reasons (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$38.28							
Expenditures by titles:								
V	38.28						$38.28	

Enlistment bounties to seamen (certified claims).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Amount appropriated	$75.00							
Expenditures by titles:								
V	75.00						$75.00	

Indemnity for lost property, naval service, act Mar. 2, 1895.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$170.58							
Amount appropriated	558.87							
	729.45							
Expenditures by titles:								
V	558.87						$558.87	
Balance	170.58							
	729.45							

Judgments, bounty for destruction of enemies' vessels.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$60,682.28							
Expenditures by titles:								
V	303.00						$303.00	
Balance	60,379.28							
	60,682.28							

Judgments, Court of Claims, Navy.

Balance July 1, 1915	$5,692.62							
Amount appropriated	97,373.74							
	103,066.36							
Expenditures by titles:								
V	97,540.98						$97,540.98	
Balance	5,525.38							
	103,066.36							

Navy pension fund, interest.

Balance July 1, 1915	$440,963.18							
Miscellaneous receipts	435,881.06							
	876,844.24							
Miscellaneous adjustments [1]	441,119.20							
Balance	435,725.04							
	876,844.24							

Navy pension fund, principal trust fund.

Miscellaneous receipts	$14,767,725.43							
Balance	14,767,725.43							

Navy pension fund, rentals, Naval Home.

Balance July 1, 1915	$1,500.00							
Miscellaneous receipts	600.00							
	2,100.00							
Miscellaneous adjustments	2,100.00							

[1] Transferred to appropriation Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pensions.

Prize money, Battle of Manila Bay.

Balance July 1, 1915	$32,888.93							
Balance	32,888.93							

Prize money to captors.

Balance July 1, 1915	$429,354.74							
Expenditures by titles:								
V	2.57						$2.57	
Balance	429,352.17							
	429,354.74							

Prize money to captors, Spanish War.

Balance July 1, 1915	$28,098.71							
Expenditures by titles:								
V	21.97						$21.97	
Balance	28,076.74							
	28,098.71							

Refund of stolen deposits of enlisted men of the Navy and Marine Corps.

Balance July 1, 1915	$721.96							
Expenditures by titles:								
V	73.34						$73.34	
Balance	648.62							
	721.96							

Reimbursement of enlisted men, Navy, for clothing and bedding destroyed.

Balance July 1, 1915	$147.51							
Balance	147.51							

[1] Transferred to Navy pension fund, principal trust fund.

Statement [illegible] Appropriations, expenditures, and balances [illegible]

[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Amount appropriated	[illegible]							
Expenditures by titles:	[illegible]							
V	[illegible]							
[illegible]								
[illegible]								
Balance July 1, 1918	[illegible]							
Balance	[illegible]							
[illegible]								
Amount appropriated	[illegible]							
Expenditures by titles:	[illegible]							
V	[illegible]							
[illegible]								
Amount appropriated	[illegible]							
Expenditures by titles:	[illegible]							
V	[illegible]						[illegible]	
[illegible]								
Expenditures by titles:								
Other Government departments	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		
Indirect divided		71,175.91	84,194.48	94,478.88				
Total expenditures	984,888.18	488,887.94		178,248.89		848,789.99		

6996. Special deposits.

Expenditures by titles:								
Special deposits	$185,319.43	$83,168.13	$17,698.70	$84,452.60				
			17,698.70					
Indirect divided		13,751.13		3,947.57				
Total expenditures	185,319.43	96,919.26		88,400.17				

6997. Proceeds of sales.

Expenditures by titles:								
Proceeds of sales	$41,418.24	$35,817.89	$774.25	$4,826.10				
			774.25					
Indirect divided		613.19		161.06				
Total expenditures	41,418.24	36,431.08		4,987.16				

6998. Cash sales.

Expenditures by titles:								
Cash sales	$57,802.65					$57,802.65		

6999. General account of advances—Naval supply account.

Expenditures by titles:								
X	$24,092,615.47				$24,092,615.47			
Z	9,397,275.39	$2,571,546.64	$408,243.44	$6,417,485.31				
			408,243.44					
Indirect divided		323,524.79		84,718.65				
Total expenditures	33,489,890.86	2,895,071.43		6,502,203.96	24,092,615.47			

Statement 40.—APPROPRIATION ACCOUNTS, BY TITLES—Continued.

RECAPITULATION.

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Balance July 1, 1915	$52,659,283.16							
Amount appropriated	152,693,313.53							
Miscellaneous receipts	30,054,649.92							
	235,407,246.61							
Net total expenditures by titles (naval appropriations)	156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Miscellaneous adjustments in appropriations*	8,674,093.76							
Total expenditures under naval appropriations	164,704,692.67	25,681,084.62		19,938,768.16	52,890,374.51	7,034,530.97	1,087,897.50	49,397,943.15
Carried to surplus fund	2,580,560.95							
Balance June 30, 1916	68,121,992.99							
	235,407,246.61							

RECONCILEMENT WITH STATEMENT 14 (GROSS EXPENDITURES BY YARDS AND TITLES).

	Total.	Labor.	Indirect.	Material.	Public vouchers.	Miscellaneous material.	Auditor's settlements.	Pay and allowances.
Net total expenditures by titles (Statement 40)	$156,030,598.91	$25,681,084.62		$19,938,768.16	$52,890,374.51	$7,034,530.97	$1,087,897.50	$49,397,943.15
Other Government departments	954,885.15	433,857.24		172,245.62		348,782.29		
Special deposits	185,319.43	96,919.26		88,400.17				
Cash sales	57,802.65					57,802.65		
Proceeds of sales	41,418.24	36,431.08		4,987.16				
Purchases under naval supply account	24,092,615.47				24,092,615.47			
Issues naval supply account, title X, to naval supply account, title Z and labor applied to same	9,397,275.39	2,895,071.43		6,502,203.96				
Issues of stores previously charged to appropriations	28,908,520.51					28,908,520.51		
Total, Statement 14	219,668,435.75	29,143,363.63		26,706,605.07	76,982,989.98	36,349,636.42	1,087,897.50	49,397,943.15

NOTE.—Statement 40 reconciles with Statement 1 (cost of the Navy) through the above reconcilement with Statement 14.

*Arming and equipping Naval Militia, 1916	$26,031.97	Clothing and ordnance stores transferred to the Naval Militia.
Arms, uniforms, etc., Naval Militia, 1916	100,578.95	Clothing and ordnance stores transferred to the Naval Militia.
Navy fines and forfeitures	522,271.11	Transferred to naval hospital fund.
Maintenance naval auxiliaries, 1916	66,541.95	Provisions transferred to masters, naval auxiliaries.
Increase of the Navy, equipment (Nav.)	144,476.58	Balance transferred to appropriation Increase of the Navy (C. and M.).
Ordnance and ordnance stores, 1916	491,076.71	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, armor and armament	213,308.38	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Ammunition for ships of the Navy	211,613.22	Ordnance stores transferred from other ordnance appropriations and purchases from the Army.
Increase of the Navy, equipment (C. and R)	427,658.57	Balance transferred to appropriation Increase of the Navy (C. and M.).
Increase of the Navy, equipment (S. E.)	376,935.34	Balance transferred to appropriation Increase of the Navy (C. and M.).
Provisions Navy, 1916-17	381,039.75	Transfers to naval hospital fund on account of sick in hospitals, etc.
Provisions Navy, 1915-16	71,298.18	Transfers to naval hospital fund on account of sick in hospitals, etc.
Increase of the Navy, equipment (S. A.)	72,062.10	Balance transferred to appropriation Increase of the Navy (C. and M.).
Naval hospital fund	115,767.67	Provisions, etc., transferred to naval hospitals from stock carried under appropriation Provisions, Navy.
Maintenance, quartermaster's department, Marine Corps, 1916.	330,914.18	Transfer of stores originally purchased under naval appropriations.
Pay of the Navy, deposit fund	336,036.30	Repayment of deposits to enlisted men upon discharge.
Pay of the Marine Corps, deposit fund	282,406.60	Repayment of deposits to enlisted men upon discharge.
Pay Marine Corps, 1915	289,991.27	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Equipment of vessels, 1914	625,000.00	Transferred to appropriation Increase of the Navy, torpedo boats.
Construction and repair, 1914	900,000.00	Transferred to appropriation Aeronautics, Navy, 1916.
Steam machinery, 1914	275,000.00	Transferred to appropriation Aeronautics, Navy, 1916, and Increase of the Navy, torpedo boats.
Pay, Marine Corps, 1914	42,099.06	Adjustments made by the accounting officers of the Treasury in the final settlement of Marine Corps rolls.
Navy pension fund, interest	441,119.20	Transferred to appropriation, Naval Home, Philadelphia, Pa., 1916, and to the Interior Department to pay Navy pensions.
Navy pension fund, Spanish war	727,936.82	Transferred to Navy pension fund, principal trust fund.
Other appropriations	1,202,929.85	Miscellaneous adjustments made by the accounting officers of the Treasury, etc.
	8,674,093.76	

Statement 41.—SALES OF CONDEMNED PROPERTY, FISCAL YEAR 1916.

Date of sales.	Places of sales.	By whom deposited.	Gross receipts.	Expenses of sales.	Net receipts.	Credited to miscellaneous receipts.	Credited to Navy funds.	
							Clothing, and small-stores fund.	Ordnance material proceeds of sales.
Sept. 9, 1915	Navy yard, Portsmouth, N. H.	G. P. Dyer	$5,057.06	$936.62	$4,120.44	$4,007.85	$106.08	$6.51
Dec. 20, 1915	do.	do.	5,851.29	683.86	5,167.43	5,167.43		
June 11, 1915	Navy yard, Boston, Mass.	Joseph Fyffe	8,750.39	649.25	8,101.14	6,254.90	1,846.24	
Oct. 1, 1915	do.	do.	278.06		278.06	278.06		
Nov. 10, 1915	do.	do.	14,198.40	2,056.00	12,142.40	12,086.68	55.72	
May 25, 1915	Naval training station, Newport, R. I.	A. M. Pigman	205.55	1.35	204.20	204.20		
July 12, 1915	Naval torpedo station, Newport, R. I.	C. W. Ellason	639.01	11.57	627.44	377.11		250.33
July 20, 1914	Navy yard, New York, N. Y.	W. J. Littell	913.48	10.50	902.98	902.98		
June 2, 1915	do.	do.	23,076.06	4,406.47	18,670.59	18,890.94	4,731.72	47.98
Feb. 2, 1916	do.	do.	4,470.45	214.82	4,255.63	556.27	3,510.40	188.96
May 2, 1916	do.	do.	7,549.80	67.00	7,482.80	2,739.24	4,743.56	
Mar. 9, 1915	Navy yard, Philadelphia, Pa.	S. L. Heap	29,774.49	6,512.81	23,261.68	23,261.68		
July 26, 1915	do.	do.	25,143.87	2,302.13	22,841.74	21,924.94	550.00	366.80
Oct. 9, 1915	do.	do.	30,225.69	5,308.30	24,917.39	24,694.83		222.56
Dec. 17, 1914	Navy yard, Washington, D. C.	R. H. Woods	11,799.47	4,044.78	7,754.69	133.88		7,620.81
Oct. 18, 1915	do.	H. D. Lamar	17,790.39	3,458.50	14,331.89	399.91		13,931.98
Jan. 4, 1916	do.	do.	1,379.07		1,379.07			1,379.07
Mar. 17, 1916	do.	do.	680.58	11.10	669.48	669.48		
Dec. 15, 1914	Naval proving grounds, Indianhead, Md.	B. H. Brooke	340.33		340.33			340.33
Apr. 29, 1915	do.	do.	25,094.05	1,351.11	23,742.94			23,742.94
Sept. 2, 1915	do.	do.	1,677.95	187.09	1,490.86			1,490.86
Apr. 20, 1915	Navy yard, Norfolk, Va.	H. A. Dent	21,884.38	10,898.90	10,985.48	9,336.48		1,648.95
Oct. 25, 1915	do.	do.	11,122.86	2,767.80	8,355.06	8,282.72		72.34
Dec. 4, 1915	do.	do.	2.00		2.00	2.00		
Apr. 21, 1915	Navy yard, Charleston, S. C.	G. G. Seibels	6,724.53	935.13	5,789.40	4,124.61	1,664.79	
Apr. 20, 1916	do.	do.	6.00		6.00	6.00		
May 15, 1916	do.	do.	510.68		510.68	510.68		
Nov. 2, 1915	Navy yard, Mare Island, Cal.	J. Brooks	12,096.14	876.57	11,219.57	10,080.65	1,061.61	77.31
Feb. 24, 1916	do.	do.	715.00	4.25	710.75	710.75		
Feb. 9, 1916	Navy yard, Puget Sound, Wash.	J. Irwin, jr.	1,363.69	497.87	865.82	865.82		
Sept. 9, 1916	Naval station, Cavite, P. I.	H. A. Wise	4,769.68	177.77	4,591.91	4,495.15	90.50	6.26
Apr. 1, 1915	Naval station, Pearl Harbor, Hawaii	W. T. Gray	47.00		47.00	47.00		
Aug. 10, 1915	Naval station, Olongapo, P. I.	F. T. Foxwell	105.50	2.07	103.43	103.43		
June 26, 1915	Elizabeth City, N. C. (steamer No. 175)	O. D. Conger	67.00		67.00	67.00		
July 12, 1915	Bureau Supplies and Accounts (U. S. S. Portsmouth)	do.	4,689.00	122.46	4,566.54	4,566.54		
July 30, 1915	Recruiting station, Chicago, Ill.	do.	65.00		65.00	65.00		
Aug. 28, 1915	Buffalo, N. Y. (Naval Militia, launch machinery)	do.	151.00		151.00	151.00		
Sept. 8, 1915	San Diego, Cal. (Naval Militia, 2 boats)	do.	20.00		20.00	20.00		
Oct. 30, 1915	Plymouth, N. C. (cutter)	H. D. Lamar	5.00		5.00	5.00		

Nov. 11, 1915	Cleveland, Ohio (U. S. S. Dorothea, material)	do	90.00		90.00	90.00		
Nov. 17, 1915	Naval magazine, Dover, N. J. (material)	W. J. Littell	73.36	8.75	64.61			64.61
Apr. 24, 1915	Radio station, San Juan, P. R.	do	11.95		11.95	11.95		
Feb. 17, 1916	Bureau Supplies and Accounts (U. S. S. Justin)	H. D. Lamar	301,107.00	157.93	300,949.07	300,949.07		
May 25, 1916	Naval hospital, Chelsea, Mass	J. S. Carpenter	70.00		70.00	70.00		
Mar. 16, 1916	Bureau Supplies and Accounts (U. S. S. Oneida)	H. D. Lamar	2,580.00	75.00	2,505.00	2,505.00		
May 3, 1916	Recruiting station, Atlanta, Ga	do	5.30		5.30	5.30		
May 17, 1916	Erie, Pa. (U. S. S. Wolverine, material)	do	155.50		155.50	155.50		
May 29, 1916	Bureau Supplies and Accounts (U. S. S. Franklin)	do	16,787.53	130.80	16,656.73	16,656.73		
June 21, 1916	Providence, R. I. (equipment, recruiting station, Boston.	do	1.00		1.00	1.00		
Aug. 31, 1914	Newbern, N. C. (cutter)	H. A. Dent	5.00		5.00	5.00		
May 1, 1916	Chilcat, Alaska (barges)	A. H. Eddins	200.00		200.00	200.00		
Oct. 20, 1915	Radio station, San Juan (water cooler)	W. J. Littell	1.50		1.50	1.50		
	Total		600,327.99	48,867.56	551,460.43	481,641.26	18,360.62	51,458.55

[illegible] FISCAL YEAR [illegible]

[illegible]	
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[illegible]	
[illegible]	[illegible]
Perry, Buxton, Doane Co.	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
	[illegible]

Navy yard, Boston, Mass., June 1, [illegible]:	
[illegible] Exchange	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible] Butler & Co.	[illegible]
[illegible]	[illegible]
W. [illegible]	[illegible]
[illegible]	[illegible]
[illegible]	4,[illegible]
[illegible]	[illegible]
C. [illegible] Doherty	[illegible]
[illegible] Doherty	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible] & Gould	[illegible]
A. C. Harvey & Co.	[illegible]
[illegible] Hirsch & Son	[illegible]
International Engine Works	[illegible]
F. J. Irons	[illegible]
[illegible]	[illegible]
W. Stokes Kirk	1,[illegible]
Evelyn Le Grice	[illegible]
W. J. Marshall	[illegible]
C. A. Morang	[illegible]
Musgrave Machine Co.	[illegible]
W. W. J. McLaren	[illegible]
New England Iron & Metal Co.	[illegible]
James F. Nolan	[illegible]
W. S. Nolan	12.23
Perry, Buxton, Doane Co	42.00
Charles A. Pettee	65.27
John J. Reynolds	157.00
A. I. Rumrill	4.27
Emil Schneider (Inc.)	12.00
M. J. Sousa	5.27
W. J. Tavender	4.10
Daniel Cashman	297.25
	8,750.20

Navy yard, Boston, Mass., Oct. 1, 1918:	
[illegible]ane Co.	278.06

Navy yard, Boston, Mass., Nov. [illegible]:	
[illegible] Exchange	[illegible]
[illegible] & Rubber Co.	14.95
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible] & Co.	34.11
[illegible]	1,[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	1.11
[illegible]	[illegible]
[illegible] & [illegible] Co.	[illegible]
[illegible]	[illegible]
[illegible] Engine Works	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	22.15
[illegible]	2,[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible] & Rubber Co.	[illegible]
A. [illegible]	[illegible]
[illegible] Doane Co.	6,[illegible]
[illegible]	4.29
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	1,986.75
[illegible]	[illegible]
[illegible]	5.00
[illegible]	7.85
[illegible]	[illegible]
	14,[illegible]

Naval training station, Newport, R. I., [illegible]:	
[illegible]	[illegible]
[illegible] Smith	4.75
	[illegible]

Naval torpedo station, Newport, R. I., July [illegible]:	
[illegible] Smith	[illegible]
[illegible]	232.16
[illegible]	132.[illegible]
[illegible]	36.00
	[illegible]

Navy yard, New York, July [illegible]:	
[illegible]	[illegible]
[illegible]	67.32
[illegible]	594.45
A. De Angelis	196.05
	913.48

Navy yard, New York, N. Y., June 2, [illegible]:	
Douglas & Co. (Inc.)	894.15
Francis Bannerman	967.00
Army & Navy Store Co., Philadelphia	202.80
Joseph Kaplan	43.70
Army & Navy Store Co., New York	767.75
M. Karger	35.05
Wm. McCreery	54.70
W. Stokes Kirk	95.82
S. Krantz	2.30
C. Osterman	8.50
M. R. Rodrigues	25.32
James Keane	240.35
J. McGovern	2.00
I. Berman	74.65
Estate of W. J. Bannerman	378.00
Franchi Bros.	5.00
Michael Stapleton	27.30
J. Wolff (Inc.)	127.80

Statement 42.—PURCHASERS OF CONDEMNED PROPERTY, FISCAL YEAR 1916—Continued.

Navy yard, New York, N. Y., June 2, 1915—Continued.

W. J. Crowley	$78.00
David L. Marks	132.44
H. Goldberg	18.25
N. Wolfson	127.22
J. Leonard & Co. (Inc.)	2,132.29
Thomas Matthews	5.15
John P. Beardall	2.15
Schwartz & Land	93.80
Standard Electric & Elevator Co.	76.66
James H. Sheridan	57.39
Sloan Dannenhron	232.00
Fred Geggers	34.04
Thomas F. Finley	24.75
Empire Metal & Lamp Co	5.15
New England Export Co	313.12
Mrs. K. Buckley	8.25
Michael Flynn	139.70
Richard Bennett	5.00
Niman & Greenblatt	105.89
H. Lewinske	21.03
James H. Sheridan	7.55
G. G. Griffin	70.53
Charles A. E. Fisenne	28.35
Merritt Chapman Wrecking Co	154.00
James W. Reilly, jr	10.45
J. H. Morton	20.00
R. Tobin & Son	1,431.79
Louis Abraham	116.15
Burcher & Bro	25.08
Thomas Yearsley Co	96.57
Ernest Grasso	320.80
J. W. Wegman	41.41
Riverside Construction Co	275.00
Alex Simpson	175.00
Andrew Greeley	70.79
H. D. Cook	10.00
Harry W. Keeler	26.50
Thomas F. Murray	25.00
Lahn & Simons	256.03
Jos. Libmann & Co	1,668.07
Coatesville Scrap Iron & Steel Co	1,375.68
E. B. Leaf Co	234.43
The Jos. Joseph Bros. & Co	1,509.88
B. D. Kaplan & Co	781.30
National Woolen Co	875.09
Illinois Smelting & Refining Co	5,860.47
Emil Schneider (Inc.)	3.13
John Hilbert (forfeiture)	25.00
	23,076.06

Navy yard, New York, N. Y., Feb. 2, 1916:

B. B. Abrahams & Co	449.50
Army & Navy Store Co., Philadelphia	51.50
W. S. Kirk	172.00
David L. Marks	194.25
Joseph Franklin	8.00
Dreifus & Co	14.60
J. J. Reynolds	20.00
W. F. Carr	41.00
Blum & Pepperman	250.00
Henry Garfinkle	556.25
Frank Kupferberg	538.00
Kirtland Bros	635.00
B. Levy	345.00
W. Rudnick	477.25
Wm. McCreery	201.00
M. P. Coleman	48.00
B. Feldman	15.50
L. Rubin	4.75
Dr. Bunker	4.75
B. Breslof	11.50
J. R. Sanford	5.75
Army & Navy Store Co., New York	7.00
John Devine & Son	9.75
I. Ruderman	7.50
Fred Geggers	13.50
J. H. Sheridan	19.00
Morris Weinstein	10.50
J. H. Murphy	7.00

Navy yard, New York, N. Y., Feb. 2, 1916—Continued.

J. Blum	$345.10
H. A. Magden	5.50
H. J. Satran	2.00
	4,470.45

Navy yard, New York, N. Y., May 2, 1916:

Jos. Kaplan	69.60
W. Stokes Kirk	545.75
B. B. Abrahams & Co	21.40
M. Karger	17.45
L. C. Pontez	918.40
Benjamin Riedus	110.80
S. Krantz	28.25
R. Tobin & Sons	1,013.34
Army & Navy Store Co., New York	51.75
H. J. Satran	22.94
M. R. Rodrigues	.96
S. Rawitser & Co	1,943.54
Mutnick Bros	41.85
Sperry Gyroscope Co	1,300.00
W. J. Bannerman	938.67
B. F. Conway	217.60
H. P. Brearly	307.50
	7,549.80

Navy yard, Philadelphia, Pa., Mar. 9, 1915:

Samuel Gerson	10,103.36
Luria Bros. & Co	4,958.05
E. B. Leaf Co	1,102.45
American Iron & Steel Manufacturing Co	702.00
Jos. Joseph Bros. & Co	2,770.28
Acorn Iron & Metal Co	52.92
Ajax Metal Co	805.50
Illinois Smelting & Refining Co	2,385.50
Union Smelting & Refining Co	6,744.50
Michael Hayman & Co	149.93
	29,774.49

Navy yard, Philadelphia, Pa., July 26, 1915:

Wm. Rosen	60.00
Henry Yost	107.85
H. Coleman	300.00
Dreifus & Co	29.15
George T. Swift	49.75
Samuel Hurley	421.10
Atlantic Marine Exchange	69.56
Army & Navy Store Co., Philadelphia	779.10
E. Domage	6.20
W. Stokes Kirk	339.81
Cal. Hirsch & Sons Iron & Rail Co	12.00
J. W. Mather	15.00
D. L. Marks	110.00
A. W. Rowe	2,238.45
J. J. Reynolds	284.28
David Peoples	5,533.42
Wm. B. Mason	11.60
H. W. Barraclough	28.67
A. Perez & Son	140.84
H. Goldberg	8.10
J. Dreifus & Sons	16.60
P. & J. Zeiser	23.65
Edward Corner	5.01
Isaac Minsky	10.28
H. Schelensky	64.65
J. P. Murdock	10.10
E. Domage	10.60
B. B. Abrahams & Co	77.75
Burcher & Bro	21.50
Otis H. Long	35.00
Wm. B. Wall	50.00
Deebold & Dempsey	49.11
Grant Bethel	966.70
Wm. H. Haley	20.00
Alfred Kastrup	41.00

Statement 42.—PURCHASERS OF CONDEMNED PROPERTY, FISCAL YEAR 1916—Continued.

Navy yard, Philadelphia, Pa., July 26, 1915—Continued.

T. Rudolph	$67.95
J. W. Davis	45.26
A. B. Knoblauch	61.30
B. Ferguson	359.00
H. F. Grow	89.90
A. Knox	3.50
R. Brown	51.00
G. Kister	127.55
Alex Simpson	125.00
Charles Brady	205.00
Daniel Dougherty	19.00
John W. Todd	600.00
Henry A. Hitners Sons Co	205.66
J. W. Paxson Co	1,045.00
Thomas Yearsley & Co	190.00
A. Schiller	20.00
M. J. Conlon	11.50
Wm. J. Doyle	7.25
F. L. Thompson	5.00
F. B. Kurtz	8.00
J. E. Cleary	9.25
J. J. Chaulk	65.56
S. J. Fowkes	107.52
Raymond B. McNeille	12.50
L. C. Pontez	310.00
Sterling Iron & Steel Co	27.60
L. Abraham	1.00
Henry Berkowsky	122.60
Daniel Greenbaum	1,721.42
Marvin Briggs (Inc.)	8.28
Illinois Smelting & Refining Co	7,564.44
	25,143.87

Navy yard, Philadelphia, Pa., Oct. 9, 1915:

Jos. Joseph & Bros. Co	24,400.73
Perry, Buxton, Doane Co	3,009.86
W. L. Dunning	1,747.29
Luria Bros. & Co	517.73
Nassau Smelting & Refining Co	511.98
Fred Craemer	38.10
	30,225.69

Navy yard, Washington, D. C., Dec. 17, 1914:

Chas. H. Beaver	85.80
Henry Bernheimer	7.75
Coatesville Scrap Iron Co	1,931.15
A. C. Daft	48.87
J. Dreifus & Sons	10.25
Ben Einstein	32.70
Friedman Bros	12.10
Jos. Joseph & Bros. Co	726.63
Keystone Iron & Metal Co	25.00
E. B. Leaf Co	583.52
Luria Bros. & Co	1,908.25
David L. Marks	1,512.33
Morris Weil's Sons	161.70
Wilbur F. Nash	3.25
Williams & Freedman	4,750.17
	11,799.47

Navy yard, Washington, D. C., Oct 18, 1915:

S. Bensinger	243.00
Boston Iron & Metal Co	90.33
John J. Chaulk	759.28
Cook, Bernheimer & Co	292.09
J. Dreifus & Sons	32.00
Philip S. Francis	5.60
N. Frank & Sons	65.62
S. Hollander	145.00
Luria Bros. & Co	7,678.93
John Nuttall	11.00
Reliable Junk Co	1,416.85
Jos. Rosenthal's Sons (Inc.)	4,606.45
Frank Toomey (Inc.)	278.00
White & Bro. (Inc.)	2,067.20
W. L. Whitehouse	99.04
	17,790.39

Navy yard, Washington, D. C., Jan. 4, 1916: Reid Metal Refining Co. (Inc.)	$1,379.07
Navy yard, Washington, D. C., Mar. 17, 1916: Lewis Hopfenmaier	680.58
Naval proving grounds, Indianhead, Md., Dec. 15, 1914: Butterworth-Judson Co	340.33

Naval proving grounds, Indianhead, Md., Apr. 29, 1915:

Crucible Steel Co	19,972.45
Bethlehem Steel Co	3,631.38
E. B. Leaf Co	1,269.29
Manhattan Rubber Manufacturing Co	220.93
	25,094.05

Naval proving grounds, Indianhead, Md, Sept. 2, 1915:

Alexandria Fertilizer & Chemical Co	1,647.95
Illinois Smelting & Refining Co	30.00
	1,677.95

Navy yard. Norfolk, Va., Apr. 20, 1915:

Frank Toomey	586.78
Wm. A. Burckard Co	520.00
Samuel Butter & Co	666.51
R. Goldstein & Son	60.06
Atlantic Metal & Rubber Co	147.68
Norfolk Hide & Metal Co	823.71
H. J. Segall	209.21
Illinois Smelting & Refining Co	1,869.86
M. T. Cashin	544.78
D. D. Hitchings	51.00
Nichols & Hodges	18.35
R. P. Scott	117.00
J. H. Wilkins	45.26
Ernest Becker	31.50
J. H. Bonneville	31.75
Walter Martin	30.00
O. G. Cosby	149.18
J. J. Chaulk	4,694.12
Stidham & Sons	248.57
Gerad D. Chambers	15.00
B. R. Richardson	29.42
N. Block & Co	20.55
Marine Iron Works	25.00
Geo. Sachsenmair & Co	11.00
A. McClean Co	25.00
Warwick Machine Co	591.60
Miles Jennings	20.56
S. McCall	3.00
National Metal & P. S. Co	4,461.57
J. T. Whelan	40.00
A. J. Phillips	17.07
Dreifus & Co	21.26
A. C. Bunch	5.26
L. A. Williams	2.02
J. Dreifus & Son	74.80
C. H. Culpepper	13.95
N. Cassell	25.00
W. Stokes Kirk	50.00
C. S. Weiss	15.00
W. F. Farnham	1.50
Samuel Gerson	3,150.00
T. V. Moore	151.00
E. Domage	3.60
Berkley Machine Works	10.35
H. L. Winterer	211.00
E. B. Leaf Co	1,673.47
Ben Einstein	311.04
	21,884.33

Navy yard, Norfolk, Va., Oct 25, 1916:

Chas. S. Aydelotte	81.60
S. Baker	52.45
Berkley Machine Works	35.10
Boston Iron & Metal Co	3,638.65
Wm. A. Burckard Co	405.60
Walter A. Buxton	1,839.66
R. J. Campbell	15.20
Joseph Carlson	56.25
John J. Chaulk	112.80

Statement 42.—PURCHASERS OF CONDEMNED PROPERTY, FISCAL YEAR 1916—Continued.

Navy yard, Norfolk, Va., Oct. 25, 1916—Continued.

Clarence Cosby	$74.00
J. Dreifus & Sons	19.00
E. Domage	11.10
Ben Einstein	169.50
A. B. Elliott	51.00
J. H. Epperson	64.70
Philip S. Francis	267.85
John Gallagher	110.00
A. G. Gascon	5.00
T. C. Gill	11.00
I. Guttman	1,498.72
J. W. Guinne	15.50
A. Hamlen	19.55
R. W. Hudgins & Son	186.60
B. A. Kelley	13.00
D. L. Kiley	4.85
H. Klaff & Co	184.70
J. G. Lamps	215.00
A. McClean Co	106.00
H. T. Meriweather	86.60
Mink & O'Brien	5.00
Nichols & Hodges	25.00
Norfolk Hide & Metal Co	201.49
R. N. Nottingham	15.00
W. F. Robertson	.75
Jos. Rosenthal's Sons (Inc.)	2.00
R. Scheinert Co	320.20
John Spencer	60.50
E. McC. Stephens	30.35
Warwick Machine Co	373.00
John T. Whelan	5.50
O. L. Williams	30.00
	11,122.86

Navy yard, Norfolk, Va., Dec. 4, 1915:

R. J. Campbell	2.00

Navy yard, Charleston, S. C., Apr. 21, 1915:

Boston Iron & Metal Co	2,152.51
Simon Menzel	2,893.07
Josiah Linton & Co	1,678.95
	6,724.53

Navy yard, Charleston, S. C., Apr. 20, 1916:

H. T. Janner, jr	6.00

Navy yard, Charleston, S. C., May 15, 1916:

Jas. J. Igoe	484.18
B. Shapiro	26.50
	510.68

Navy yard, Mare Island, Cal., Nov. 2, 1915:

Daniel R. Buckley	175.70
Melvin A. Taylor	525.00
N. C. Cleaves	55.20
Fred Ozol	36.60
S. Steinberg & Co	678.30
Geo. E. Dickie	140.30
C. A. Lauritzen	33.00
John S. Gutleben	5.25
Louis Lipp	30.00
Frank Rauscher	7.00
Chas. E. Clark	57.50
Jacob Unna	7.00
Cal. Hirsch & Sons	271.16
W. Stokes Kirk	274.24
American Machine Works	149.05
Spiro Harness Co	519.95
H. J. Widenmann	22.50
H. C. Cutting	130.75
J. C. Hyde	28.50
Ballen & Weinberg	17.82
M. Levin & Sons	6,480.59
J. M. Donovan	13.80
J. E. Campbell	9.80
Muir & Symon (Inc.)	31.00
A. C. Tufts	8.75

Navy yard, Mare Island, Cal., Nov. 2, 1915—Continued.

Ed. McDermed	$15.00
C. K. Howe	7.75
Chester R. Davis	.75
Great Western Machinery Co	1,243.55
George Draeger	28.60
Monticello S. S. Co	6.00
M. Barde & Sons (Inc.)	254.38
E. Domage	6.90
James A. Greenwood	30.25
W. A. Hessee	5.00
H. Burstein	17.50
Geo. W. Carter	2.00
A. H. Van Keuren	10.20
Charles Rabinovich	32.40
M. M. Morris	110.25
V. Grothwell	5.00
Illinois Smelting & Refining Co	78.00
Pacific Pipe Co	8.00
H. U. Holzhauer	1.65
J. C. Magill	67.60
Stabens & Freidman	325.05
Miscellaneous bidders	131.55
	12,096.14

Navy yard, Mare Island, Cal., Feb. 24, 1916:

Leon De Ville	715.00

Navy yard, Puget Sound, Wash., Feb. 9, 1916:

George Broom	220.20
Tacoma Junk Co	155.60
H. Roth & Sons	676.11
Seattle Junk Co	71.57
Frank Schwartz	240.21
	1,363.69

Naval station, Cavite, P. I., Sept. 9, 1915:

F. Tan Limco	41.50
Uy Eng Kui	40.00
M. Mosca	57.50
Tan Sioc Li	57.50
C. C. Gilbert	117.50
Go Taco	94.00
J. Luna	8.00
Tuason & San Pedro	256.00
V. Fernandez	50.00
C. Go Chico	20.00
J. D. McCord	15.00
C. A. Lockwood	6.00
Paul Foley	4.50
B. Pestanas	7.00
Sam Yu	47.50
W. M. Quigley	25.50
E. T. Short	12.50
K. K. Weimer	21.00
H. Salam	35.00
L. Octavo	120.00
Wise & Co	227.50
A. C. Bailey	232.50
Tan Tioco	203.50
W. C. Younger	31.00
E. L. Probasco	183.50
Si Cha	250.00
J. Kalagayan	301.18
J. Hennings	102.00
S. Daplas	250.00
Ong Che	110.50
B. Mejiliano	8.00
Ong Chong	12.50
G. Beruete	9.50
A. Nangbayan	90.00
J. M. Co Siongco	95.00
Cheng Bec	75.00
M. de la Riva	154.50
S. Legaspi	32.50
Z. Fortich	263.00
M. Lontok	25.00
A. Rosaleskey	68.50
Chua Tiaco	16.00
A. Dano	43.50

Statement 42.—PURCHASERS OF CONDEMNED PROPERTY, FISCAL YEAR 1916—Continued.

Naval station, Cavite, P. I., Sept. 9, 1915—Continued.	
Yu Ay	$214.50
J. G. Marino	194.00
Cheng Bee Lay	76.50
Sy Put	120.50
Ong Chi	63.50
P. Johnson	85.00
E. Xuierebo	15.50
Gui Ho	67.00
Yap Se	80.00
Leoncio Tan	32.50
	4,769.68
Naval station, Pearl Harbor, Hawaii, Apr. 1, 1915:	
W. S. Sinclair	25.00
Honolulu Scrap Iron Co	22.00
	47.00
Naval station, Olongapo, P. I., Aug. 10, 1915: C. Schneider	105.50
Elizabeth City, N. C., June 26, 1915: Elizabeth City Iron Works & Supply Co. (steamer No. 175)	67.00
Bureau of Supplies and Accounts, July 12, 1915:	
John F. Burke, Boston, Mass. (U. S. S. Portsmouth)	4,689.00
Recruiting station, Chicago, Ill., July 30, 1915: H. Walter Brown Co	65.00
Buffalo, N. Y., Naval Militia, Aug. 28, 1915: Kerin Hylant (launch machinery)	151.00
San Diego, Cal., Naval Militia, Sept. 8, 1915: Kelp Products Co. (2 boats)	20.00
Plymouth, N. C., Naval Militia, Oct. 30, 1915: E. R. Jackson (cutter)	5.00
Cleveland, Ohio, U. S. S. Dorothea, Nov. 11, 1915: Edward Le Blanc (material)	90.00
Naval magazine, Dover, N. J., Nov. 17, 1915 (material):	
The David Kaufman & Sons Co	$46.91
M. Liberman	26.45
	73.36
Radio station, San Juan, P. R., Apr. 24, 1915: New York & Porto Rico Metal Co	11.95
Bureau of Supplies and Accounts, Feb. 17, 1916: N. H. Busey, jr. (U. S. S. Justin)	301,107.00
Naval hospital, Chelsea, Mass., May 25, 1916: George F. Clarke	70.00
Bureau of Supplies and Accounts, Mar. 16, 1916: Thos. W. Carroll (U. S. S. Oneida)	2,580.00
Recruiting station, Atlanta, Ga., May 3, 1916: L. B. Field	5.30
Erie, Pa., May 17, 1916:	
U. S. S. Wolverine (material):	
Herman Schaak	137.00
Edward Myers	2.00
Ben Schaak	14.50
Ben Massiroff	2.00
	155.50
Bureau of Supplies and Accounts, May 29, 1916: Joseph G. Hitner (U. S. S. Franklin)	16,787.53
Providence, R. I., June 21, 1916: Abraham Silverman (equipment, recruiting station, Boston, Mass.)	1.00
Newbern, N. C., Aug. 31, 1914: C. W. Northcott (cutter)	5.00
Chilcat, Alaska, May 1, 1916: Hoonah Packing Co. (barges)	200.00
Radio station, San Juan, P. R., Oct. 20, 1915: C. Francis (water cooler)	1.50

REPORT OF THE SURGEON GENERAL.[1]

DEPARTMENT OF THE NAVY,
BUREAU OF MEDICINE AND SURGERY,
Washington, D. C., October 1, 1916.

To: Secretary of the Navy.

Subject: Annual report for fiscal year 1916.

The following report of the activities of the bureau is submitted.

During the past year there has been an increase in the admission and death rates over the preceding year. The increased admission rate is not accounted for by any alarming increase or epidemic of disease, or occurrence of extensive casualty or engagement. The mainly responsible factors are tonsillitis, venereal diseases, malaria, mumps, and bronchitis, and the comparatively slight increase in the death rate, with a total of only 7 deaths from the above-mentioned diseases, indicates that the total harm to the service has not materially increased.

Term.	Per 1,000 of personnel.		
	Admissions and readmissions, all causes.	Deaths.	Total sick days.
Average, years 1901-1910	897.35	5.38	10,871.12
1912	787.46	4.08	9,449.39
1913	760.03	3.82	10,041.41
1914	886.58	4.18	10,862.28
1915	955.91	4.48	11,402.17

Among the major classified groups of diseases that show an increase in total damage are the following:

Diseases of the digestive and respiratory systems, diseases of infective type (venereal and nonvenereal), diseases of the eye, and wounds and other injuries.

Among the more important of the special diseases that show an increase are the following:

Bronchitis, acute.
Cerebrospinal fever.
Cholangitis, acute.
Dengue.
Gastroenteritis.
Goiter.
Gonorrheal infections.
Hemorrhoids.
Malaria.
Mumps.
Myopia.
Orchitis.
Rheumatism.
Scarlet fever.
Syphilis.
Tonsillitis.
Typhoid.

[1] All statistics cover the calendar year 1915.

Statement 42.—PURCHASERS OF CONDEMNED PROP
1916—Continued.

Naval station, Cavite, P. I., Sept. 9, 1915—Continued.	
Yu Ay	$214.50
J. G. Marino	194.00
Cheng Bee Lay	76.50
Sy Put	120.50
Ong Chi	63.50
P. Johnson	85.00
E. Xuierebo	15.50
Gui Ho	67.00
Yap Se	80.00
Leoncio Tan	32.50
	4,769

Naval station, Pearl Harbor, Hawaii, Apr. 1, 1915:
W. S. Sinclair
Honolulu Scrap Iron Co.

Naval station, Olongapo, P. I., A 1915: C. Schneider
Elizabeth City, N. C., June Elizabeth City Iron Work Co. (steamer No. 175)
Bureau of Supplies and 12, 1915:
John F. Burke,
S. S. Portsm
Recruiting statio 30, 1915: H. W
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personnel, while higher than the
an the average for the 10 years from
ath rate for the registration area of the
ensus year 1910, was 17.8 per 1,000 of our
course, includes all from infancy to old age,
from 20 to 29 years, which would approximate
verage naval age limit, the mortality tables give 8
incidence of death. This includes both sexes, and
bly higher if quoted for males alone.
roughly death rates of 8 plus per 1,000 and 4.48 per
spective rates for the young men of our country, the
ting the risks incurred in the ordinary hazards of farm
the lesser representing the peace-time losses while serving
ry, and while under the constant watchful care of the
partment of the service.

if the families, parents, or guardians of the young men who
Navy, realize how carefully guarded as to health conditions
oung men are. No institution of private training is so zealous
well-being of its charges, or so watchful for the preservation
s own good name as is the Navy. A constant pride is exhibited
our medical officers in maintaining health and sanitation on the
ships or stations under their care, and constant efforts are being
exerted to provide further safeguards. The city or country practitioner is not called in to examine into the habits of life and knowledge of or regard to sanitary matters exhibited by his patients, nor does he so, unsolicited. But with us half of our duties are those of the uninvited sanitarian, and if the individual is neglectful not only of his own safety, but of the community good, advisory and, if necessary, disciplinary measures are soon invoked.

The leading causes of death for the last three years in the Navy are as follows:

	1915	1914	1913
Drowning	51	42	22
Tuberculosis, all forms	36	38	30
Pneumonia, all forms	22	33	21
Burns	16	6	12
Wounds, gunshot	13	30	19
Nephritis, all forms	13	13	8

It will be seen that the deaths are increased over 1914 in only two noteworthy classifications, both of these being injuries, i. e., drowning and burns. The deplorable loss of the *F-4* accounts for 21 of the deaths by drowning, leaving only 30 for the usual minor casualties due to carelessness in boating, swimming, etc. Aside from the above-mentioned loss of the *F-4*, therefore, it can be considered that a material increase in safety and avoidance of this hazard was achieved during the past year, as the 42 deaths from drowning in 1914 were the results of no major calamity.

Burns are responsible for 16 deaths, eight of these occurring on the U. S. S. *San Diego* and three on the U. S. S. *Decatur;* both of these accidents were boiler explosions.

Gunshot wounds, with resultant deaths, are naturally decreased from the preceding year, which included the Vera Cruz casualties, and are well below what may be considered a normal average in preceding years.

It is noteworthy that for the past years three main causes of death appear predominantly over the others, the three being drowning, tuberculosis, and pneumonia; but I am glad to reiterate that upon analysis each one of these shows encouraging improvement over the preceding year.

Disabilities having the greatest number of sick days during 1915 as compared with the years 1914 and 1913.

Disease.	Sick days, 1915.	Relative standing.		
		1915	1914	1913
Tuberculosis, chronic pulmonary	71,360	1	1	2
Syphilis	65,682	2	2	1
Gonorrhea (urethral)	35,404	3	3	3
Tonsillitis	25,174	4	4	7
Mumps	24,781	5	6	5
Appendicitis	20,828	6	5	4
Influenza	20,787	7	15	15
Bronchitis	19,818	8	7	11
Hernia, inguinal	15,573	9	8	8
Malaria	12,150	10	11	12
Otitis media	11,114	11	10	10
Chancroid	10,521	12	9	9
Pleurisy	9,304	13	13	13
Pneumonia	9,156	14	14	14
Measles	7,472	15	12	6

In compiling the above table several classes that would have come within the limits have been omitted as being comparatively unimportant in significance or scientifically loose in application. These are (*a*) gonorrheal infections other than urethral (27,889); (*b*) rheumatism (all forms) (20,539); (*c*) abscess (unqualified) (13,514); (*d*) chancroid of lymph node (11,443); and (*e*) tuberculosis (other forms) (10,873).

VENEREAL DISEASES.—Venereal diseases *combined* will, of course, head such a list by a wide margin. During the statistical year of 1915 the primary admission rate for the various venereal diseases has shown but little change over the preceding years. The rate for chancroid dropped from 43.37 to 32.31 per 1,000, a rate more in keeping with the years 1910, 1911, and 1912. The rate for gonorrhea was 87.91 per 1,000 as against 84.94 per 1,000, but lower than the years 1909, 1910, and 1912, when the rate was 102.51, 103.90, and

92.15, respectively. The admission rate for syphilis was 21.35 per 1,000 against 19.83 per 1,000. While this rate was an increase over the statistical year of 1914, it was lower than for the preceding five years, the rates for those years being 25.81, 22.54, 27.11, 23, and 21.94.

Admission rate for venereal disease.

Year.	Average complement.	Chancroid.		Gonorrhea.		Syphilis.	
		Admissions.	Rate.	Admissions.	Rate.	Admissions.	Rate.
1903	37,248	396	10.63	1,032	27.70	816	21.90
1904	40,555	542	13.36	1,512	37.28	880	21.69
1905	41,313	538	13.00	2,085	50.46	981	23.73
1906	42,529	733	17.23	2,640	62.07	1,147	26.96
1907	46,336	554	11.95	2,274	49.07	881	19.01
1908	52,913	665	12.56	3,015	56.98	1,001	18.91
1909	57,172	1,573	27.51	5,861	102.51	1,476	25.81
1910	58,340	1,968	33.73	6,062	103.90	1,315	22.54
1911	61,399	1,929	31.41	5,658	92.15	1,665	27.11
1912	61,897	2,169	35.04	5,403	87.29	1,424	23.00
1913	65,926	1,855	28.13	5,320	80.69	1,447	21.94
1914	67,141	2,908	43.31	5,703	84.94	1,332	19.83
1915	68,075	2,200	32.31	5,985	87.91	1,454	21.35

Chancroid.

Year.	Average complement.	Admissions.	Invalided or died.	Admission rate.	Days.	Daily average.	Daily average; correct.	Damage.	Damage; correct.
1903	37,248	396	0	10.63	7,644	20.9424	19.8575	20.94	.....
1904	40,555	542	4	13.36	7,661	20.8852	19.4043	22.88	.....
1905	41,313	538	2	13.00	5,469	14.9385	13.5095	15.98	.....
1906	42,529	733	0	17.23	6,562	17.9726	15.9698	17.97	.....
1907	46,336	554	0	11.95	6,311	17.2904	15.7726	17.29	.....
1908	52,913	665	0	12.56	6,570	17.9508	16.1338	17.95	.....
1909	57,172	1,573	3	27.51	9,539	26.1342	21.8246	.....	23.32
1910	58,340	1,968	1	33.73	9,975	27.3287	21.9369	.....	22.43
1911	61,399	1,929	0	31.41	12,547	34.3753	20.0904	.....	29.69
1912	61,897	2,169	0	35.04	12,634	34.5191	28.5928	.....	29.59
1913	65,926	1,855	0	28.13	9,018	.....	24.7068	.....	24.70
1914	67,141	2,908	1	43.31	14,749	.....	40.4082	.....	40.90
1915	68,075	2,200	0	32.31	10,521	.....	28.8300	.....	28.83

Gonorrhea.

Year.	Average complement.	Admissions.	Invalided or died.	Admission rate.	Days.	Daily average.	Daily average; correct.	Damage.	Damage; correct.
1903	37,248	1,032	4	27.70	11,643	31.8986	29.0715	33.89	.....
1904	40,555	1,512	15	37.28	14,953	40.8551	36.7249	43.35	.....
1905	41,313	2,085	11	50.46	15,137	41.4712	35.7589	48.96	.....
1906	42,529	2,640	7	62.07	17,958	49.2000	41.9671	52.89	.....
1907	46,336	2,274	8	49.07	13,912	38.1150	31.8849	42.11	.....
1908	52,913	3,015	14	56.98	18,239	49.8080	41.5663	54.89	.....
1909	57,172	5,861	33	102.51	28,801	78.9068	62.8219	.....	79.32
1910	58,340	6,062	17	103.90	31,813	87.1589	70.5598	.....	79.04
1911	61,399	5,658	26	92.15	33,946	93.0027	77.5813	.....	93.49
1912	61,897	5,403	26	87.29	35,140	96.0109	81.2486	.....	94.24
1913	65,926	5,320	27	80.69	33,204	.....	90.9686	.....	101.46
1914	67,141	5,703	10	84.94	36,218	.....	99.2273	.....	101.22
1915	68,075	5,985	11	87.91	35,404	.....	102.404	.....	107.99

Chancroid showed an improvement over the preceding year. The admission rate was not only less but the total sick days dropped from 14,749 to 10,521, the daily average of patients dropping from 40.40 to 28.83 and the damage rate dropping from 40.90 to 28.83.

Syphilis.

Year.	Average complement.	Admissions.	Invalided or died.	Admission rate.	Days.	Daily average.	Daily average; correct.	Damage.	Damage; correct.
1903	37,248	816	132	21.90	34,112	93.4575	91.2219	159.45	.....
1904	40,555	880	125	21.69	32,389	88.4945	86.0901	150.99	.....
1905	41,313	981	97	23.73	39,632	108.5808	105.8931	157.08	.....
1906	42,529	1,147	91	26.96	41,248	113.0082	109.8657	158.50	.....
1907	46,336	881	106	19.01	32,656	89.4684	87.0547	142.46	.....
1908	52,913	1,001	118	18.91	36,645	100.1229	97.3878	159.12	.....
1909	57,172	1,476	171	25.81	49,647	136.0191	131.9753	.....	217.47
1910	58,340	1,315	118	22.54	47,893	131.2136	127.5890	.....	186.58
1911	61,399	1,665	84	27.11	66,210	181.3972	176.8356	.....	218.83
1912	61,897	1,424	75	23.00	56,759	155.0792	151.1885	.....	188.68
1913	65,926	1,447	74	21.94	62,630	.....	171.5890	.....	208.58
1914	67,141	1,332	51	19.83	53,016	.....	145.2493	.....	170.74
1915	68,075	1,454	63	21.35	65,682	.....	179.9500	.....	211.44

Gonorrhea showed but very little change over the preceding year. The admission rate increased from 84.94 to 87.91, a lower rate than for the years 1909, 1910, and 1911. The daily average of patients increased from 99.22 to 102.49, but the complement of the Navy was somewhat larger and the damage rate was slightly lower than for the preceding four years.

The rate for syphilis, likewise, has shown but little change. The past 2 years have given the lowest invalid rate in the last 12 years or more. The daily average of patients increased from 145.24 to 179.97. The damage rate showed some increase over the preceding years, but was lower than for the years 1909 and 1911.

Considering the experience with primary venereal diseases and sequelæ, the total number of admissions was less than for the preceding year, being 10,318 as against 10,932. The total number invalided or died was the lowest in many years, amounting to 101. The admission rate was 151.56, as against 162.82 for the preceding year, and lower than for the years of 1909, 1910, 1911, and 1912. The total number of sick days was 150,939, being only exceeded by the year of 1911, when the total number of sick days was 161,358. The corrected damage rate was 464.02, being only exceeded by the years of 1909 and 1911.

Primary venereal diseases and sequelæ.[1]

Year.	Average complement.	Admissions.	Invalided or died.	Admission rate.	Days.	Daily average.	Daily average; correct.	Damage.	Damage; correct.
1903	37,248	3,951	212	106.07	98,984	271.189	260.364	377.18	.....
1904	40,555	4,817	234	118.77	107,007	292.368	279.207	409.36	.....
1905	41,313	5,293	163	128.11	105,099	287.668	273.441	369.16	.....
1906	42,529	6,348	144	149.26	116,411	318.901	301.542	390.90	.....
1907	46,336	5,528	153	119.30	99,126	271.578	256.430	348.07	.....
1908	52,913	6,491	186	122.67	105,142	287.273	269.538	380.27	.....
1909	57,172	10,961	287	191.71	136,761	374.687	344.675	.....	488.15
1910	58,340	11,071	191	189.76	135,507	371.252	340.920	.....	436.42
1911	61,399	10,827	185	176.33	161,358	442.076	412.413	.....	534.57
1912	61,897	10,495	153	169.55	146,135	399.275	370.601	.....	447.10
1913	65,926	9,434	138	143.09	141,378	.....	387.336	.....	456.33
1914	67,141	10,932	118	162.82	142,981	.....	391.728	.....	450.72
1915	68,075	10,318	101	151.56	150,939	.....	413.531	.....	464.02

[1] Includes only: (1) Gonorrhea, (2) chancroid, (3) syphilis, (4) arthritis gonorrhoica, (5) epididymitis, (6) adenitis inguinalis, (7) prostatitis, (8) orchitis, (9) ophthalmia gonorrhoica.

TUBERCULOSIS.—A most satisfactory condition is noted here. With an *increased* naval personnel, the actual number of cases admitted is well below the lowest previous year and the rate per 1,000 is markedly reduced.

Year.	Admitted.		Deaths.	Sick days.
	Number.	Rate per 1,000.		
1909	311	5.43	40	58,984
1910	349	5.98	44	65,443
1911	319	5.19	48	64,668
1912	264	4.26	32	57,723
1913	325	4.92	30	67,423
1914	295	4.39	38	80,237
1915	253	3.71	36	82,233

The total of deaths is also below the average for the previous years, but, as is to be expected of the most frequent and widespread of the major infections, is still undesirably high.

In this country 9 per cent of all deaths are due to tuberculosis. The toll falls heaviest during the period of life of greatest usefulness—thus 30 per cent of all deaths between the years of 15 and 60 are due to pulmonary tuberculosis alone. Our mortality of 36 is 11 per cent of the total deaths of the Navy during 1915. While this is a very satisfying and commendable comparison, much greater improvement is to be desired. The selected nature of our personnel, the rigid physical examinations upon entrance and transfer should give us and preserve for us a specially healthful type and should make our results far exceed those in the ordinary walks of life. And as pointed out, this result is achieved with great credit to all concerned. But, as indicated in my report last year, naval life afloat is far from hygienically perfect, and with the crowded conditions existing there, even under the most vigilant supervision and constant care, most favorable conditions are furnished for the propagation of the disease. Happily this is a well-recognized fact, and all concerned are striving to the end that will provide a maximum of fresh air, light, and space.

The Naval Hospital, Las Animas, Colo., receives practically all of the cases of tuberculosis that develop within the Navy, and this institution shows an improvement in its statistics that is very creditable. The total number of cases of tuberculosis treated during the year was 431—a decrease of 21 from 1914—of which 231 remained from the previous year; 200 were admitted, 207 discharged, and 224 were continued to the next year. The total sick days for the hospital as well as for the service at large are increased in both cases, despite a reduction in total admissions. This increase is due to an increase in the average duration of the stay of each patient in the hospital from 254 sick days in 1914 to 318 in 1915. The number of deaths at the hospital during the year was 36, a decrease of 8 as compared with 1914. Of these, 1 was a first-stage case, 9 were second-stage, and 26 third-stage. Eight of the third-stage deaths had been in the hospital less than a month at time of death.

The annual report of the commanding officer of the hospital notes an interesting feature in connection with results from treatment as evidenced by the sputum examinations:

Of the 67 cases which were discharged during the year as first-stage cases, 28, or 40.9 per cent, were negative for tubercle bacilli on admission and remained so on discharge; 20 cases, or 29.8 per cent, were positive on admission and negative on discharge.

Of the 88 cases discharged during the year as second-stage cases 22, or 25 per cent, were negative on admission and remained so on discharge; 13, or 14.7 per cent, were positive on admission and negative on discharge.

Of the 46 cases discharged during the year as third-stage cases, 3, or 6.5 per cent, were negative on admission and remained so on discharge; 2, or 4.3 per cent, were positive on admission and negative on discharge.

TONSILLITIS.—This disease is always prevalent under service conditions of overcrowding. Bacterial throat infections are easily disseminated from person to person when the cubic air space per individual reaches the low limits sometimes unavoidable aboard ship. The overcrowding, imperfect ventilation, damp and cold conditions of the winter months, together with the frequent habits of using the deck for sleeping when off duty, provide most unsatisfactory sanitary conditions. This is especially noticeable when a vessel is undergoing overhaul or in dry dock, at which time, owing to the stress of work being done, the lack of cleanliness, and the relaxing of the usual discipline, respiratory affections soon become prominent.

Happily, it is noted that in battleships of the newer types respiratory affections appear less than on the older ships, and cruising conditions are particularly more favorable. The tendency of modern ship construction is gradually taking cognizance of a better ideal of hygiene, and diseases of the respiratory tract will be the first to feel the betterment.

CONTAGIOUS DISEASES.—There were 1,053 admissions and 24,781 sick days from mumps; 308 admissions, 3 deaths, and 7,472 sick days from measles; 61 admissions and 2,430 sick days from scarlet fever; 100 admissions and 921 sick days from German measles; 42 admissions and 712 sick days from chickenpox; 38 admissions, 1 death, and 1,401 sick days from diphtheria; and 5 admissions, 1 death, and 211 sick days from smallpox. It will be noted from the table on page 7 that mumps consistently maintains its place as a leader, ranking fifth in 1913 and 1915 and sixth in 1914. Owing to the comparative slightness of the symptoms exhibited, early detection and isolation is more difficult than with the more serious diseases. Measles appears in a better light than in previous years, and markedly so compared to 1913, when it ranked ahead of tonsillitis in its damage to the service. There are, however, 3 deaths during the current year, as compared with none during 1914, and 1 in 1913. Diphtheria provides the first death from that disease since 1911. Admissions are notably decreased from previous years, 1913 showing 73 and 1914 showing 59, as compared with 38 in 1915. Smallpox shows the same number of admissions and deaths as in 1914, materially better than the 38 admissions and 3 deaths in 1913, discussed at some length in my 1914 report. The elaborate precautions observed in our service in maintaining an active immunization of our personnel against variola are indicated by the fact that 63,747 vaccine points were forwarded to medical officers on requisitions during the past year, and

by the following paragraph from the changes in Naval Instructions of date of July 15, 1915:

3211. (1) Recruits shall be vaccinated within 24 hours after their arrival on a receiving ship or at a barracks. In case of failure the operation shall be repeated in eight days. If the second vaccination is not successful, it shall be repeated at the first opportunity with a vaccine of assured potency. The only acceptable evidence of successful vaccination is a *pitted* scar following vaccination. Results of vaccination shall be recorded on the health record and reported on the quarterly report of sick.

(2) No recruit in the Navy or Marine Corps shall be transferred from a training station, receiving ship, or barracks, or other rendezvous, until the medical officer is satisfied that the man is protected against smallpox.

(3) Every enlisted man of the Navy or Marine Corps shall be vaccinated upon reenlisting, or extending enlistment, unless (a) he has two *pitted* vaccination scars, or (b) shows evidence of a previous attack of smallpox.

(4) Every officer upon appointment should be vaccinated immediately upon reporting at his first station for duty and the fact entered on his health record. Revaccination should be performed at least once in every seven years thereafter unless he has two *pitted* vaccination scars or evidence of a previous attack of smallpox. The responsibility for revaccination shall rest upon the medical officer making the annual physical examination required by I 709 (5). If it is impracticable for this medical officer to perform the vaccination he shall notify the proper medical officer, through official channels, so that it may be carried out. The medical officer who performs the vaccination shall note the result of the vaccination on the officer's health record.

APPENDICITIS.—Appendicitis leads the list of affections demanding operative procedure. There were 623 admissions and 20,828 sick days attributable to this, an improvement, however, over preceding years. Five hundred and four operations were performed. Deaths numbered 7.

INFLUENZA.—The influence of the pandemic of this disease occurring last year is shown in the following figures offering comparison with the two preceding years.

Year.	Admissions.	Sick days.
1913	998	5,008
1914	1,520	6,989
1915	4,133	20,787

It is noted that the admissions and sick days are both increased fourfold over 1913. Its relative rate among the diseases listed on page 7 jumped from last place to seventh, and it represented 9 per cent of the total admissions for the year. The present epidemic followed the usual course from east to west, undoubtedly aided in its origin in eastern Europe by chaotic war conditions, and its dissemination also furthered by the same means.

It is of interest to quote the following from the annual report of the Surgeon General of the Navy for the year 1891, regarding the last great pandemic, that of 1899–90:

"This disease presents some very interesting facts in connection with the sick of the Navy for the year 1890. One thousand four hundred and twenty-two cases were reported, *one-tenth* of the whole number admitted to the sick list during the year, representing a loss to the service of 7,719 days, or an average of 5 plus days for each case. The disease was not confined to any locality or to the force afloat, but prevailed alike on our vessels in foreign waters and at home, in the hospitals, and at shore stations. It is more remarkable to note that only 1 death occurred out of 1,422 cases reported."

MALARIA.—Malaria provided 1,205 admissions, 12,150 sick days, and 3 deaths, as compared with 1,170 admissions, 10,607 sick days, and 1 death in 1914, advancing slightly in its relative standing. The greater part of this incidence occurs among the personnel of our marine expeditionary forces ashore on tropical duty, as at present in Haiti and in Santo Domingo. During the present calendar year, and not embraced within the statistical period of this report, a number of cases of a severe hemorrhagic type have occurred among our forces in Haiti.

PNEUMONIA.—While occupying a prominent position among the causes of death, following only drowning and tuberculosis, pneumonia stands fourteenth on the list on page 7, having held this same relative position for the past three years. There were 288 admissions, 9,156 sick days, and 22 deaths, as compared with 292 admissions, 9,488 sick days, and 33 deaths in 1914, and 189 admissions, 6,110 sick days, and 21 deaths in 1913. The mortality rate will be noted to be markedly reduced, as the 1915 rate is but 7.6 per cent, the 1914 and 1913 rates both being 11 plus per cent.

TYPHOID FEVER.—From the following table it will be seen that the remarks which I made in my report of last year concerning the reduction in menace of typhoid are borne out by the statistics of the year since. The admissions are only appreciably higher than in 1914, 18 as to 13; rate per 1,000 and sick days also little changed. There were 5 admissions and 402 sick days from paratyphoid, as compared with 9 admissions and 355 sick days in 1914. One death from typhoid occurred, whereas none occurred in the previous year. With an average complement of 68,075, the one death in the last two years represents an incidence of 0.7 per 100,000, as compared with the figures prepared by the Journal of the American Medical Association for 1915 (based on the population of our larger cities), of 8.65 per 100,000.

Year.	Admitted.		Died.	Sick days.
	Number.	Rate per 1,000.		
1909	189	3.20	17	10,378
1910	193	3.20	10	9,426
1911	222	3.61	15	14,024
1912	57	.92	2	5,234
1913	22	.33	4	1,657
1914	13	.19	0	1,027
1915	18	.26	1	1,031

Of the 18 cases, 3 are of erroneous diagnosis, change in diagnosis to paratyphoid having been made in 2 cases and to influenza in 1 case, leaving 15 apparently authenticated new cases of typhoid. Of these 15, 7 had not had the inoculations for various reasons—i. e., 4 on account of histories of previous attacks of typhoid, 2 in recruits who were enlisted during the incubation period of the disease, and 1 who, apparently through carelessness or ingenuity, had escaped the medical officer.

Thus we have 8 left who incurred typhoid despite the protective inoculations, and these are arranged in the following table, [illegible]

the length of time in each case between the inoculations and the onset of the disease:

	Period of protection.
Case 1	3 years 4 months.
Case 2	2 years 9 months.
Case 3	2 years 8 months.
Case 4	2 years 5 months.
Case 5	3 years 6 months.
Case 6	3 years 8 months.
Case 7 [1]	4 years 3 months.
Case 8 [2]	7 months.

While this table represents in itself a small number of cases, it stands, however, for the incidence of typhoid in a personnel of 68,000 protected by four-yearly inoculations of a killed culture of typhoid organisms.

Disregarding case No. 8 for obvious reasons, we have a most interesting commentary on the duration of this artificial immunity, and an indication that the present four-year period needs material shortening. It can not be a mere coincidence that no cases developed within the first two years, and the fact that they did not speaks volumes for the efficacy during this time. Nor in the first half of the third year do we find a case until the twenty-ninth month, and only three under a full three-year period. The average is three years and two months, and the only one going over the four-year period case No. 7, succumbed to the disease.

Theoretically, results would have been 100 per cent perfect in the prevention of disease if the period had been two years, and only slightly less so if a three-year period were followed.

The adoption of the latter is being considered, one of its drawbacks being necessarily an abandonment of the coincidence of reinoculation with reenlistment.

The menace of paratyphoid is at present so slight in our service that a mixed vaccine has not as yet been adopted. This, however, is being done by practically all the warring powers, using not only typhoid but paratyphoid A and B.

TYPHUS FEVER.—Specific reference is made to this disease because of its revival as an epidemic scourge during the present war, and its probable rôle as an important menace to the service should this country be embroiled. Its occurrence in the Navy at present is negligible, showing, however, a slight increase in the last two years—5 cases and 1 death in 1914, 4 cases and 1 death in 1915, there having been no cases in 1913.

The tremendous benefit of modern sanitary knowledge is nowhere more convincingly demonstrated than in our very recently acquired ability to handle with scientific accuracy this dreaded scourge. The work of Nicolle in demonstrating the transmitting agent and that of Plotz in isolating the infecting organism came at a miraculously opportune moment. Routine quarantine procedure in the face of the present great conflict, with numbers of scattered foci of infection, would have been comparatively helpless in carrying out the energetic repressive measures that have achieved such quick and notable success, particularly in Serbia, where the infection was in full flame before these measures were inaugurated.

[1] Died. [2] Diagnosis doubtful. Received inoculations in 1912 and 1915.

SANITARY CONDITIONS AND MEASURES AFLOAT.

The problem of solving the unsatisfactory conditions connected with the use of the combined heating and ventilating system in our newer ships was discussed in my report of last year. The following remarks from the annual sanitary reports of medical officers of the latest additions to our battleship fleet bear out my remarks.

The fleet surgeon on the U. S. S. *Wyoming* is quoted as follows: "The indirect combined system installed on the newer ships has been much criticized because, as installed, it furnishes parched air, which is certainly somewhat injurious. A humidity of about 70 per cent is desirable in respired air. If the outside air be at 40 F., and even if it should have 100 per cent of saturation at that temperature, which it has not, such air heated to 70° and delivered to living spaces without additional moisture will have a humidity of only 36 per cent. When, with a temperature of 40° the outside air has a normal average humidity of 70 per cent, the heated air under the same conditions at 70 F. will have a humidity of 25 per cent. Some device should be developed for humidifying the heated air in the trunk. It would seem that this could be effected by a water spray actuated by a steam jet. I think this should be tried, as the indirect system where proper provision has been made for supplying moisture is certainly superior from a sanitary standpoint to any system of direct radiators, whether steam, hot water, or electric, as with none of these can any effective moisture supply be devised.

"The naval service at large, both afloat and ashore, is much given to our national vice of overheating. If this tendency were curbed by a general order, our difficulties in handling the parched-air problem would disappear along with our present bad habits. An educational campaign on this subject is needed both in and out of the service. Even though we are confronted with the conditions incident to this vice in theatres, railways, hotels, and restaurants, this does not constitute an excuse for heedlessness and indifference to the matter in our own domain, and we should cease to treat ourselves and our sailors as hothouse plants to their decided injury. Body heat is properly maintained by food, and by clothing which prevents undue dissipation of the natural heat of the body. If a man is properly bathed, clothed, and fed it is not necessary in order to maintain his body heat to place him in an oven and to make him breathe parched air. The lack of any intelligent interest in this matter on the part of most medical officers is to be reprehended. Most of them accept conditions as they find them and fall in with the crowd and follow it instead of endeavoring to lead and teach it. They know that cool, fresh, natural air has been found good for sick lungs, but it does not seem to occur to them that it may be equally good for sound ones."

The medical officer of the U. S. S. *Arkansas* has the following:

"The ventilation, however, can not be considered independently of the heating system since fresh air is taken in by the blowers, heated (when necessary) by passing over steam coils, and then delivered by blowers through ducts to the various compartments, entering through the McCreery or other terminals. This combined ventilating and heating system is far from satisfactory. During winter weather fresh air is taken in at low temperature and capable even at saturation of carrying a comparatively small amount of water vapor.

This air is heated (and expanded), thereby greatly reducing the relative humidity of air finally supplied to the living spaces. For instance, even if air were saturated at 40 F. it would contain 2.86 grains of water (vapor) per cubic foot, and when heated to 70 F., at which temperature the air is capable of holding 8.01 grains per cubic foot, *ceteris paribus*, this air would have a relative humidity of 36 per cent, whereas the desideratum is about twice that amount, viz, 70 per cent. Expired air is saturated for its temperature, say 98 F., and is carrying about 18.9 grains of water vapor per cubic foot. The saturation deficit must be supplied by the respiratory mucous tract and much dryness and irritation of the sinuses and respiratory tract result.

"Air from a louver in the wardroom country has been observed by me to be delivered at 120 F. dry-bulb (i. e., the thermometer scale would register no higher, but the mercury went the limit), while the wet-bulb thermometer mounted on the same board registered 70 F. Some method of humidification of the air so heated should be devised in order to reduce the headaches, and nasal and bronchial irritation caused by the too dry air."

The medical officers of the U. S. S. *New York* and *Texas* also noted the necessity of adding moisture to the air:

"The heating of the ship (*New York*) is effected through the supply ventilating system, and is efficient. The amount of steam to the radiators in this system is controlled in the engine room, rather than at the numerous radiators throughout the ship. The dryness of the air, which is common to the indirect system of heating, is corrected by having a small jet of steam escape from the radiator to be taken up by the passing air. With this combined heating and ventilating system, the advisability of having a cut-off in the louver of a pipe discharging into a passageway or into a large compartment, is questioned. Too often a cut-off is found closed because the rush of air, or dust coming through the pipe, or an uncomfortable temperature has been annoying to someone. On an inspection below deck, a number of louvers are always found closed, and the efficiency of the ventilating system correspondingly diminished."

"In most of the living spaces on this ship (*Texas*) as the heat and fresh air come through the same system it is impossible to supply fresh air without heat if the heating system is on. Therein lies the great drawback to the dual system. If the dual system is to be retained on our ships I would recommend increasing the number of heating bunkers, as with the present system there is much too large a territory supplied from a single bunker which results in a section of the territory supplied getting too much heat and another an insufficient amount. Steam radiators have been installed in the forward lavatories belonging to the wardroom, junior, and warrant officers, with satisfactory results. During the past two months the general heating system on this ship has been placed under the immediate charge of the medical officer, and we have found that the dual system will heat the ship even in very cold weather, provided the instructions are properly carried out. Our present scheme is to turn the heat on the spaces occupied by the crew at 4 a. m., and to turn it off at 9 p. m. We turn heat on the officers' quarters at 5 a. m., and off at 11 p. m. The results have been fairly satisfactory. I am

of the opinion that if the heat be cut off entirely during the sleeping hours it will, to a very great extent, eliminate the complaint in regard to the excessive dryness of this system. It appears to me that the cutting out of all heat during several hours each night is a distinct sanitary gain."

HOSPITAL SHIP.—Congress has authorized in the appropriation bill the first hospital ship to be built as such from the keel up by this or any nation. Plans for this ship, based on long experience with converted hospital ships and the experience of the European war, have been prepared by the Bureau of Construction and Repair in collaboration with the Bureau of Medicine and Surgery. The ship will be an oil burner, designed for a capacity of something over 300 patients in peace time, with a war capacity of over 500. The design incorporates the most advanced features of ship construction, including stabilizers, vacuum cleaning installation, etc. The hospital department will, in addition to its medical, surgical, and contagious-disease divisions, include an up-to-date out-patient department for special examination and treatment of men in the fleet requiring special and temporary services. She will also carry in her hold regimental and field hospital medical equipment, including ambulances and other sanitary paraphernalia. When finally completed it is believed she will represent a model ship of this class for many years to come, and her usefulness may well be expected to continue during the lifetime of those who had a hand in her designing. It would be impracticable to describe the many advanced features of this ship in this report, but the methods of handling patients, their baggage, food, laundry and linen repair, the care of the dead, X-ray, chemical and biological laboratories, interior transportation, vacuum cleaning, water cooling and distribution, and other measures for the care, comfort, and welfare of the sick have required much thought, study, and perseverance. In preparing the plans the bureau is indebted to many of the medical officers of the service who have contributed their opinions and ideas to the end that an efficient and useful adjunct to the fleet might be created.

A representative of the Bureau of Medicine and Surgery has been in touch with the plans from the beginning, and it is hoped will be able to follow the ship through her construction to ultimate completion.

SANITARY CONDITIONS AND MEASURES ASHORE.

NAVAL ACADEMY, ANNAPOLIS, MD.—The total number of admissions for all causes was 1,730, and 120 readmissions, with a total of 3,589 sick days. This gives a daily average of 9.83 patients as compared with 6.12 in 1914. The average complement for the year was 1,428, an increase of 108 over 1914. Of the admissions and readmissions, 1,566 were for diseases with 3,097 sick days, and 284 for injuries with 492 sick days. Of the diseases, the greatest damage was due to influenza, which caused a total of 616 admissions and readmissions to the sick list with 1,509 days. Gastro-intestinal diseases caused a total of 158 admissions and readmissions, counting midshipmen only, with a loss of 221 days as compared with 196 admissions and 326 sick days in 1914. There were 94 admissions and readmissions due to football, with a loss of 147 days as compared with 42 admissions and 100 days in 1914. The daily average of patients for diseases was 8.48 and for in-

juries 1.34. The percentage of sick was 0.74 as compared with 0.46 in 1914. There were 490 cases transferred to hospital, of which 113 were for injuries. Seventeen men were invalided from the service, three died, all due to accidents, two away from the station, and one from drowning at the academy. There were 25,796 visits of midshipmen to sick quarters, causing a damage of 2,728 sick days and 2,852 days on the excused list. As compared with 1914, there were 2,413 more visits to sick quarters, 942 more days on the sick list, and 284 days less on the excused list. The average number of visits per day in 1915 was 70.6, as compared with 64.06 in 1914. There were 494 vaccinations against smallpox, and 795 persons received typhoid prophylactic. In the laboratory 1,236 urine, 54 blood, 1 feces, 20 milk, 20 sputum, 60 cultures, and 11 smears were examined.

The Naval Academy dairy was moved to the farm at Gambrill's Station in May. This farm contains 780 acres, and the soil is well adapted to cultivation, having been tested by the Department of Agriculture. The cow stables were built and all equipment for the dairy installed under the supervision of the Bureau of Animal Industry. At present 100 Holstein cows furnish about 300 gallons of milk; this milk is cooled down by a refrigerating process to 40° immediately after being drawn, and is shipped by rail to Annapolis. It is kept at a low temperature in the milk and butter room at Bancroft Hall until used. As previously mentioned, the dairy is under the supervision of the Bureau of Animal Industry, the representatives of which frequently test the cows for tuberculosis, and inspect and score the dairy as to methods and equipment. By this means milk is kept up to the highest standard. This milk of Holstein cows is not rich in butter fat, having about 2.5 per cent, which is rich enough for adults. In some cases it has been found that infants did not thrive on this milk, but as a rule the low degree of butter fat is more than compensated by the purity; especially is this the case in the summer time when bacteria are more prolific.

The best results from the use of milk are seen during the summer in the effect on the new fourth class men. The upper class men being absent, these have all the milk they can drink, so very appreciably gain in weight. The average gain of the present fourth class was 7 pounds per man from the entrance in June and July to the 1st of October, or a total of 1,890 pounds in less than four months.

The following tables and remarks submitted by Surg. R. G. Heiner are given here as of quite general interest:

Average defects for all midshipmen this year and last year.

Number of physical defects.	Percentage of total.	
	1916	1915
No physical defects	54.26	40.15
1 to 5 defects	40.00	45.20
6 to 10 defects	5.55	7.27
11 to 15 defects	.90	4.29
16 to 20 defects	.40	.85
Over 20 defects	.13	2.15

Defects, by classes, and comparison with last year.

	First class.		Second class.		Third class.		Fourth class.	
	1916	1915	1916	1915	1916	1915	1916	1915
	P. ct.	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
No physical defects	37.13	14.97	65.40	25.01	64.35	28.07	49.05	40.88
1 to 5 defects	54.62	77.58	30.81	69.79	32.68	66.57	45.28	55.06
6 to 10 defects	14.85	4.59	2.70	3.64	2.47	4.07	3.77	2.46
11 to 15 defects	2.28	2.29	.53	.52	.50	.00	.47	.80
16 to 20 defects	.00	.57	.53	.52	.00	.45	.94	.40
Over 20 defects	.00	.00	.00	.52	.00	.00	.47	.40

Average strength, by classes, compared with last year.

	First class.	Second class.	Third class.	Fourth class.
1915	5,391	5,555	5,166	5,014
1916	5,461	5,483	5,470	5,167

Average weight, by classes, compared with last year.

	First class.	Second class.	Third class.	Fourth class.
1915	149.9	146.4	147.4	146.1
1916	151.6	151.1	151.5	150.8

Spirometer deficiencies.

	First class.	Second class.	Third class.	Fourth class.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
1915	6.77	4.07	3.64	4.7
1916	16.00	5.3	3.4	3.87

Average gain in strength per man since last year.

First class.	Second class.	Third class.	Fourth class.
Points.	*Points lost.*	*Points.*	*Points.*
70	72	304	153

Average gain per man in weight since last year.

First class.	Second class.	Third class.	Fourth class.
Pounds.	*Pounds.*	*Pounds.*	*Pounds.*
1.7	4.7	4.1	4.7

"There is no way to account for the greater number of spirometer deficiencies for the first and second classes. They have had, if anything, more outdoor exercise, and the Swedish drills are carried out as usual with a view to development of lung capacity, free movements of the chest, and correct posture.

"A careful examination of each midshipman has been made, and I am taking the liberty to report on certain defects which have not been made a subject of previous reports and to recommend certain exercises which I think will do a great deal toward correcting them.

"I find that the following percentage of midshipmen in the various classes have curvature of the spine to a more or less marked degree:

First class.	Second class.	Third class.	Fourth class.
4.0	6.4	14.0	13.2

"That the following percentage have a tendency to or slight flat feet:

First class.	Second class.	Third class.	Fourth class.
14.5	15.1	22.2	30.0

"That the following percentage have flat feet to a marked degree:

First class.	Second class.	Third class.	Fourth class.
5.1	6.4	7.4	10.3

"In addition to these more frequently present defects, there are a few cases of marked underdevelopment—4.2 per cent of fourth class, 2 per cent of third class, 5 per cent of second class, 5 per cent of first class.

"The Swedish drills do much toward correcting deformities and developing the muscles, but these few with marked deficiencies need special and constant attention. They should take part in as many forms of physical culture and athletics as possible, besides having special exercises to suit their needs."

NAVAL DISPENSARY, WASHINGTON, D. C.—Medical attendance furnished to officers and enlisted men on the active and retired lists and their families included 3,340 house calls, 2,232 dispensary consultations and treatments, 179 electrical treatments, and 156 bakings in the hot-air apparatus for chronic joint troubles.

Office calls by months were as follows:

July	513	February	585
August	118	March	629
September	328	April	567
October	567	May	564
November	556	June	446
December	689		
January	937		6,499

The total number of cases treated by the specialist on eye, ear, nose, and throat diseases was 3,241. Dental treatments numbered 1,002. There were 11,622 prescriptions compounded.

Much assistance to the regular staff was furnished by the specialists on mental and nervous conditions, skin diseases, roentgenography, surgery, etc., on duty at the bureau and the Naval Hospital.

NAVAL HOSPITALS.

ANNAPOLIS, MD.—The amount of work accomplished this year in the matter of patients admitted, operations performed, and number of sick days has been greater than in any previous year, although the medical staff, owing to the shortage of the corps, has been below the needed number. Undoubtedly the coming year, with the large increase in the number of midshipmen under instruction, will be a very much more busy one.

There were 603 admissions during the year, 14,428 sick days, and 36 major operations and 143 minor operations performed. During the football season there were 36 admissions for football injuries, made up of 24 sprains, 4 fractures, 2 dislocations, 3 contusions, and 3 cases of synovitis, totaling 433 sick days.

The grounds of the hospital have been greatly improved during the year. The roads and walks have been improved or relaid and retaining walls built. The marsh at the foot of the hospital hill has been filled by contract during the present calendar year, and this long-standing nuisance has finally been abated and the improvement will ultimately add greatly to the beauty of the entire reservation.

CANACAO, P. I.—The sanitary condition of the hospital reservation during 1915 was excellent, no cases of disease attributable to insanitary conditions originating here. The health of the working personnel was excellent, only 10 cases of dengue occurring.

There were 51 cases of injury and 546 cases of diseases, 49 remaining from the year 1914, 72 admissions, 476 readmissions, 379 discharged to duty, 7 deaths, 66 transferred, and 75 continued to the year 1916.

Of diseases, 46 cases remained from the previous year, 67 cases were discharged, 433 readmitted, 350 discharged to duty, 64 were changed diagnoses, 3 died, 64 were transferred, and 65 were continued to the calendar year 1916.

Of injuries, 3 cases remained from the previous year, 5 cases were admitted, 43 were readmitted, 29 were discharged to duty, 6 diagnoses were changed, 4 cases died, 2 were transferred, and 10 were continued to 1916.

The total number of sick days due to diseases was 12,142, and to injuries, 897.

During the year there were 245 cases of venereal disease with 5,779 sick days, including 150 cases of syphilis with 3,342 sick days from that disease. There were 699 Wassermann tests made and 97 salvarsan treatments.

CHELSEA, MASS.—The new hospital was commissioned April 24, 1915. This modern type of hospital, together with its complete and up-to-date equipment and furnishings, provides an establishment for the care of the sick wherein little more could be desired. Incidental to the occupancy of the new building, considerable structural defects of minor consequence developed that have necessitated supervision and correction.

A generally good sanitary condition was maintained about the reservation during the year. The plumbing, sewage, and drainpipes in the western end of the old hospital and outlying buildings, which are of old design and time-worn, have been repaired from time to time as necessity required. The western half of the old hospital has in part been made use of for the care of any contagious or infectious cases that occurred. Hospital corpsmen, civilian employees, and the

marine guard are also housed here. Provisions could also be made in this section to care for about 75 patients. In view of the fact that it is necessary to maintain this part of the building for the purposes above mentioned, the lavatories, baths, and plumbing, which are worn out, will have to be renewed during the present year, even though no repairs and alterations are made to put it in an efficient condition for the care of an overflow of patients. Should the latter be undertaken, suitable cooking arrangements would also have to be provided, as the equipment of the old kitchen is antiquated and worn out. The eastern half of the old hospital was converted into quarters for nurses. Here, repairs and alterations were made throughout, baths, lavatories, and plumbing renewed, and furnishings and equipment provided for 15 nurses and 3 servants. A change from steam to hot water heating was effected throughout the entire building.

In the reconstruction of this end of the building all communications with its western half were cut off by bricking up the various entrances. A doorway was built to the south and the old one to the north maintained. The various floors are reached by a stairway in the rear or north end of the building, which, as a means of exit from the third and fourth stories in the event of fire is considered inadequate. Fire escapes could be put on the building at but little cost. It is believed that the establishment of this well-appointed home for nurses on the reservation will result in a marked degree of contentment among them and a consequent maximum efficiency obtained for the institution.

GREAT LAKES, ILL.—The reopening of this hospital has been fully justified. The number of patients treated has increased to such an extent that at present over 100 patients are being taken care of, [illegible] the hospital is normally an 80-bed institution. With the [illegible] of patients much trouble has been experienced [illegible] berth the [illegible] Even with the size of the Navy [illegible] this [illegible] found necessary, and with the [illegible] the pr[illegible] Congress the pressure will be [illegible] is in ev[illegible] y a great credit to the service, [illegible] and [illegible] unsurpassed. Unfortunately [illegible] contagious diseases, which [illegible] ticularly so on this station, [illegible] andles youths of a sus- [illegible] ver, etc., have caused [illegible] ce with efficient work [illegible] should be provided. [illegible] relaying tiles, walks, [illegible] eplacing, and all of [illegible] and need replace-

[illegible] the commanding [illegible] ation of this is, [illegible] nd appropriate [illegible] rvation is de- [illegible] nt situation [illegible] s providing [illegible] naval dead.

LAS ANIMAS, COLO.—The excellent professional side of the work done at this hospital has been discussed on page 10.

The work of graveling the roads has been continued as opportunity offered during the year. The majority of the pines and elm trees which had been set out during the preceding two years are alive and made a good growth, and 90 per cent of the pines and ash trees transplanted this year are alive and doing well. About 500 rose bushes were presented to the hospital and were set out in February and all are in thrifty condition at present. The vegetable garden furnished an abundance of such vegetables as were spared by the unusually late frosts in the spring; in a few instances it was too late in the season to reset the plants killed in this manner.

Cost of daily ration for fiscal year:	
1912	$0.781
1913	.739
1914	.721
1915	.672
Cost of daily ration for fourth quarter, 1915	.637
Cost of daily ration for first quarter, 1916	.576
Cost of daily ration for second quarter, 1916	.524

It is to be noted that with this marked reduction in the cost of the ration there has resulted an improvement both in its quality and variety. It seems reasonable to expect a further reduction of about 2 cents in the average cost of the ration during the remainder of this fiscal year. The service from the bakery has been entirely satisfactory.

Development work on the farm has continued. Not more than 50 acres of the original prairie land which is available for agricultural purposes remains to be broken up. About 2,400 bushels of grain were harvested, which will be an ample supply for all farm animals for the year; also an abundant supply of first-grade alfalfa hay. About 500 tons of barnyard manure were obtained from a neighboring ranch and ploughed into the various fields in addition to green manure for about 50 acres of sweet clover, alfalfa, and oats. In addition to the routine work about the farms and building area, the farm teams have hauled more than 900 tons of hospital stores from Las Animas and Rixey. A costly outbreak of hog cholera occurred during the late fall and caused the loss of nearly 100 of the herd of hogs in various stages of development—50 per cent of the entire herd. Fortunately all but three of the brood sows were saved and should only suffer a loss of about six months in the normal development of the herd.

During the past year the hospital has expended $12,506.86 for milk and cream. The present Congress has provided $25,000 for the establishment of a much needed dairy. The hospital has been [illegible] per gallon for milk, which it can now easily produce [illegible] is a most desirable and satisfactory addition to the

[illegible] I.—Improvement of the grounds has progressed [illegible] A fence inclosing the grounds on all sides [illegible] front has been built. This construction is post- [illegible] sts carrying two rails of 2-inch galvanized iron [illegible] ce a privet hedge has been planted. This, as

the hedge makes growth, will serve very well to protect the grounds from outside trespass. The public are permitted to pass through the grounds by a pathway along the sea wall; there has been little disposition to gain unauthorized admission. Outside lighting of the grounds, by a series of 18 high-power lamps on ornamental iron pillars bordering the front and rear roadways and the wharf, has been installed.

The embankment facing the harbor has been graded along the new section of sea wall and a footing of turf laid; the upper surfaces will be seeded in the spring, thus completing the improvement of the waterside. A graded and graveled pathway has been made along the sea wall at the foot of the embankment, which is open to the public.

The large area which had been plowed in the autumn was cleared of stone, the old roads and paths surfaced with soil and seeded in the spring, and is now in good turf throughout. The section in the rear of the main building, facing Third Street, which had been the dump for broken rock and soil from the foundation excavation, has likewise been cleared, leveled, topsoiled, and seeded with like results. The low area in the northeast corner of the grounds, adjacent to the power house, has been about half filled with cinders from the power plant and surfaced with topsoil.

The completion of this section will practically finish the improvement of the grounds. In the way of arboreal embellishment, a screen of evergreen trees, 30 in number, 10 feet high, has been planted, bordering the roadway to the rear entrance on Third Street. At the front entrance two groups of dwarf conifer evergreens, 36 trees, have been planted; the oval in the driveway facing the front steps has been beautified by a central bed of hardy rose bushes and on the margin a plantation of pyramidal box trees.

NEW YORK, N. Y.—Three new contagious units of standard design have been erected in the northwest corner of the hospital reservation. These are one-story brick buildings, each having one ward, susceptible of division into three compartments, diet kitchen, ward toilet, quiet room, medical officer's room, nurses' room, toilet for nurses, and two halls.

OLONGAPO, P. I.—The *Relief* is still, as condemned in my report of last year, the only hospital on this station, and as such has met the needs arising. The condition of the ship in general is poor, and unless a considerable sum is expended another year will practically necessitate rebuilding of the entire hospital part of the ship. The sanitary condition is poor due to the rotting woodwork, the medical ward needing a wooden deck to replace the canvas covering, and the boat deck and screened infectious ward are leaking badly in spite of recanvassing and pitching, making the quarters of the medical officers and Hospital Corps at times uninhabitable.

PHILADELPHIA, PA.—The undesirable location of the present hospital reservation, the insanitary commercial neighborhood, and the great distance from the source of the majority of its patients—the navy yard—make it more and more evident that a new hospital should be constructed nearer the navy yard. With the increase in the naval personnel this will become decidedly more evident and unless carried out additional construction will be needed on the present site.

Quarters for female nurses are also needed, as the Government is at present using the expensive plan of renting quarters in the city of Philadelphia, not only an extravagant but an inconvenient substitute.

PORTSMOUTH, N. H.—This new hospital is doing excellent work, expanding in scope each year. The total number of patients from the active list of the Navy during the calendar year 1915 was 816, with 22,939 sick days, or a daily average of 62.8 patients. In addition to these there were under treatment 27 supernumeraries, with 551 sick days, making a total of 853 patients, with 23,490 sick days, or 64 patients per day. Compared with preceding years there were, in 1914, 17,392 sick days and an average of 47 patients per day; in 1913, 7,059 sick days and an average of 19 patients per day.

The commanding officer, in commenting on the excellence of existing conditions, points out, however, the needs of quarters on the hospital reservation for the medical and Hospital Corps staffs, the need of an infectious disease pavilion, and the need of a suitable stable and garage, as well as additional storage facilities.

PUGET SOUND, WASH.—The general condition of the hospital grounds remains about the same, although there has been considerable work and attention given to keeping the grounds in an attractive condition. Early in the year the new infectious wards were completed, and have proved a great success, although only a few cases of smallpox, chickenpox, mumps, and measles have been admitted. One house is used as a venereal ward and is found to be a great improvement compared with the damp vacant basement of the main building that was formerly used for such cases.

The following cases of contagious diseases were admitted, i. e., 2 cases of smallpox, both recruits from the receiving ship, and who had previously been sent from the Salt Lake City recruiting office to this station, where there are no means of segregation of men recently entering the service. Both cases, although of a confluent type, recovered and were discharged to duty in good condition. Two cases of cerebrospinal fever developed on ships in the reserve fleet. One died and one thoroughly recovered and was restored to duty. There were 7 cases of chickenpox of a mild type, 4 cases of mumps, and 5 cases of measles.

The new automobile ambulance which was purchased in May has been a source of comfort to the patients in transportation, and the necessary work has been greatly facilitated by its use. A suitable temporary garage was built at small cost and has been satisfactory. A very much needed stable has been built within the grounds and was occupied late in December. It will undoubtedly be a source of convenience as well as more economical for future use.

WASHINGTON, D. C.—The annual report of the commanding officer of this hospital is most complete in its discussion of all points of value to the service, including buildings, material equipment, Hospital Corps, patients, etc.

During most of the year only two or three wards of the hospital have been utilized. The receipt of a large number of patients from the *Solace* early in the year caused all beds to be filled, and there was an overflow of patients to the top floor of the hospital corps building where there are two wards suitable for such purposes. In that

locality patients capable of walking were quartered, such as were able to go to the mess room for meals. Of course such a situation requires additional members of the Hospital Corps.

During the year the hospital continued to receive from various stations patients having mental disorders in varying degrees. Quite a number of them were ultimately transferred to St. Elizabeth's Hospital, and some were found to be of such character as to permit discharge from service.

In connection with the subject of mental disorders the hospital has been impressed with the number of cases of paralytic dementia and consequently the effect that syphilis continues to have on the naval service. Another situation is that some of these cases when subjected to intensive treatment have been found to improve to the extent of appearing quite normal to their friends and relatives. During that time it appears quite possible that in some cases there may be request or desire for return to duty. However, the point can not be too strongly emphasized that no person with such history should ever again be placed in a position of responsibility.

The facilities afforded at this hospital during the year for the treatment of disease and injury have been excellent. Results obtained from operations have been excellent as a rule. In connection with operations the underground tunnel connecting the main building with the sick officers' quarters has continued to afford a convenient and proper route for the transfer of officers to and from the operating room.

The hospital received during the year the usual number of retired officers as patients. At times all rooms available in the sick officers' quarters have been occupied. There are indications that the facilities afforded here for the care of such officers are being more extensively realized. Not a few officers on the active list were received during the year for observation and for consideration thought necessary in view of health records showing continued absence from duty. A few of these cases have come within the domain of psychiatry.

NAVAL STATIONS.

GUAM, M. I.—The work of the Medical Department in Guam continues to impose a heavy burden of responsibility upon the medical officers attached to the station. The care of a 13,000 native population as well as the naval personnel, the executive details of the hospital, the sanitation of the entire island, quarantine precautions, etc., indicate the scope of activities demanded. There are no practitioners on the island other than our naval surgeons and no hospital other than that at Agana. The native realization of the benefits of such assistance decreases with the distance from the capital, and owing to ignorance, prejudice, or distance from Agana, only a small percentage of all cases are actually brought to the hospital, and but too frequently only when the patient is in a moribund condition and past possible recovery.

The work of the hospital keeps at a high state of efficiency and reflects great credit upon the medical officer in command.

GUANTANAMO, CUBA.—A suitable barrack building for the enlisted personnel is urgently needed. During the past year the men have been quartered in the construction building and from there they were

moved to the surveying barge and are now quartered in tents. During the greater portion of the year the climate is quite warm, and from a sanitary point of view men can be kept in better health and spirits if they are properly quartered. A barrack building presents many advantages over a station ship. The air space on a small ship is limited, and the ventilation is comparatively poor. If the barracks were constructed on the water front, to the eastward of the machine shop, a constant breeze would blow through the building, and the air passing over the water would be cooled. At this place there would be very few mosquitoes and sand flies.

The roofs of all the living quarters at the new station have been ceiled. The quarters have thereby been wonderfully improved and the occupants are far more comfortable.

The water question at this station is still an open one. It is believed that the best water in this region can be obtained from the Yateras River.

During the past year there were 318 cases admitted with a total of 3,767 sick days. The general health of the personnel of the station has been good. There have been a few cases of dengue, and two cases of tuberculosis developed on the reservation. There have been no cases of malaria.

KEY WEST, FLA.—The climate is essentially tropical. The presence of frost has never occurred, and the lowest temperature recorded was 41 degrees, which was more than 34 years ago. January is the coldest month and averages from 68 to 72 degrees. July and August are the warmest months of the year, with an average temperature of from 80 to 85 degrees. The prevailing summer winds, blowing from the east almost continuously over the island, render the long summer exceptionally agreeable. Occasional exceptions to the general average in temperatures occur, which last only a few days. The bed rock on which the station is located is composed of coral, with a top soil of coral marl. The flora is confined to that of the usual tropical variety, and its cultivation is carried on with success at the station.

The physical condition of the personnel is excellent. The average complement is 131. Number of cases transferred to the marine hospital, 31; number of sick days, 1,157. The percentage of sick days for the year, 2.4. The number of cases admitted to the yard dispensary ward, 53.

The sanitary condition of the station has been very good during the past year. There were no epidemics on the station. No cases of malaria have appeared which could be traced to conditions existing on the station or in the immediate vicinity. No cases of plague, yellow fever, or typhoid fever have appeared; but one case of typhoid fever has been observed, and this in the case of an officer in the Coast Artillery Corps, who came into this port with the disease, contracted at Tampa. This patient had received his typhoid prophylactic five years previously. Almost no venereal disease has appeared. The use of cowpox and antityphoid prophylactic is regularly carried out.

The health of the population of Key West has been very good during the past year, which result has its good influence on the health of the naval station. No cases of dengue fever have appeared during the year, where hitherto it has been prevalent. Tuberculosis and the gastro-intestinal diseases of infancy are the principal causes of death in the city.

NEW ORLEANS, LA.—Following a period of about three years, during which it was closed, the station was reopened in January, 1915. The station comprises about 210 acres of low, level land, roughly about one-half by three-fourths mile in extent, lying along the western (south) bank of the Mississippi, with a gradual slope away from the levee. Only a comparatively few of the yard blocks have been filled in to the established drainage level, viz, those upon which yard buildings are located. The remainder are from a few inches to 2 or more feet below this level. Three main covered canal drains traverse the station from near the levee to the opposite side of the yard, where they empty into the city drains. Surface water from all these unfilled areas does not drain into the above-mentioned canals, but through innumerable small ditches, which are habitually choked with vegetation and too low to flow into the city drains. The surface drainage of the whole station is therefore poor, and mosquitoes have been prevalent throughout the year.

All public buildings of the station are in apparent good repair and in good sanitary condition. During the year all buildings occupied as living quarters have been completely screened against insects, including porches thereof, and steps taken to render them rat proof.

The general health of the station during the year has been good. There has been no epidemic of disease. The percentage of sick for the year was 2.2. This does not include those cases transferred to the yard dispensary from ships, etc., for treatment.

PEARL HARBOR, T. H.—The total area of the Pearl Harbor reservation is 779.5 acres; subtracted from this is the hospital reservation of 40 acres. Roughly speaking, the reservation is bounded on the north and west by the harbor, and on the south and east by cane fields. Included in the reservation on the northeast is an island reserved for ordnance purposes, now used, however, as a base for the submarine flotilla.

The station is still in process of development. During the year five industrial buildings were erected and one refrigerating plant, one power and locomotive house, and one marine guardhouse on Magazine Island.

The following improvements in living conditions have been instituted during the year: Electric illumination of quarters which formerly ceased at midnight is now continuous; general illumination of reservation now obtains and telephone connection through the local exchange is now possible to all parts of the island of Oahu. Lawns are being developed around all the quarters and at the marine barracks and administration building; the planting of trees has been accomplished in a number of places.

Considering the disturbance of the soil, etc., in connection with the erection of buildings, construction of roads, etc., which has been prosecuted during the year, the general sanitary condition of the station has been very good.

Mosquitoes are present the entire year in great numbers, and on account of adjacent cane fields where breeding is facilitated in consequence of artificial irrigation, there does not seem to be much hope that their numbers will be diminished. The quarters are efficiently screened and fortunately the Anopheles mosquito does not exist in the Hawaiian Islands. A low, swampy area 10 acres in extent, in front of

the officers' quarters, a possible breeding place for mosquitoes, is now being filled. There are no other low or swampy places on the reservation which, in normal condition of fairly dry weather, might afford breeding places. Flies are few and not troublesome.

The water supply is from an artesian well some miles distant and pumped to reservation. It is of good quality. Plumbing and natural drainage are good.

There has been no unusual endemic or epidemic disease on the station during the year.

TUTUILA, SAMOA.—All public buildings with but two exceptions are in good condition. The station mess building has been thoroughly overhauled and is in fair condition. It is, however, still an old structure, infested with rats, and never can be made entirely sanitary. It should be replaced by a substantial concrete building of more permanent construction. Concrete is recommended not only on account of its durability, but also because it can be made more easily rat proof. The station bakeshop also can not be kept in good condition. It is old and unsightly, and should be replaced by a neat concrete structure. The bake oven has been rebuilt and now answers its purpose well.

The drainage and sewerage systems of the station have proven fairly efficient. As heretofore recommended, a system of open concrete drains would be an improvement; this would prevent stagnation and accumulation of débris, etc., which afford breeding places for mosquitoes.

The quality of the water is good, but its quantity, except during heavy rainfall, is entirely inadequate. A few days of dry weather, say 10 days for example, always means a shortage of water. There has been considerable drought during the year and the water shortage at times has been most serious. The normal annual rainfall in order to preclude absolute shortage should be 250 inches; this year, however, there was a total precipitation of only 156 inches. The drought was of some five months' duration, the lowest monthly rainfall being that of August, in which only 0.6 inch fell.

Health of the personnel: Total sick days during the year were 690, as against 945 in 1914 and 1,289 in 1913. Diseases giving this number of sick days were as follows:

Conjunctivitis	44
Abscess unqualified	61
Filariasis	62
Appendicitis	65
Gonococcus infection of urethra	17

Particular care has been taken with all cases of gonorrhea to prevent spread of the disease in American Samoa. All cases were carefully restricted and sources of contagion found among the natives were promptly sent to the Samoan Hospital and restricted there until cured.

Typhoid prophylaxis was given where needed. No cases of typhoid have occurred this year. There have been no epidemics.

In the Naval Medical Bulletin, July, 1916, is a valuable account of further points of interest and activity in the hygiene and sanitation of the islands.

NAVAL TRAINING STATIONS.

GREAT LAKES, ILL.—The health of the personnel of the station for the year 1915 was very good, and the general sanitary condition excellent. The admissions for carrier, diphtheria bacillus, were those of recruits, all being discovered by cultures from throat upon reexamination on reporting on the station. Of the eight cases of tuberculosis, chronic pulmonary, six were readmissions for the disease in officers ordered to appear before a naval retiring board. Mumps and measles are the most prevalent of the communicable diseases on the station. The number of cases of the latter disease have been controlled by daily inspection of the men, especially of the throat, and the immediate isolation of suspected cases and their effects. It has not been found difficult to eliminate cases of measles. The eradication of mumps cases on the station has never been successful. Daily inspection of the brigade is made during the prevalence of the disease, and suspicious cases are isolated for observation. All the drinking fountains are of the sanitary type and are carefully cleaned; and the mess gear is thoroughly sterilized before being returned to the racks. Occasionally a week or two passes without a case of mumps, then another case of the disease appears. The effects of each patient and suspect are removed from the barracks and sterilization done in each case of the disease.

The typhoid prophylactic was given to 2,186 men during the year. No untoward effects were observed, but in a few cases malaise, slight fever, and soreness at the point of inoculation were observed.

In 1914 flies and mosquitoes were prevalent on the station, the former so numerous as to become practically a pest. During 1915 the station was comparatively free from both flies and mosquitoes. This gratifying result is believed to be due in a great measure to the efficient method of weekly inspection of the whole station by the commissioned personnel. The inspection party is divided into three groups, each accompanied by a yeoman. Every building is therefore thoroughly inspected and note made of any defect requiring attention. The medical officer accompanies the commandant, and sanitary matters are discussed during the inspection. This division of the station into three parts for inspection purposes, and the thorough weekly inspection by the three groups of officers who inspect a different part of the station each week, is believed to be the only satisfactory method of inspection of such a large station as this is, and undoubtedly obtains the best results.

Since my last report there has been added to the filtration plant at this station a liquid chlorin sterilizing equipment. This equipment was installed with the chlorin meter in the pump room of the power house, with hard rubber piping for carrying the effluent of water and the chlorin to the clear-water reservoir in the filter plant, where it mixes with the clear water as it enters the reservoir from the filters. This method allows chlorin to be properly regulated and again gives the entire reservoir (225,000 gallons capacity) opportunity for absorbing any excess charge of chlorin which may accidentally be introduced. Since installation, September 2, 1915, chlorin has been fed continuously except one day when the meter clogged. Analysis of water taken from water faucets made at the naval hospital, approximately 10 times a month, show that since September 2, 1915, the

maximum bacteria have been about 10 per milliliter, and *B. coli* has been absent in all tests.

NORFOLK, VA.—The average complement for 1915 was 1,569, a reduction of 367 from the previous and even less by 75 than that of 1913. The reduced complement necessarily lessened somewhat the work done during the past year. However, some of the work accomplished by the medical department is represented by such items as 3,220 admissions and readmissions, 13,978 sick days, 2,467 vaccinations and verifications, 2,701 typhoid prophylaxis inoculations completed, 992 physical examinations for enlistment, 2,336 physical reexaminations of recruits, 5,363 examinations for transfer, 903 examinations for discharge from the service, and 106 medical surveys.

One hundred and four recruits arriving here with disqualifying physical defects were surveyed and returned to their homes. There were 33 causes for survey, and the principal causes were trachoma, 20; neurosis of bladder, 15; flat feet, 11; goiter, 7; and neurasthenia, 6.

The most important change made during the past year has been the placing out of commission and removal of the old receiving ship *Franklin*. This change was made in accordance with the past policy of the department of relegating from the service this class of vessels and was precipitated by the appearance of extensive leaks in the hull due to deterioration. Consequently, other quarters had to be found for the sick bay, medical storerooms, and examining room, which were formerly on board the *Franklin*. The sick bay and medical storerooms were removed to the U. S. S. *Cumberland*, which now occupies the berth formerly occupied by the *Franklin*. The examining room was installed in two bungalows adjacent to building 86, and seems satisfactory as to location and accommodations. Eleven new bungalows have been added to the 4 at building 86. At building 81 (detention camp) the sick quarters have been increased by adding a well-lighted dental office and room for the physical reexaminations of recruits. This room is also used for vaccinations and to administer all typhoid prophylactic injections. Thirteen new bungalows have been added at main camp and 9 at detention camp, and many other desirable improvements have been made, particularly as regards heating and drainage.

The natural advantages of the vicinity of Hampton Roads as a location for a naval training station were referred to in last year's annual sanitary report, and a recommendation was made therein against the past policy of improving and repairing this station and in favor of the construction of an institution of modern, substantial structures in line with those buildings of the other training stations of the Navy. The present site is not suitable for the construction of such an institution, and it is also very probable that these grounds and water front will be needed in the near future to add to the facilities of the navy yard. For the past several years the desirability of building barracks in which to house the crews of ships undergoing repairs has been discussed with increasing frequency, and if such policy were to be adopted by the department these grounds could be advantageously appropriated for that purpose.

Without doubt the shores of the waters of Hampton Roads offer many excellent sites for the pur[illegible] constructing a modern naval training station, and in part[illegible] unds of the Jamestown Exposition may b[illegible] for such purposes.

NAVY YARDS.

Boston, Mass.—As noted in my report of last year, the medical officer of the yard has been most zealous in visualizing and actively carrying out activities beyond the usual scope of prescribed duties. New fields have been invaded and all departments combined so as to make a solid front to fight for health and to coordinate the efforts of all for the general good. There is no more fertile avenue for the entrance of disease into the service than through the foodstuffs supplied by contract to the personnel. How this food shall be prepared is generally definitely specified in the contract, and Government inspectors are supposed to see that the specifications are carried out, but nowhere is it specified that these foods must be prepared in sanitary surroundings, that the bread, milk, meats, etc., should be handled by clean hands, and prepared in clean shops, and this is practically as important as the purity of the ingredients of which the food is composed. This, as generally outlined, opened up a wide and interesting field for work and one which was bound to produce beneficial results. With the hearty, intelligent, and efficient cooperation of the supply officer of the navy yard, the medical officer was able to have placed on the face of all contracts for foodstuffs purchased through the purchasing pay office in Boston the following legend, as part of each and every contract:

"No award shall be made to any dealer unless the said dealer's establishment appears on the approved sanitary list of the Consumers' League of Massachusetts, subject to the approval of the medical officer of the navy yard, Boston, Mass., or unless the said dealer's place of manufacture, preparation, and packing, and all appurtenances and utilities pertaining thereto, shall have passed a sanitary inspection by the medical officer of the navy yard. Furthermore, any and all contracts shall be voidable without notice, at the discretion of the Bureau of Supplies and Accounts, if at any time the dealer's establishment is removed from the approved list of the Consumers' League of Massachusetts, or if, in the opinion of the medical officer of the navy yard, the dealer fails to maintain a satisfactory sanitary standard. If a dealer declines to afford proper facilities for inspection, or hinders such inspection in any way, his proposal shall not be considered or his contract shall become void, as the case may be."

As a result of this the medical officer can now be sure that these foods are prepared in a sanitary shop by sanitary methods, that they are clean and free from contamination when they leave the storehouse. About 50 inspections have already been made under this clause, and while some firms have lost their contracts on account of the condition of their shops or their insanitary methods of handling foods, the majority have seen the mutual benefits to be derived from the regulations prescribed by the medical officer and have made such changes as would conform to those regulations. All of these establishments are reinspected from time to time as opportunity presents and contractors kept up to their contracts. All foods are inspected by a Federal inspector under the Bureau of Animal Industry of the Department of Agriculture before they are delivered to the ships. Thus we have three inspections to safeguard the [illegible]

the service; one for the ingredients of the foods, one for the sanitary surroundings in the preparation of the foods, and finally one as to the quality of the foods when delivered.

CHARLESTON, S. C.—The general sanitary condition of the yard and station has been excellent. The yard dispensary has been taxed to the limit and it has been constantly necessary to care for some of the sick of the station in tents.

There has been gradual improvement in the grounds, but the south end of the yard is still low and damp and partly covered by underbrush. The grounds about the industrial part of the yard and officers' quarters are in good shape and well kept. That portion of the hospital reservation lying south of Turnbull Avenue has been turned over to the Marine Corps by order of the department, and, like the hospital reservation itself, is in good condition. The water supply has been satisfactory in quantity and quality.

There was the usual epidemic of typhoid fever in Charleston during the summer and early fall months. There were no cases among the enlisted personnel or in the officers' families. There was also an epidemic of smallpox in the county, but no cases in the yard.

MARE ISLAND, CAL.—The sanitary condition of the station in general has been excellent and the health of its personnel very good throughout the year. The relative diminution of disease incidence noted last year as compared with several preceding years has continued. There occurred among an average of 1,013 officers and enlisted men the following cases of epidemiological interest: Influenza 7, tonsillitis 13, malaria 7, mumps 7, measles 2; but 1 case of pneumonia (bronchial). There were 2 deaths, 1 from accidental drowning and 1 suicide by carbolic acid.

The sanitary condition, activities, and facilities of the yard itself have been maintained fully as well as could be expected considering funds available and required for renovating streets, heating system, and public works generally. The civilian sanitary inspector gives his whole time to details for the greater part of the year, but during the rainy season devotes half days to other work. The nuisance of marsh mosquitoes has been largely removed by burning and petrolizing the tule marshes back of the civilian quarters at northwest side of the island. It was found that dikes and ditches would involve greater expenditure of funds than could be obtained, but, at any rate, the present source of these mosquitoes has been conclusively shown by the department of public works.

The rainfall for 1915 was satisfactory, 23.3 inches, and up to January 13, 1916, for this season 12.78 inches had already fallen, assuring adequate water supply for Wildhorse Valley, Vallejo's and the navy yard's supply for 1916. The city of Vallejo will have to take steps to increase its storage facilities soon, with largely increased population expected for extensive shipbuilding work being authorized for this yard, for with one or two years of low precipitation, as experienced in 1912 (11.6 inches), local activities could hardly again be maintained without materially increasing the water impounded.

The civilian force of yard employees averaged 2,334 men during 1915.

Total number of workmen given first-aid at yard dispensary	2,557
Total number sent home after treatment	208
Total number receiving redressings	386
Total number of deaths (killed in yard)	0

A week rarely passes that one or more injury or disability cases do not demonstrate clearly that it is to the decided advantage of the Government that applicants for civil employment be examined by some Government physician who is not pecuniarily or otherwise interested in the applicant to the prejudice of the interests of the Government. Heads of departments employing new men are now much more interested in thorough physical examinations and careful handling of injury cases than they seemed to be before injury claims were assessed against the particular yard from which they emanated.

The certification of injury claims has continued without material differences of opinion or any friction with civilian practitioners and the only cases that have been sent to the official referee appointed by the Department of Labor have been where the employee himself has either not reported for examination, declined to acknowledge himself fit to resume work, or preferred what appeared to the naval medical officer an unjust claim—either from absence of injury or disability, or with nonofficial origin.

The Naval Medical Supply Depot filled 361 requisitions during 1915, to the value of $50,829.40, the last quarter of the calendar year amounting to $21,047.32. Instead of gradually accumulating a reserve stock of nonperishable medical stores, dressings, instruments, etc., for issue in times of stress, when the majority of items would be most difficult to obtain, at least in western markets, the stock for current needs at this depot has been depleted about 20 per cent; the value of stock on hand January 1, 1915, was $61,762.63, and on January 1, 1916, but $49,995.82.

New York, N. Y.—From an average of 5,365 civilian employees, the yard dispensary furnished first-aid to 4,501 cases of injury, which is 1,275 more than for the previous year and 2,401 more than for 1913. This large number of injuries for the year makes an average of over 15 cases per working day, or nearly 1 every 30 minutes and when it is taken into consideration that the majority of these cases are treated at this dispensary throughout the entire period of their disability, each case reporting daily for treatment, the magnitude of the work done here can be easily realized. In addition to the above it has often been found necessary for a medical officer to visit a yard employee at his home to determine the progress of his disability.

There were many visits to the homes of officers and families entitled to medical treatment outside the yard. Many prescriptions, written by medical officers and civilian physicians, were filled at the dispensary for the families of officers and enlisted men. One hu[illegible] and sixty-six officers were examined preliminary to their a[illegible] physical exercise and many officers were examined at the ex[illegible] of sick leave to determine their physical fitness for du[illegible] were made to the homes of retired officers and [illegible] determine the cause of death. Many candidates [illegible]

the Naval Academy from the adjacent congressional districts were given the preliminary physical examination to ascertain the probability of their passing the required physical examination.

There was paid out during the year $35,892.98, or about $118 per working day, for disability compensation, under the act of May 30, 1908, which is $8,871.11 more than for the previous year; but when it is considered that there was an average of 435 more workmen employed and 1,275 more injuries during the year 1915 than during the year 1914, the proportionate increase is not great. Accounting for the large increase in the number of injuries, as noted above, it is believed that many more of the minor injuries are now reported than was formerly the case, due to instructions recommended by the medical officer. Three yard employees received compensation for one year each, their incapacity disabling them for that time.

There were 50 employees examined physically for promotion; 40 trainmen examined for color blindness, vision, and hearing; 1,649 unclassified laborers given civil service physical examination, and 4,501 civil service forms No. 1,800 were filled out, showing markings for physical ratings during the year.

One yard employee died from septic poisoning as a result of an injury received in the yard, this being the only death recorded.

The majority of the accidents were of minor severity, not requiring the period of 15 days necessary for compensation. A number of cases of malingering or exaggeration of condition were detected and referred to the physician of the Department of Labor, who in all cases agreed with the findings of the medical officer of the yard. A number of cases that were considered as fit to return to work by both the medical officer and the physician of the Department of Labor prior to the period which would entitle them to compensation did actually remain absent 15 days or longer upon their own responsibility, and on submitting claim for compensation were paid in full for the whole period absent.

PHILADELPHIA, PA.—Throughout the year the health and sanitary condition of the station, as far as these concerned the medical officer of the yard, were very good. All of the acute contagious and infectious diseases common to this latitude have been present to a greater or less extent in Philadelphia, but none has originated within the yard in the sense of spreading from a developed case which was infected outside, and no case of illness suggests in any way the existence of unwholesome, avoidable influence, either direct or indirect in effect, within the limits of the yard.

The preparation, issue, and dissemination of information concerning matters of hygiene and sanitary importance to all on this station, including the Reserve Fleet and visiting ships, and concerning matters of broad professional interest to visiting medical officers has been continued throughout the year and has been greatly appreciated by the recipients. The facilities and assistance offered by the dispensary have been in almost daily demand, and if impartial comment of those supposed to benefit may be taken as a fair criterion the me[illegible]ent is justified in believing that its activity has [illegible] maintain cooperative effort, to place timel[illegible]sts for those interested, and to effec[illegible]neral sanitary condition of the [illegible]

There are 717 cases of accident among civil employees recorded at the yard dispensary for the year, of which 280 were given injury time, making a daily average of 20.5 men carried on the list and accounted for as absent because of disability incurred while on duty. The number that returned permanently to duty was 715, the remaining 2 necessary to balance those given time being accounted for by death. The difference between the total number reporting at the dispensary for injury (717) and the number of those given injury time (280) is 437, which number represents those whose injury was so slight or in such a locality that it was not necessary to grant release from work. It is worth noting that most of this group really desired to return to work and many cases to which the dispensary would have granted time actually insisted that they were able to return to work. These could be picked from among the good men and the new employees who had not been acquainted with the illegitimate possibilities of the liability law by immorally disposed associates. Of course, no case in which there would be the slightest danger from continuing work was allowed to do so. On the other hand, many men reported with trivial injury who refused to return to work—flagrant examples of a growing tendency among employees to exaggerate their conditions and take illegitimate advantage of a beneficent law and who unfortunately for the example and precedent thus established succeeded in their aim, despite all that was done or said to reassure them, to shame them, or to inspire a proper spirit and a loyalty to their work, their fellow employees, and the reputation of the navy yard in turning out jobs economically. The disposition exhibited in such behavior is pernicious and the 15-day provision of the law and the present system of determining disability favor it.

It is also interesting to note that of the total number of injuries reported at the dispensary, 302, or 42 per cent, were the result of carelessness on the part either of the individual, as in 229 cases, or of a fellow workman, as in 73 cases.

SANITARY CONDITIONS AND MEASURES IN GENERAL.

The activities of the Medical Department of the Navy during the past year have been unusually marked. Naval and military developments of this portentous epoch of military history are consequently being observed, and proper use made thereof in the plans and activities of our own service. Our medical officers detailed for observation purposes with the warring powers are possessing themselves of all facts available pertinent to the medico-military aspects of naval life. The bureau has been most fortunate in detailing for this duty officers most highly fitted for this important duty. The excellent report of Surg. Fauntleroy, elsewhere referred to, represents only a very small part of the valuable material which has reached the department.

The usual routine work of the Medical Department is constantly on the increase, added to which are extensive considerations of many practical problems in connection with questions pertaining to the health and welfare of the personnel, to organization, preparedness for war, aviation duty, submarine hygiene, preventive medicine, etc.

he work of the bureau has also been extending with many new nsibilities in connection with the thousands of workmen em- d in our navy yards, the important work in connection with ces in Haiti and Santo Domingo, and the efforts to improve tary and living conditions in Haiti imposed upon us by our eaty with that nation, a work that will equal the sanitation a.

ND SANTO DOMINGO.—Haitian affairs have resolved into the formation of an orderly system of government, United States is doing its utmost to lend assistance ith the preservation of a Haitian national integrity.

treaty signed at Port au Prince on September 16, 1915, fore- asted the formation of the Haitian gendarmerie, and the Congress of the United States provided by an act approved June 12, 1916, for a stable constabulary which is officered by members of the United States Marine Corps, and a sanitary supervision of the same by medical officers and hospital corpsmen of the United States Navy.

A careful preliminary sanitary survey of public health conditions was made in the early days of occupancy by Passed Asst. Surgs. H. A. May and P. E. Garrison, United States Navy, embracing observations on natural conditions, description of the existing sanitary and public health situation, discussion of Haitian public health laws, organization, and equipment, with specific recommendations. This has been a material aid in properly organizing new lines of endeavor and in proposing sanitary legislation.

A report upon the tropical diseases prevalent in Haiti has been prepared by Dr. Garrison. This report covers a period of practically one year of observation and laboratory study at the native hospitals. Annual curves show the relative prevalence of the more important diseases during the different seasons of the year. Malaria and the intestinal infections show very striking seasonal exacerbations. These studies establish the fact that Haiti, as a place of residence, presents no special dangers to foreigners from the viewpoint of health, with the single exception of malaria, against which it is possible to take effective precautions.

Our medical officers, acting in amicable unison with a commission of leading Haitian physicians, have gone over the existing laws relative to public health matters, and new laws have been drafted making necessary changes. Certain of the more important of these changes are now being put into execution under the present régime of military control until such time as the proposed alterations of the Haitian statutes can be secured.

Complete plans for the gradual rebuilding and equipment of the Haitian general hospital and medical school are ready to be put into execution as soon as the financial matters of the government are settled. It is estimated that this project can be completed in about five years at a total cost of approximately $100,000.

The proposed reorganization of Haitian public health service is based upon the organization which was found to work with such satisfactory results in the Philippines, certain consideration being given to the French ideas and the local custo[illegible]vides for the employment by the Haitian Go[illegible]cialists in the various branches of the me[illegible]tablish-

ment of reciprocal relations between the Haitian Government and the Governments of the United States and the Latin-American Republics in public health and sanitary matters. This I believe to be of particular importance in breaking through the isolation from which Haiti has always suffered in matters medical as well as economic and political.

A gradual process has finally evolved a systematized gendarmerie, the greater part of the work of attending to medical and sanitary details having been ably handled by Passed Asst. Surg. F. X. Kobes, United States Navy. This officer has been appointed director in accordance with the provisions of the above act, and has as his assistants the following inspectors of the gendarmerie: Asst. Surgs. John T. Borden and J. B. Helm, United States Navy, and 3 hospital stewards, United States Navy, with rank of first lieutenants, and 6 hospital apprentices, first class, United States Navy, with rank of second lieutenants.

Santo Dominican revolutionary outbreaks necessitated the presence of an armed force of United States Marines in May of this year. A portion of the expedition in Haiti was detached for this purpose, together with forces from the various ships available, and these were reinforced by orders early in June to the fourth regiment, then stationed at San Diego, Cal.

Headquarters landed at Santo Domingo City at 7 a. m., May 22, and organized as the United States expeditionary force operating ashore in Santo Domingo, with Passed Asst. Surg. N. T. McLean as chief surgeon, and the following is quoted from the latter's report:

"Inspection of the camp sites, fort, palace of justice, and hospitals of the city was immediately made. Sanitary conditions of camp sites were generally good; of the fort, palace of justice, and the site on the east bank of the river, bad. Sanitary work was already under way at the fort and palace of justice. The various hospitals in the city were crowded with Dominican patients and offered no possibility of use by our troops without causing disorganization and hardships to the civil practitioners and their patients. Passed Asst. Surg. Allen had obtained permission from the sisterhood operating the Hospital Beneficencia to use for a few days a portion of one ward in the hospital and at the time of inspection had 10 patients therein. Acting under instructions from the commanding officer to establish at the earliest possible moment a field hospital capable of accommodating the estimated sick and injured from the troops already in Santo Domingo, en route, and anticipated, every offered site or building was inspected. On May 23 an almost completed suitable building was found. This building is constructed of reinforced concrete, has 30 rooms, 6 bathrooms, its own water supply (38,000 gallons potable), and lighting system (acetylene); has cot room for 130 patients, with ample room for the housing of 12 hospital corpsmen, the necessary storerooms, kitchen, dispensary, operating room, offices, etc. The building was rented on May 24, and 17 patients transferred to it on May 26. While considerable minor construction is still under way, the building at date of this report has already proved its suitability for our needs. The local sanitary condition of the city of Santo Domingo is good. Local

authorities are at the present time vaccinating all the school children. They maintain a fairly rigid quarantine against Porto Rico, although our advices have not shown any new cases at Ponce or San Juan since June 1. Malaria is a menace, but not more marked than would be expected in any subtropical community. No quinin prophylaxis is being used. The water supply is very poor; lack of rain has depleted practically all cisterns of the one source of potable water. At present it is necessary to purchase distilled water from the ice plant for the use of the troops. A summary of the situation, in so far as the welfare of our troops in this Republic is concerned, does not suggest the likelihood of marked damage to their health. Santo Domingo City requires more care than either Puerto Plata or Monte Cristi, where the detachments are located in tents on well-drained land, with good water supply at both places. Mosquitoes and flies are a menace at both these places, but with completion of work already begun little trouble is anticipated."

RELIEF WORK.—In addition to the military activity ashore in Haiti and Santo Domingo the medical officers of the service have been of aid in various contingencies demanding humanitarian aid.

During the last five days of January, 1916, the continuous heavy rainfall in San Diego, Cal., and surrounding country caused an enormous rise of water in the Tia Juana River Valley; the river overflowed its banks and carried everything before it over a fertile and populous area comprising thousands of acres. The adjoining Otay Valley was likewise depopulated by the bursting of the lower Otay Dam, and homes, barns, railroads, orange and lemon ranches, and fertile soil were all swept out into San Diego Bay. Hundreds of people were left homeless and a few were drowned.

Medical attention was furnished to about 175 inhabitants by Asst. Surg. C. I. Wood, United States Navy, assisted by five hospital corpsmen. By February 15 the roads became passable to vehicles, and near-by physicians could be summoned; consequently naval relief was withdrawn.

During the recent uprising in China consequent upon the announcement by Yuan-shi-kai that a sovereignty existed with himself as emperor, considerable fighting took place in the Yangtze Valley. Asst. Surg. W. B. Hetfield, United States Navy, then at Chungking on duty on the U. S. S. *Monocacy*, laudably associated himself with the local Red Cross Society and extended material assistance in caring for the many wounded. A detailed report of this was presented in the October, 1916, number of the Naval Medical Bulletin.

Much assistance has been extended to American refugees in the coast towns of Mexico by medical officers of ships of the Navy which have received and transported these unfortunates. This has devolved an unusual line of cares upon the medical department, including the practice of obstetrics. Not only has the anomalous status of women and children on shipboard had to be handled, but constant guard has been necessary under the unusual conditions prevailing to prevent the access of epidemic diseases to the naval personnel under the medical officer's charge.

RECRUITING.—The following table presents the statistics for the calendar year 1915 on the total number of applicants for enlistment in

ment of recipro[illegible]
the Govern[illegible] ..umber rejected for all
Republics i[illegible]
be of par[illegible] 74,280
which H[illegible] 106,392
and pol[illegible] 4,292
A gr[illegible]
the g[illegible] 958
deta[illegible] 391
Uni[illegible]
acc[illegible] 2,361
an[illegible] 9,260
T[illegible] 753
[illegible] 8,188
[illegible] 1,105
[illegible] 3,149
[illegible] 1,647
[illegible] 273
[illegible] 597
[illegible] 1,196
[illegible] 7,751
[illegible] 730
[illegible] 4,598
[illegible] 1,455
[illegible] 25,621

[illegible] of acceptances is 30.18. During the last four [illegible] full or relatively full condition of the complement, [illegible] of applicants, and consequent ability to exert more [illegible] percentage of acceptances has decreased from an aver- [illegible] previous six years of 52.67 to the present 30.18. This [illegible] for the improvement in the physique of our personnel. [illegible] causes for rejection, eye conditions are mainly respon- [illegible] followed by flat feet, defective teeth, varicosities, [illegible] and heart affections. The present rigidity of physical [illegible] not only insures a fine standard of men but helps to [illegible] pension load of the Nation in future years. The urgent [illegible] more men, as would happen in time of war, could be met by a [illegible] lowering of the bars without entailing the acceptance of any [illegible] deficient types. The contending European nations are, [illegible] our standpoint, most lax in their physical standards, par- [illegible] so in eye requirements.

[illegible] SALVAGE OF THE *F-4*.—Shortly after the preparation of my [illegible] of last year final observations were received in connection with [illegible] final steps of the salvage of the *F-4*, and were published in full [illegible] the Naval Medical Bulletin of January, 1916.

Passed Asst. Surg. G. R. W. French's most scientific and detailed accounts of the diving operations bringing about the final raising, and Surg. W. Seaman's account of the recovery, identification, and disposition of the remains, close this most unfortunate incident in our naval history. The resistance of teeth to ravages of decay gave valuable evidence in establishing identity by crowns, fillings, etc., and emphasizes the need of a careful entry of all such upon the health records. It was also noted that shoes survived most markedly and that "the feet covered by the shoes were in an almost perfect state of preservation; the nails were in all cases intact, hair still adherent, the skin intact and natural in color. * * * It has been suggested

that metal tags, light in weight—aluminum, for instance—be attached to officers and men, especially those doing submarine work, and worn about the neck. Experience in this accident teaches that if worn about the neck they would have been useless, as all the skulls were separated from the bodies; but that if worn about the ankle they would have remained. It would be well to insist on a regulation requiring that the heels of all shoes be marked with the initials of the owner cut into the leather."

REPATRIATION OF REMAINS OF SPANISH PRISONERS OF WAR.—On April 12, 1916, with appropriate ceremonies, the remains of 31 Spanish seamen who died in 1898 while patients at the Naval Hospital, Portsmouth, N. H., were transferred to the naval transport *Almirante Lobo*.

By direction of the President of the United States the Secretary of State had arranged with the Spanish ambassador for the return of the bodies, and through the Secretary of the Navy gave directions that, as a special mark of respect to these brave men who gave their lives to their country and as a mark of esteem for the Spanish Government, the United States should undertake all of the work of disinterment, preparation, and removal of the remains and their delivery on board the transport.

This bureau had a representative in charge of the details of supervising proper disinterment, etc. As the official representative of the Government, Rear Admiral Austin M. Knight transferred custody of the bodies to Col. Don Nicolas Urculla y Cereyo, military attaché of the Spanish Embassy.

HOSPITAL CORPS TRAINING SCHOOLS.—The training schools for recruit hospital apprentices have continued to be unqualifiedly successful, and the results of this training, now becoming evident, more than justify the expenditure of the time and materials.

For the fiscal year ending June 30, 1916, the monthly average number of men under instruction at the school at Newport was 122.25, and at the school at San Francisco 61.9, or a total of 184.15 men. The courses have been improved, the subjects augmented in number, quality, and quantity, visits have been made to special laboratories, disinfection plants, etc., in the near vicinity, and laboratory and drug work of the stations has been taken over, particularly at San Francisco. Much practical instruction was thus afforded and more satisfactory and prompt examinations and reports obtained by the medical officers on stations concerned. To such men as show special aptitude, special courses in laboratory work and examinations are given. Special instruction upon the circumstances and conditions which may be encountered on duty with expeditionary forces has been given in connection with the drills and hygiene. Many men have become interested in the work and instruction obtained by hospital apprentices at these schools, and are showing an unusual interest in desiring to take up the rating. One thing only seems to influence them unfavorably, and that has been the lack of that opportunity of advancement afforded in other branches. It would appear that these two schools have each made a very favorable impression at the station concerned, not only by the presence of a better trained type of hospital apprentice but also by developing a new confidence in the endeavor of the medical department to more efficiently care for the sick.

The opportunity afforded for the elimination of those men who are found undesirable, inapt, or poorly adapted to the work of the Hospital Corps has enabled us to weed out a great proportion of those who formerly caused difficulties at other stations and on ships.

It is hoped that with these schools, the presence of a better quality of hospital apprentice and the additional intermediate ratings, that greater contentment and efficiency, and satisfactory advancement may be developed among the men of the corps.

The medical officers under whom the schools have had their development and guidance have devoted themselves most conscientiously and patiently to the work, and deserve great commendation for their untiring efforts.

The several hospital stewards who have been assigned as instructors at the two schools have performed their difficult tasks in a most creditable and satisfactory manner.

NAVAL MEDICAL CORRESPONDENCE COURSE.—Upon recommendation of the bureau the Navy Department on January 24, 1916, authorized the establishment of a correspondence course for medical officers of the Medical Reserve Corps. This course is also open to acting assistant surgeons of the Navy and to medical officers of the Naval Militia.

Acting assistant surgeons and officers of the Medical Reserve Corps on active duty are required to take the course, unless they have previously completed the regular course of instruction at the Naval Medical School.

The course is administered by the Naval Medical School. The object is to promote the efficiency of these officers by systematic instruction in naval forms, customs, regulations, and procedures.

The course will cover a total period of approximately one year and will be divided into two parts, the first part being devoted to instruction in the Navy Regulations and Naval Instructions as they pertain to shore duty. The second period will follow immediately after the first and will be devoted to the medical officer's duties afloat.

It is considered that the principal duties to which these officers would be ordered in case of emergency, where they would be the only medical officer attached, would be to recruiting duty on shore or as the medical officers of auxiliary ships. Therefore special efforts will be made to the end of preparing them for these duties, so that if called upon their services would be more valuable at once and they would be more confident and better satisfied with their work than would be the case were they without any preparation or knowledge of service conditions and procedures.

The subject matter furnished the student officers consists of:

(*a*) The Manual for the Medical Department of the U. S. Navy.

(*b*) Those portions of the Navy Regulations and Naval Instructions upon which medical officers of the Naval Militia are examined for qualification for mustering into the service of the United States, as provided by General Order 153, appendices A and B. Also all articles referred to in the Manual for the Medical Department, which are not included in General Order 153. All these extracts have been printed in book form, preserving the original article numbers and marginal notes.

(*c*) The circular relating to the physical examination of recruits.

(*d*) Bulletins which will be issued from time to time, dealing with such matters as uniform, receipt of orders and reporting for duty, honors, ceremonies, and salutes, the relations of officers to each other and to the enlisted personnel, duties with landing forces, naval hygiene, etc. The object of these bulletins is to give the officer some knowledge of the customs of the service and of his military position.

At intervals of about three weeks study matter will be assigned, question papers issued, and answers required, which last will be criticised and returned to participants.

The first session of the course opened early in October, 1916.

A description of the course and its purpose and an invitation to enroll was sent to all eligible officers of the Medical Reserve Corps and of the Naval Militia, and the responses received indicate a degree of interest that is very commendable, especially when it is considered that most of these officers are busy men, whose time is consumed by private practice, literary and research work, or teaching. On June 30, 98 officers had replied to the invitation, of which number 91 accepted and 7 declined.

PUBLICATIONS.—The issue of a quarterly professional publication commensurate with the dignity of the Medical Department continues to be the aim of the bureau in publishing the Naval Medical Bulletin. This has now finished its tenth year and has attained the excellent standing that it has in military and public health medicine because of the unremitting backing it has had from the necessarily very limited number of this corps from which it emanates. During the past twelve months 85 original contributions have been issued through its pages, embodying many lines of activity and thought, including not only strictly medical and surgical treatment, technic, etc., but also medico-military tactics, discussion of hospital ships, typographical data from the world over, studies on lighting, the mechanics and physics of diving, study of submarine ventilation, etc. The department of reviews has contained 190 abstracts of the progress in medical sciences, for which the bureau is indebted to the voluntary labors of 14 medical officers who devote a considerable amount of their time to this extra duty. Frequent reviews are also received from other officers throughout the service, indicating their own professional zeal, and stimulating that of others in the corps.

What I consider the ablest contribution on the medical side of the present war emanated from this bureau in December of last year, namely, the "Report on the Medico-Military Aspects of the European War" by Surg. A. M. Fauntleroy, United States Navy. Under orders from the Secretary of the Navy, Surg. Fauntleroy sailed from New York on April 24, 1915, and on arrival in France reported at Paris for duty as assistant to the naval attaché. His position as instructor in surgery at the Naval Medical School, Washington, D. C., had necessarily kept him in touch with all current advances in military surgery and aided him in the preparation of his most excellent report after his comparatively limited months of observation behind the allied armies on the western front.

The report is of 146 pages, with 218 halftones and line cuts, well selected and presented. Four thousand copies were printed for the Bureau of Medicine and Surgery by the Government Printing Office for distribution to the officers of the service and the profession

throughout the country. The demand was naturally one to quickly exhaust the supply, and a resolution for a reprint as a congressional document was passed by the House of Representatives, but has unfortunately not met the approval of the Senate. Copies are for sale, however, by the Superintendent of Documents, Government Printing Office, from his supply, at [illegible] cents per copy.

Another valuable handbook issued by the bureau this year is the Medical Compend for Masters of the Naval Auxiliary Service, for use [illegible] the United States Navy. The frequent occurrence of [illegible] emergencies aboard auxiliaries where [illegible] under the lay direction of the [illegible] a practical compend be evolved [illegible] the supplies furnished by the bureau, [illegible] easily comprehended way the [illegible] treatment of the commoner [illegible] hospital facilities, procedure in [illegible] on the primal principles [illegible] booklet was prepared by the [illegible] are to be commended for the way [illegible] task.

The Drill Book for the Hospital Corps was rewritten and issued in [illegible]

"The Navy as a Special Field for Medical Work" [illegible] has been issued as an exposition to the [illegible] opportunities for work and advancement [illegible] life.

[illegible] with the correspondence course for the Medical [illegible] mentioned on page 42, the bureau has issued two [illegible] The extracts from United States Navy Regulations [illegible] instructions includes all articles containing references to [illegible] medical officers ashore and afloat. No index is supplied [illegible] intended as a quiz compend, and no alterations have been [illegible] from the strict reading of the navigational publication.

The second correspondence-course publication is a revision of the [illegible] relating to the "Physical Examination of Recruits for Enlistment in the Navy and Marine Corps." Changes have been made in the former edition in the interests of clearness and progress. Particularly has the chapter on finger prints been revised and expanded, [illegible] addition of new plates. Three new chapters have been added, [illegible] supplementary notes in recruiting, hints for the inexperienced [illegible] naval and marine recruiting, and the physical examination of the personnel of the Naval Militia prior to being mustered into the service of the United States.

The revision of the supply table, a large work, has been completed and issued to the service. In addition to the standard supply table two special supply tables were prepared—one, the dental supply table, and the other, the medical outfit and supply table for expeditionary service. The latter supplied a long felt want and reflects great credit on the several officers who assisted in its preparation.

At the present time the Handy Book for the Hospital Corps is [illegible] complete revision. This book has been a most valuable [illegible] truction of members of the Hospital Corps afloat and

ashore, and must be considered a large factor of efficiency for that corps.

ESTIMATES AND APPROPRIATIONS.—The naval act for the fiscal year 1917 makes marked increase in all general appropriations over the appropriations for like purposes during the fiscal year ended June 30, 1916.

The total of all naval appropriations, exclusive of deficiencies, for 1916, was $149,661,864.18; that for 1917 is $315,000,000.

The appropriations placed directly under the cognizance of the Bureau of Medicine and Surgery are as follows: Medical Department, 1917, $921,740; contingent, medicine and surgery, 1917, $241,080; bringing home remains, 1917–18, $24,908.

The increase made in the appropriation Medical Department is in part for the accumulation of a very necessary reserve supply of medical stores for emergency purposes, also to meet the expenses incident to the medical care of the largely increased naval and Marine Corps personnel provided for in this same act.

The appropriation contingent provides for a special expenditure for the establishment at the Naval Hospital, Las Animas, Colo., of a dairy herd, and for the purchase of pasturage land and the erection of buildings.

The appropriation "bringing home remains" abolishes the deductions heretofore made from the gratuity pay for funeral and other expenses, in the sum of $75 and $35 in the case of officers and enlisted men, respectively, and makes the gratuity pay a really beneficent appropriation.

The other appropriations directly applying to the bureau are for public works and as such will be administered by the Bureau of Yards and Docks, as follows: Naval hospital, Chelsea (sea wall), $14,700; naval hospital, Newport (three contagious units), $18,000; naval hospital, New York (repairs house No. 4), $10,000; naval hospital, Port Royal (new building and changes), $15,000; naval hospital, Mare Island (mess hall), $15,000; naval hospital, Canacao (six contagious units), $3,600.

The six public-works appropriations, though aggregating but $76,300, are each and severally of value, and will provide in each instance for the most pressing need of the particular hospital concerned.

The Mare Island hospital, two years ago, by appropriation secured five contagious units buildings, thereby greatly increasing the bed capacity of the hospital at all times, and reserving the general wards for cases other than those of contagious diseases, but the general mess hall was so inadequate that it constituted the weakest link in the hospital chain, and in so far weakened the economical efficiency of the entire hospital. The appropriation made this year will double the messing capacity.

Further, the hospital at Newport, which cares for the apprentices of the training station, was in danger, at each outbreak of contagion on the station, of having so many wards occupied by contagious diseases that medical and surgical cases from naval vessels might be excluded. The appropriation made by this act gives this hospital an additional 60 beds, and keeps clear the general wards for the ordinary and usual cases.

PERSONNEL.

MEDICAL CORPS.—Under the provisions of the act of August 29, the Medical Corps will, with the present strength of the personnel, consist of a corps of over 600 medical officers, there being 6.5 medical officers allowed for each 1,000 officers and enlisted men of the Navy and Marine Corps. For some time past the shortage of medical officers has been seriously felt, ships, stations, and hospitals being run on reduced complements, and the increase provided represents the most urgent need of this corps. These officers will be distributed one-half of 1 per cent in the grade of medical director with the rank of rear admiral; 4 per cent in the grade of medical director with the rank of captain; 8 per cent in the grade of medical inspector with the rank of commander; the remaining 87½ per cent being distributed in the lower grades. In the lower grades medical officers will be promoted with officers of the line with whom and next after whom they take precedence. The act provides for the first time medical officers with the rank of rear admiral, in addition to the Surgeon General.

During the year ended June 30, 1916, 11 medical officers were admitted to the corps. The loss by retirement, resignation, or dismissal was 6, leaving the total strength of the corps on the above date 332. In making up the last class for the Naval Medical School 57 permits were issued. Of this number 17 successfully passed the preliminary physical and professional examinations; one of the candidates after successfully passing refused to accept his commission. Of those who failed 15 failed physically, 15 professionally, and 1 withdrew; 15 candidates failed to appear. At the final examination held after the course at the Naval Medical School, 11 successfully passed the examination and were commissioned assistant surgeons in the Medical Corps.

The activities of the Medical Corps during the past year have increased to a considerable extent. Every effort has been made and is being made to obtain properly qualified men for the Medical Corps, and plans have been developed to be put in force during the ensuing year which it is believed will decrease somewhat our deficiencies. The bureau realizes that for several years to come there will be a large demand for qualified medical officers in the Government services, and the problem of getting additional medical officers will not be an easy one.

MEDICAL RESERVE CORPS.—During the year, owing to the shortage of medical officers, it has been necessary to continue the services of a number of officers of the Medical Reserve Corps and to place additional officers of this corps on a duty status. The total number of officers in this corps, not candidates for the regular corps, is at present 109, 20 of whom are at present employed on active duty. During the year the bureau has developed a system of keeping track of these officers and of their fitness for duty in event of emergency, receiving a report from them each six months and otherwise keeping in touch with them. Valuable assistance in certain specialties has been rendered by members of this corps at the Naval Medical School and at some of our naval hospitals, and they have manifested a desire to maintain a friendly and a cooperative professional relationship with the regular officers on active service, and to improve their

knowledge of naval conditions to the end that their services may be of greater value should they be called into active service.

DENTAL CORPS.—During the year the small Dental Corps has rendered a considerable amount of dental service to the Navy and Marine Corps, as may be seen from the statistical record incorporated in this report. About one-third of the dental officers are at present serving on a sea-duty status, but the larger amount and also the most active dental work must be accomplished at the training stations, marine rendezvous, and larger navy yards and stations. Congress has now provided a more liberal allowance of these officers, and it is hoped that additional officers will soon make the services of a dentist available to a greater number of the officers and men of the Navy than heretofore. The Dental Corps has been completely reorganized and placed as near as practicable on the same basis as that of the Army. The act provides for one dentist for each 1,000 of the enlisted men of the Navy and Marine Corps. The new reorganization provides that these officers will hold the ranks of lieutenant (junior grade), lieutenant, and lieutenant commander, promotion to the rank of lieutenant being made after five years' service, and to lieutenant commander after 20 years' service. Previous legislation was incomplete, and did not provide for dental officers above the grade of assistant dental surgeon. The act also provides for the reorganization of the Dental Reserve Corps, granting certain recognition to the services of these officers if employed on active duty, as well as to officers of the Medical Corps under the same circumstances. The Dental Corps is a new experiment in the Navy and its usefulness will be better demonstrated as time goes on and its influence upon the personnel of the Navy has had time to accumulate.

HOSPITAL CORPS.—Following the recommendations repeatedly made during my present incumbency with a view to developing a more effective Hospital Corps and offering through opportunity for promotion suitable inducements for men to reenlist, there have been included as a part of the naval appropriation act passed by Congress this year provisions reorganizing and increasing the efficiency of this corps. These provide, among other things, for the appointment of as many pharmacists and chief pharmacists as appears necessary from time to time to adequately perform the duties demanded by the growing naval service. Lack of such provision has long embarrassed the medical department, and it is sincerely hoped that additional men in this grade may become available without undue delay, as their services are urgently needed at once throughout the service.

The act provides further for the much needed ratings of petty officer, first class; petty officer, second class; and seaman, first class, interposed between those now existing (chief petty officer, petty officer, third class, and seaman, second class). By means of these ratings a complete and satisfactory reorganization, classification, and development of the corps is made possible, establishing it upon the same plane as the seaman and special branches.

It is believed that the flow of promotion thus afforded will lead to contentment of the men, a willingness to enter the corps in place of the former hesitancy, more competent and desirable applicants, and greatest of all encouragement to those already trained and experienced in the Navy work to reenlist repeatedly and remain in the corps,

thus conserving effort and inviting initiative on the part of medical officers to train and educate men of the lower ratings. These ratings also afford opportunity for a better classification and amalgamation into the corps of men from civil life in the event of war.

The act also provides that the number of men of the Hospital Corps shall be 3½ per cent of the total enlisted strength of the Navy and Marine Corps. Should it be possible to enlist this number immediately it is believed that the corps will be sufficiently numerous to fill all complements and lend to an elasticity in assignments to such a degree as to bring satisfaction to all concerned in place of our present embarrassment. It will also entail a saving in money for transportation from place to place of available men, as it is expected that there will always be men on the ground awaiting general detail.

The advantages of this act appear as follows:

It provides a sufficient number of men to make the corps flexible, details easier, and to maintain full complements at all times, at all stations, and on all ships.

It provides intermediate ratings, better opportunity for promotion, and should stimulate enlistments in the corps not only in greater numbers but of more intelligent men.

Men who have ability for a certain amount of advancement may attain their ultimate standing rather than remain in an inferior rating because of a lack of opportunity.

It encourages competent men trained at Government expense to reenlist and remain in the service rather than seek a more promising field where this knowledge is an asset.

It eliminates discontent now existing in the Hospital Corps because men are denied that promotion provided for men in other branches of the service.

It provides for members of the Hospital Corps in keeping with ratings of other branches of the service.

It gives the commissioned warrant and warrant officers of the Hospital Corps the same status as is now or may hereafter be held by other commissioned warrant and warrant officers of the Navy.

It makes possible the utilization of pharmacists and chief pharmacists in places now occupied by junior medical officers, whose rates of pay are considerably higher, thus increasing the number of available medical officers and conducting the affairs of the Government at a less expense.

The efficiency of the Hospital Corps should be greatly increased.

The field of employment of the hospital corpsmen continues to grow extensively, the demand being now far beyond the supply of men. The present number of men has for some time been becoming more and more inadequate to meet the service necessary in supplying medical attention.

There has been no increase in the number of hospital corpsmen during the past year. On June 30, 1916, there were 1,585 (as against 1,584 on June 30, 1915), divided as follows: Hospital stewards, 365; hospital apprentices, first class, 740; and hospital apprentices, 480. This number is entirely inadequate properly to man all ships and stations and provide for special details and expeditionary forces.

There are about 75 men of the Hospital Corps now on duty with the marine expeditionary forces in Haiti and Santo Domingo.

It has been carefully computed that at least 2,255 men are required to make up the complements of stations and ships now in actual service or about to be commissioned. This number, however, does not provide for the emergencies always arising.

NURSE CORPS.—During the year 38 nurses have been appointed to and 41 have left the corps. Of this number 14 were given honorable discharge, having completed the term of service for which they were appointed. The majority of these nurses are reserve nurses and are available for duty should their services be required in any emergency.

Four names have been added to the list of seven who are eligible for promotion to the grade of chief nurse, but the number of stations to which nurses are detailed is so small that there is little opportunity for the promotions indicated by these recommendations.

The peculiar work at Guam has materially increased and additional nurses have been detailed to that station. Efforts have been made to place the instruction to the native nurses more nearly on the plane of training-school methods. Regular uniforms and caps have been authorized, and these changes have stimulated pupils and instructors to greater interest and consequent efficiency.

The first class of Samoan nurses was graduated this spring, and the exercises were made as interesting and attractive as was possible. The nurses were given diplomas signed by the commandant and governor of Samoa, and they were also given gold pins of appropriate design on which were engraved the names of the nurses and the date of their graduation. These nurses are now detailed to visiting nursing work in the various outlying districts. At stated intervals they return to the native hospital for review and further instruction. The success of this work in Samoa is demonstrated by the increase in the present class and the number who are now applying for admission in the class of 1918.

The civilian positions which require the services of trained nurses increase each year, and the pay and privileges offered usually exceed those allowed to members of the Nurse Corps; therefore this service appeals less favorably to the large number who prefer institutional work to private nursing. It is desirable to retain nurses who by length of service have become familiar with military environment, and it is also desirable to offer inducements to secure nurses who have established records for efficiency.

W. C. BRAISTED.

STATISTICS.

PREFACE.

TABLE 1.—Detailed statement of disease and injury.

(*a*) This table gives an alphabetical list of diseases and injuries showing the method of admitting and disposing of all cases of the force afloat (FA), at stations and yards (SY), at United States naval hospitals (H), and a summary with comparative data for 10 previous years.

(*b*) The class number (Roman numerals) refers to the classification of the Navy nomenclature as follows:

I. Diseases of blood.
II. Diseases of circulatory system.
III. Diseases of digestive system.
IV. Diseases of ductless glands and spleen.
V. Diseases of ear.
VI. Diseases of eye and adnexa.
VII. Diseases of genito-urinary system (nonvenereal).
VIII. Diseases of infective type (nonvenereal).
IX. Diseases of infective type (venereal).
X. Diseases of lymphatic system.
XI. Diseases of mind.
XII. Diseases of motor system.
XIII. Diseases of nervous system.
XIV. Diseases of respiratory system.
XV. Diseases of skin, hair, and nails.
XVI. Hernias.
XVII. Miscellaneous diseases and conditions.
XVIII. Parasites (fungi and certain animal parasites).
XIX. Tumors.
XX. Injuries (wounds, etc.).
XXI. Poisons.

(*c*) The international number refers to the classification of diseases and injuries prepared by the International Commission (Paris, July 1 to 3, 1909).

(*d*) In the case of wounds, etc., and poisons, key letters immediately following the title (e. g., Abrasion, unqualified "G") are given for classification of the cause of such injury, and are interpreted as follows:

A. Suicidal.
B. Homicidal.
C. Conflagration. Includes all injuries incident to general conflagration. Burns otherwise received are not classed hereunder.
D. Accidental drowning or submersion.
E. Traumatism by firearms, accidental. To include all injuries caused by the projectile, the blast from great guns, or from the piece when fired.
F. Traumatism by explosion. To include powder, gas, compressed air, or steam explosions; also the explosion of a gun.
G. Traumatism by fall.
H. Traumatism by machines.
I. Traumatism by other crushing.
J. Traumatism due to athletic sports.
K. Casualty in action.
L. Traumatism due to other external violence not classified above.

TABLE 2.—Table of diseases and injuries among occupational groups. This table shows the average complement in each group according to occupation, the number of admissions, deaths, invalided from service, sick days, and damage for each class of disability, together with a total of admissions, deaths, suicides, invalided from service, sick days, damage, and the rates per 1,000 for each occupational group.

TABLE 3.—Casualties in the Navy and Marine Corps. This table is a summary of deaths, showing the cause, number, and the distribution among the officers and men.

TABLE 4.—Discharges from the Navy and Marine Corps by reason of physical disability. This table is a summary of those invalided from the service or retired on account of physical disability, showing the disability, number, and the distribution among the officers and men.

NOTE.—The preceding four tables comprise the active service regardless of place or character of disability.

TABLE 5.—Summary of dental work performed.

TABLE 6.—Statement of total cost of maintenance and of average cost per diem for maintenance and subsistence at naval hospitals for the fiscal year 1916.

TABLE 7.—Statement of the activities of naval medical supply depots.

TABLE 8.—Statement of the naval hospital fund.

TABLE No. 1.—DETAILED STATEMENT OF DISEASES AND INJURIES FOR THE CALENDAR YEAR 1915.

NOTE.—To find the total for any one diagnosis, add together FA (force afloat), SY (stations and yards), and H (hospitals).

Diagnosis.	Place.	Taken up as—			Disposition.							Number of sick days this year.
		Remaining from last year.	Admitted.	Readmitted.	Duty.	Diagnosis changed.	Died.	Invalided from service.	Ran.	Transferred.	Continued to next year.	
DISEASES.												
Abscess about rectum (Class III, Inter. 110B).	FA	.....	67	5	56	2	.....	.....	....	12	1	362
	SY	.....	12	2	4	1	.....	.....	....	9	.....	36
	H	7	2	23	27	2	.....	.....	....	1	2	1,246
Abscess about urethra (Class VII, Inter. 125).	FA	1	6	1	5	.....	.....	.....	....	3	.....	50
	SY	.....	3	.....	.....	.....	.....	.....	....	3	.....	13
	H	.....	.....	6	5	1	.....	.....	....	.....	.....	193
Abscess, endamebic, liver (Class XVIII, Inter. 115).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	4
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	2
	H	.....	1	1	2	.....	.....	.....	....	.....	.....	88
Abscess of axilla (Class X, Inter. 84).	FA	.....	22	4	24	.....	.....	.....	....	1	1	99
	SY	.....	13	.....	10	.....	.....	.....	....	3	.....	105
	H	2	.....	4	4	1	.....	.....	....	.....	1	277
Abscess of brain (Class XIII, Inter. 60).	FA	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
	H	.....	2	.....	.....	.....	2	.....	....	.....	.....	1
Abscess of eye and adnexa (Class VI, Inter. 75C).	FA	.....	7	.....	7	.....	.....	.....	....	.....	.....	13
	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	7
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	11
Abscess of kidney (Class VII, Inter. 122).	H	1	.....	.....	1	.....	.....	.....	....	.....	.....	20
Abscess of kidney, perinephritic (Class VII, Inter. 122).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	5
	H	.....	2	4	1	1	.....	.....	....	2	2	269
Abscess of liver (Class III, Inter. 115).	FA	.....	7	3	2	2	.....	.....	....	6	.....	262
	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	22
	H	.....	4	9	4	4	2	.....	....	2	1	372
Abscess of lung (Class XIV, Inter. 98).	H	.....	1	.....	.....	.....	.....	.....	....	.....	1	170
Abscess of lymph node (Class X, Inter. 84).	FA	1	18	3	15	.....	.....	.....	....	6	.....	267
	SY	.....	8	2	7	.....	.....	.....	....	3	.....	158
	H	2	.....	8	7	2	.....	.....	....	.....	1	294
Abscess of pharynx (Class III, Inter. 100).	FA	.....	4	.....	1	.....	.....	.....	....	2	1	9
	SY	.....	2	.....	2	.....	.....	.....	....	.....	.....	4
	H	.....	2	2	3	1	.....	.....	....	.....	.....	45
Abscess of prostate gland (Class VII, Inter. 126).	H	2	.....	.....	2	.....	.....	.....	....	.....	.....	124
Abscess of scrotum (Class VII, Inter. 127).	FA	.....	9	.....	8	.....	.....	.....	....	1	.....	43
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	15

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Abscess, unqualified (Class VIII, Inter. 144).	FA	9	966	36	916	5	.....	.....	1	77	12	5,938
	SY	4	266	21	207	1	.....	2	....	77	4	1,610
	H	12	34	163	166	17	1	.....	....	6	19	5,966
Achylia gastrica (Class III, Inter. 103).	H	1	1	.....	1	.....	.....	.....	....	.....	1	81
Acidosis, nondiabetic (Class XVII, Inter. 55).	H	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
Acne (Class XV, Inter. 145C).	FA	.....	5	1	2	.....	.....	.....	....	4	.....	19
	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	2
	H	2	3	5	7	1	.....	.....	....	.....	2	792
Adenoids (Class XIV, Inter. 86).	FA	.....	9	.....	2	.....	.....	.....	....	7	.....	9
	SY	.....	6	.....	.....	.....	.....	.....	....	6	.....	4
	H	.....	1	13	10	3	.....	.....	....	.....	1	395
Adenoma (Class XIX, Inter. 46).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	1	1	1	2	1	.....	.....	....	.....	.....	200
Adhesions about stomach (Class III, Inter. 117).	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	2	.....	1	.....	1	....	.....	.....	18
Adhesions of peritoneum (Class III, Inter. 117).	FA	.....	24	5	10	.....	.....	1	....	17	1	107
	SY	.....	12	1	6	.....	.....	3	....	4	.....	66
	H	3	7	27	18	8	.....	5	1	1	4	1,667
Albuminuria (Class VII, Inter. 120).	FA	.....	8	4	6	.....	.....	.....	....	6	.....	42
	SY	.....	3	1	.....	1	.....	.....	....	3	.....	45
	H	1	2	9	6	6	.....	.....	....	.....	.....	286
Alopecia areata (Class XV, Inter. 145C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	8
Amaurosis (Class VI, Inter. 75C).	H	1	.....	.....	1	.....	.....	.....	....	.....	.....	11
Amblyopia (Class VI, Inter. 75C).	FA	.....	5	1	2	.....	.....	.....	....	4	.....	37
	SY	.....	4	2	2	.....	.....	2	....	2	.....	28
	H	.....	.....	6	1	2	.....	3	....	.....	.....	282
Amputation stump (Class XVII, Inter. 149).	FA	.....	7	1	.....	.....	.....	1	....	7	.....	66
	SY	.....	3	10	12	.....	.....	.....	....	1	.....	84
	H	4	5	9	6	2	.....	9	....	.....	1	1,313
Amyotonia congenita (Class XII, Inter. 149).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	0
Anemia of brain (Class XIII, Inter. 74).	FA	.....	2	1	3	.....	.....	.....	....	.....	.....	5
	SY	.....	.....	1	.....	.....	.....	1	....	.....	.....	0
	H	.....	1	.....	.....	.....	.....	.....	....	1	.....	26
Anemia, simple (Class I, Inter. 54).	FA	.....	6	2	2	.....	.....	.....	....	6	.....	48
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	1	3	12	7	5	.....	.....	1	2	1	323
Anemia, splenic (Class I, Inter. 54).	H	1	.....	.....	1	.....	.....	.....	....	.....	.....	32
Aneurysm (Class II, Inter. 81).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	4
	SY	.....	1	1	.....	.....	.....	.....	....	2	.....	0
	H	2	4	6	1	2	3	3	....	2	1	931
Angina pectoris (Class II, Inter. 80).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	3
	SY	.....	2	1	.....	.....	.....	.....	....	3	.....	181
	H	.....	1	2	.....	2	.....	.....	....	1	.....	23
Angioma (Class XIX, Inter. 46).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	4
Angiospastic edema (Class XIII, Inter. 74).	FA	.....	2	.....	2	.....	.....	.....	....	.....	.....	7
Ankylosis of joint (Class XII, Inter. 147).	FA	.....	7	.....	.....	.....	.....	1	....	6	.....	9
	SY	.....	8	.....	4	.....	.....	2	....	2	.....	37
	H	1	3	9	9	1	.....	1	....	.....	2	589
Anti-inoculation, unqualified (Class XVII, Inter. 189A).	FA	.....	105	.....	101	3	.....	.....	....	1	.....	277
	SY	.....	10	.....	10	.....	.....	.....	....	.....	.....	14
	H	1	.....	2	2	1	.....	.....	....	.....	.....	29

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Aphasia (Class XIII, Inter. 74).	H	1	1		1			1				44
Apoplexy (Class XIII, Inter. 64).	SY		3				2			1		0
	H			1			1					0
Appendicitis, acute (Class III, Inter. 108).	FA		298	28	108	3				213	2	1,805
	SY	5	138	27	53	6				107	4	1,384
	H	36	35	328	304	55	6		3	12	19	12,348
Appendicitis, chronic (Class III, Inter. 108).	FA	1	88	16	29	1				74	1	428
	SY	1	31	11	12	2				28	1	247
	H	7	33	115	118	16	1			4	16	4,616
Arterial sclerosis, cerebral (Class XIII, Inter. 81).	SY			1							1	27
	H		1							1		15
Arterial sclerosis, general (Class II, Inter. 81).	FA		2							2		3
	SY	2	3	7	3			1		7	1	566
	H		1	7	3		1	1		2	1	245
Arthritis, acute (Class XII, Inter. 147).	FA	3	62	10	52	2				21		732
	SY		9	1	7					3		44
	H	4	6	23	21	7				1	4	1,360
Arthritis, chronic (Class XII, Inter. 147).	FA		22	7	16					13		308
	SY	1	1	2	2			2				191
	H	10	9	18	9	7		4		8	9	2,838
Arthritis, deformans (Class XII, Inter. 48A).	H		1					1				12
Ascariasis (Class XVIII, Inter. 107).	FA		7		7							11
	SY		6		4					2		28
	H		33	4	36						1	242
Asthma (Class XIV, Inter. 96).	FA		19	15	15					19		280
	SY		11	10	8	1		3		9		202
	H		4	30	14	3		3		10	4	1,023
Astigmatism (Class VI, Inter. 75C).	FA		19	3	6					16		37
	SY	3	16	2	8	2		8		3		128
	H		8	28	20	9		2		4	1	764
Atrophy of muscle (Class XII, Inter. 149).	FA		2		1			1				19
	H	2			1			1				28
Atrophy of optic nerve (Class VI, Inter. 75C).	FA		1							1		0
	H	1	1	1	1			1			1	118
Atrophy of testicle (Class VII, Inter. 127).	FA		4		1					3		0
	SY		2	1				2		1		27
	H			4	4							82
Autointoxication, intestinal (Class III, Inter. 110B).	FA		37	3	34					6		216
	SY	2	9	3	9					4	1	328
	H		11	18	16	9				3	1	318
Balanoposthitis (Class VII, Inter. 127).	FA		7		5	1				1		18
	SY		5		3					2		20
	H		1	3	2	1		1				63
Blepharitis (Class VI, Inter. 75C).	FA		3	2	4			1				31
	SY		2		1			1				3
Bromidrosis (Class XV, Inter. 145C).	FA		2		2							16
Bronchiectasis (Class XIV, Inter. 90).	SY		1							1		0
	H		1	1		1		1				68
Bronchitis, acute (Class XIV, Inter. 89).	FA	4	573	13	517	13				54	6	2,881
	SY	3	725	43	385	11				371	4	2,765
	H	20	37	450	407	84				2	14	7,953
Bronchitis, chronic (Class XIV, Inter. 90).	FA		90	22	25	2				84	1	812
	SY		42	6	21	2		9		15	1	591
	H	14	20	112	65	47		13	1	8	12	4,926
Bronchitis, fibrinous (Class XIV, Inter. 90).	FA		1		1							27

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Bursitis, acute (Class XII, Inter. 149).	FA	1	30	2	26	1				6		245
	SY		10		6					3	1	46
	H			7	6	1						136
Bursitis, chronic (Class XII, Inter. 149).	FA		6	2	3					5		33
	SY		1							1		9
	H	1	2	9	7	3		1			1	417
Caisson disease (Class XIII, Inter. 74).	FA		2	1	1					2		30
	H			2	1					1		107
Calcification of cartilage (Class XII, Inter. 149).	SY		1		1							5
Calculus in bladder (Class VII, Inter. 123).	FA		2							1	1	18
	SY		2		1					1		0
	H			2	1	1						55
Calculus in ureter, impacted (Class VII, Inter. 123).	SY		1							1		0
	H			1	1							8
Callositas (Class XV, Inter. 145C).	FA		5		3					2		17
	SY		1		1							3
	H	1	1	2	4							73
Carbuncle (Class VIII, Inter. 143).	FA	1	38	1	33					7		259
	SY		12	1	10					3		96
	H	1	3	9	10	1	1				1	187
Carcinoma (Class XIX, Inter. 39–45).	FA		4							4		6
	H		4	6	1	3	2	1			3	654
Cardiospasm (Class III, Inter. 103).	FA		1		1							0
Caries of tooth (Class III, Inter. 99A).	FA		30	2	17			4		11		65
	SY		5	1	4			1		1		8
	H	1	3	11	12	1		1		1		282
Carrier, diphtheria bacillus (Class VIII, Inter. 9b).	FA		26		1					25		9
	SY		15							15		0
	H	1	3	43	40	1				2	4	1,583
Cataract (Class VI, Inter. 75C).	FA		3	1						4		0
	SY		1	1	1			1				0
	H		2	6	2					3	3	554
Cellulitis (Class VIII, Inter. 144).	FA	3	297	18	289	2				24	3	2,261
	SY	1	37	1	23					16		252
	H	5	19	42	57	5				2	2	1,925
Cerebrospinal fever (Class VIII, Inter. 61a).	FA		5				2			2	1	13
	SY		12				1			11		6
	H	4	2	23	16	12	1					804
Cerumen, accumulation of (Class V, Inter. 76).	FA		2		2							4
	SY		1		1							0
Chalazion (Class VI, Inter. 75C).	FA		4		4							2
	SY		3		2					1		2
	H			1	1							7
Chancroid (Class IX, Inter. 38A).	FA	13	1,777	166	1,803	20				131	2	3,123
	SY	2	411	44	389	10				50	8	1,074
	H	28	12	175	107	83			2	6	17	6,324
Chancroid of lymph node (Class IX, Inter. 38A).	FA	13	176	183	267	3				91	11	4,221
	SY	2	37	90	76	8				36	9	2,028
	H	26	6	90	68	33				5	15	5,194
Chickenpox (Class VIII, Inter. 19).	FA		34		13					21		195
	SY	2	4		4					2		56
	H	2	4	28	18	8			1		7	461
Cholangitis, acute (Class III, Inter. 115).	FA	1	125	3	92				1	36		1,127
	SY		24	8	20	2				10		342
	H	3	5	44	38	6				2	6	1,497
Cholangitis, chronic (Class III, Inter. 115).	FA		3	1	1					3		47
	H			5	3	1					1	227

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days
DISEASES—Continued.												
Contracture of muscle, fascia, tendon, or sheath (Class XII, Inter. 149).	FA		6	1	1			1		5		23
	SY		9	1	4			1		5		71
	H		1	11	6	1		3		1	1	458
Cornu (Class XV, Inter. 145C).	FA		1		1							6
	SY		1		1							0
Cramp of ciliary muscle (Class VI, Inter. 75C).	FA		1							1		0
	H			1		1						14
Cramp of muscle (Class XII, Inter. 149).	FA		9	1	10							24
	SY		2		2							9
	H			1	1							10
Curvature of spine (Class XII, Inter. 36C).	FA		4		1			2		1		16
	SY		1					1				6
	H			1	1							34
Cyclitis (Class VI, Inter. 75C).	FA		2	1	3							27
	H	1			1							50
Cystitis, acute (nonven.) (Class VII, Inter. 124).	FA		28	1	20					9		208
	SY		12	1	4					9		55
	H		1	18	12	7						523
Cystitis, chronic (nonven.) (Class VII, Inter. 124).	FA		5	2	1					6		20
	SY		3	1		1				3		3
	H	1	1	10	6	4					2	400
Cystoma (Class XIX, Inter. 46).	FA		20	1	12					9		31
	SY		9	3	6					6		25
	H	1	4	18	14	5				3	1	609
Dacryocystitis (Class VI, Inter. 75C).	FA		4		3					1		7
	SY		1	1				1		1		22
	H			2	2							55
Deafness (Class V, Inter. 76).	FA		11	4	3			2		10		101
	SY	1	7	1	1			5		3		35
	H	6	9	14	10	3		9		6	1	1,339
Deformity of nose, acquired (Class XIV, Inter. 86).	FA		14	2						16		3
	SY		4							4		0
	H	4	5	20	20	4		1	1	1	2	798
Deformity of penis, acquired (Class VII, Inter. 127).	FA		2							2		0
	H			2	2							48
Dementia, cause unknown (Class XI, Inter. 68).	FA		2							2		2
	SY		1							1		0
	H	3	3	13	1	9			1	6	2	704
Dementia paralytica (Class XI, Inter. 67).	FA		6							6		4
	SY	1	1	1		1				1	1	388
	H	8	10	21		6	5	5		13	10	3,155
Dementia precox (Class XI, Inter. 68).	FA		17	3	1	1				18		76
	SY		12	7				7		12		76
	H	20	21	101	2	19		39		67	15	5,717
Dengue (Class VIII, Inter. 19).	FA	1	100	1	89					13		475
	SY		85	2	70					15	2	323
	H	1	16	34	43	8						450
Dentition (Class XVII, Inter. 189A).	FA		7	2	5					4		14
	H		2	4	5						1	79
Dermatitis, unqualified (Class XV, Inter. 145C).	FA	1	39	4	36					8		276
	SY	1	12	1	10			1		3		343
	H		9	12	17	3					1	543
Dermatitis venenata (Class XV, Inter. 145C).	FA		16	1	14					3		83
	SY		18		17					1		66
	H		1	4	5							54
Detachment of retina (Class VI, Inter. 75C).	FA		1							1		0
	H			1							1	153

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Deviation of nasal septum (Class XIV, Inter. 86).	FA		67	4	2			1		63		25
	SY		67	2	4					64	1	38
	H	22	24	133	151	10		8	1	1	8	5,220
Diabetes insipidus (Class XVII, Inter. 55).	FA		2	1						3		28
	SY		1	1	1			1				0
	H	1		2				2		1		123
Diabetes mellitus (Class XVII, Inter. 50).	FA		8	1						9		22
	SY		4	5	3			1		5		128
	H	2	7	20	11	6		7		5		1,397
Dilatation, acute cardiac (Class II, Inter. 79C).	FA		4		1		3					4
	SY		1							1		0
	H			1	1							1
Dilatation, chronic cardiac (Class II, Inter. 79C).	FA		3	3	1					5		31
	SY			1						1		90
	H			5		2				2	1	49
Diphtheria (Class VIII, Inter. 9).	FA		21		6		1			14		141
	SY		7	1	2	1				5		110
	H	3	10	29	27	9		1			5	1,150
Duodenitis (Class III, Inter. 105B).	FA		5		4					1		22
	SY		4		4							51
	H		5	2	5	1					1	146
Dysentery, bacillary (Class VIII, Inter. 14A).	FA		2	1	1		1			1		14
	SY		2		1					1		8
	H			1	1							25
Dysentery, balantidic (Class XVIII, Inter. 14B).	SY		1							1		0
	H			1	1							9
Dysentery, endamebic (Class XVIII, Inter. 14C).	FA	1	28	13	23					19		451
	SY		22	13	15	1				19		179
	H	5	16	42	43	5	1		1	5	8	2,194
Dysentery, unclassified (Class VIII, Inter. 14D).	FA		41	9	37		1			12		297
	SY	1	26	3	19	3				8		209
	H	2	14	20	29	6				1		617
Dystrophy, progressive muscular (Class XIII, Inter. 63).	SY		1					1				0
Ecthyma (Class XV, Inter. 145C).	FA		3		3							31
Eczema (Class XV, Inter. 145C).	FA	1	46	12	43					13	3	396
	SY	1	30	2	20			1		10	2	294
	H	6	6	25	25	4		1		4	3	1,110
Elongation of uvula (Class III, Inter. 100).	FA		1							1		0
	H			1	1							19
Encephalitis, acute (Class XIII, Inter. 60).	FA		1	1						2		12
	H			1	1							20
Endocarditis, acute (Class II, Inter. 78).	FA		2							2		0
	SY		1	1						2		54
	H	1	7	3	2	4		4		1		769
Endocarditis, chronic (Class II, Inter. 78).	FA		1	1		1		1				20
	SY		1	2				2		1		27
	H		2	3	1			3		1	1	197
Enlargement of prostate (Class VII, Inter. 126).	FA		1							1		0
	H			1		1						2
Enteritis, acute (Class III, Inter. 105B).	FA		373	4	367					10		1,197
	SY	1	238	6	218					26	1	455
	H		12	38	34	15					1	449
Enteritis, chronic (Class III, Inter. 105B).	FA		5		1					4		24
	SY		2		2							34
	H			5	1	2					2	113

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Enterocolitis (Class III, Inter. 105B).	FA		8		5	1				2		24
	SY		2	1	1					2		11
	H		2	6	6	2						103
Epididymitis, acute (non-ven.) (Class VII, Inter. 127).	FA	4	21	7	26					5	1	225
	SY	1	16		12					5		105
	H	3	3	12	13	5						397
Epididymitis, chronic (non-ven.) (Class VII, Inter. 127).	FA	1	4	1	2					4		15
	SY		2							2		10
	H		3	10	8	4					1	299
Epilepsy (Class XIII, Inter. 69).	FA	2	31	5	6			5		27		158
	SY	1	22	19	11			22		9		196
	H	5	6	44	6	5		24	1	15	4	1,658
Epilepsy, Jacksonian (Class XIII, Inter. 74).	FA			1						1		67
	H			1				1				24
Epistaxis (Class XIV, Inter. 85).	FA		2		1					1		3
	SY		3		2					1		2
	H			2	1	1						24
Epithelioma (Class XIX, Inter. 39–45).	FA		1							1		0
	SY		3							3		0
	H			6	3	2					1	334
Erysipelas (Class VIII, Inter. 18).	FA		18		4		1			13		51
	SY		6	3	3					6		49
	H		4	20	14	4	1			1	4	460
Erysipeloid (Class XVIII, Inter. 25B).	FA		1		1							2
Erythema multiforme (Class XV, Inter. 145C).	FA		2							2		0
	H		1	4	2	2					1	20
Erythema nodosum (Class XV, Inter. 145C).	FA		1		1							5
	H		1		1							44
Erythema scarlatiniforme (Class XV, Inter. 145C).	FA		2							2		0
	H			4	2	2						22
Erythema simplex (Class XV, Inter. 145C).	FA		6	1	6	1						20
	SY		1		1							3
Erythrasma (Class XVIII, Inter. 25B).	FA		1		1							0
Eustachian salpingitis, acute (Class V, Inter. 76).	FA		6		6							24
	SY		1		1							11
	H		1		1							18
Eustachian salpingitis, chronic (Class V, Inter. 76).	FA		3					2		1		22
	SY		1		1							1
	H		1	1	2							38
Exophthalmic goiter (Class IV, Inter. 51).	FA		2							2		0
	SY			1	1							90
	H	2		2	2	1				1		118
Fermentation, gastric (Class III, Inter. 103).	FA	1	13		13					1		55
	SY		3	1	2			1		1		113
	H		2	2	3	1						60
Fermentation, intestinal (Class III, Inter. 103).	FA		20		20							53
	SY		4		4							7
	H		3		3							32
Fever of unknown cause (Class VIII, Inter. 189A).	FA	1	72	4	60	3				14		433
	SY		108	9	96	13				7	1	455
	H	1	3	22	11	15						235
Fibroma (Class XIX, Inter. 46).	FA		7	2	4					5		68
	SY		3							3		0
	H	1		10	4	4		1		1	1	266
Filariasis (Class XVIII, Inter. 19).	FA		1		1							4
	SY		6	1	6	1						78

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Fissure of anus (Class III, Inter. 110A).	FA	.....	7	1	3	.....	.....	.....	....	5	.....	62
	SY	.....	4	1	4	.....	.....	.....	....	1	.....	26
	H	.....	2	6	3	3	.....	.....	....	.....	2	216
Fissure of skin (Class XV, Inter. 145C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	2	1	1	.....	.....	....	.....	.....	21
Fistula, fecal (Class III, Inter. 110A).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	H	1	.....	3	2	1	.....	.....	....	1	.....	336
Fistula in ano (Class III, Inter. 110A).	FA	.....	20	5	8	.....	.....	.....	....	17	.....	89
	SY	.....	7	3	3	.....	.....	.....	....	7	.....	68
	H	2	6	26	26	2	.....	.....	....	3	3	1,430
Fistula of kidney (Class VII, Inter. 122).	H	1	.....	.....	.....	.....	.....	1	....	.....	.....	176
Fistula of salivary gland or duct (Class III, Inter. 99B).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	14
Fistula of urethra (Class VII, Inter. 125).	FA	.....	3	.....	.....	.....	.....	.....	....	3	.....	8
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	1	6	3	1	.....	.....	....	2	1	233
Flagellate diarrhea (Class XVIII, Inter. 105B).	FA	.....	.....	1	.....	.....	.....	.....	....	1	.....	7
	SY	.....	5	1	2	1	.....	.....	....	2	1	94
	H	.....	.....	3	1	.....	.....	.....	....	1	1	85
Foreign body in bladder (Class VII, Inter. 124).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	25
Foreign body in esophagus (Class III, Inter. 101).	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	2
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	1
Functional derangement of liver (Class III, Inter. 115).	FA	.....	15	2	12	1	.....	.....	....	3	1	137
	SY	.....	23	4	23	1	.....	.....	....	3	.....	87
	H	1	4	4	7	1	.....	.....	....	1	.....	285
Furunculosis (Class VIII, Inter. 143).	FA	1	411	25	415	1	.....	.....	....	18	3	1,808
	SY	.....	94	6	76	1	.....	.....	....	22	1	373
	H	8	7	42	46	11	.....	.....	....	.....	.....	1,023
Ganglion (Class XII, Inter. 149).	FA	.....	4	1	3	.....	.....	.....	....	2	.....	31
	SY	.....	3	.....	3	.....	.....	.....	....	.....	.....	14
	H	.....	1	2	1	.....	.....	.....	....	.....	2	88
Gangrene, infective (Class VIII, Inter. 142).	FA	.....	1	.....	.....	1	.....	.....	....	.....	.....	54
Gangrene of lung (Class XIV, Inter. 95).	SY	.....	1	.....	.....	.....	1	.....	....	.....	.....	5
Gastritis, acute catarrhal (Class III, Inter. 103).	FA	.....	89	2	67	3	.....	.....	....	18	3	333
	SY	1	25	1	16	.....	.....	.....	....	10	.....	88
	H	2	10	40	34	16	.....	.....	1	.....	1	683
Gastritis, chronic catarrhal (Class III, Inter. 103).	FA	.....	59	7	26	.....	.....	.....	....	40	.....	237
	SY	2	24	8	10	3	.....	3	....	16	2	226
	H	5	7	90	46	35	.....	1	....	11	9	2,575
Gastritis, acute phlegmonous (Class III, Inter. 103).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	6
Gastroduodenitis (Class III, Inter. 105B).	FA	1	16	.....	14	1	.....	.....	....	2	.....	121
	SY	.....	2	.....	2	.....	.....	.....	....	.....	.....	6
	H	.....	1	2	1	1	.....	.....	....	.....	1	66
Gastroenteritis (Class III, Inter. 105B).	FA	1	291	9	287	5	.....	.....	....	8	1	1,043
	SY	.....	49	3	51	.....	.....	.....	....	1	.....	194
	H	.....	18	13	24	6	.....	.....	....	1	.....	336
Gastroptosis (Class III, Inter. 103).	FA	.....	2	2	1	.....	.....	.....	....	3	.....	5
	SY	.....	1	2	1	.....	.....	1	....	1	.....	60
	H	.....	5	7	5	2	.....	.....	....	4	1	462
Genu valgum (Class XII, Inter. 147).	SY	.....	.....	1	.....	.....	.....	1	....	.....	.....	3

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
German measles (Class VIII, Inter. 19).	FA	.....	80	1	54	.....	.....	.....	....	26	1	225
	SY	.....	13	.....	6	.....	.....	.....	....	7	.....	57
	H	.....	7	36	37	5	.....	.....	....	.....	1	639
Gingivitis (Class III, Inter. 99A).	FA	.....	3	.....	2	.....	.....	.....	....	1	.....	6
	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	1
	H	.....	1	3	3	1	.....	.....	....	.....	.....	23
Glaucoma, acute (Class VI, Inter. 75C).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	15
Glioma (Class XIX, Inter. 46).	SY	.....	.....	1	.....	.....	.....	.....	....	1	.....	10
	H	1	.....	1	.....	.....	1	.....	....	1	.....	99
Glossitis, acute (Class III, Inter. 99B).	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	5
Glycosuria (Class XVII, Inter. 50).	FA	1	2	.....	.....	.....	.....	.....	....	3	.....	13
	SY	.....	2	3	1	.....	.....	.....	....	4	.....	210
	H	.....	1	7	3	1	.....	.....	....	3	1	294
Goiter (Class IV, Inter. 88).	FA	.....	16	2	3	1	.....	7	....	7	.....	58
	SY	.....	5	.....	.....	.....	.....	1	....	4	.....	0
	H	1	1	15	6	3	1	3	....	1	3	643
Gonococcus infection of conjunctiva (Class IX, Inter. 38B).	FA	.....	4	2	4	.....	.....	.....	....	2	.....	55
	SY	.....	3	1	.....	.....	.....	1	....	3	.....	0
	H	2	.....	6	5	.....	.....	1	....	2	.....	451
Gonococcus infection of joints (Class IX, Inter. 38B).	FA	3	56	55	46	1	.....	1	....	65	1	1,195
	SY	.....	20	7	5	.....	.....	2	....	19	1	392
	H	21	23	93	73	12	.....	18	1	19	14	7,826
Gonococcus infection of lymph node (Class IX, Inter. 38B).	FA	1	28	29	40	1	.....	.....	....	16	1	518
	SY	1	13	23	22	.....	.....	.....	....	11	4	839
	H	8	.....	20	20	7	.....	.....	....	1	.....	1,271
Gonococcus infection of urethra (Class IX, Inter. 38B).	FA	13	4,758	708	5,145	16	.....	1	1	304	12	5,603
	SY	3	1,076	155	1,028	5	.....	3	....	194	4	1,729
	H	73	151	547	574	62	.....	7	4	12	112	28,072
Gonococcus infection, unqualified (Class IX, Inter. 38B).	FA	10	238	318	396	.....	.....	.....	....	155	15	4,997
	SY	1	58	62	64	3	.....	.....	....	50	4	1,121
	H	24	17	203	175	21	1	3	....	12	32	9,224
Gout, acute (Class XVII, Inter. 48C).	FA	.....	5	1	6	.....	.....	.....	....	.....	.....	47
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	8
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	44
Gout, chronic (Class XVII, Inter. 48C).	FA	.....	.....	1	1	.....	.....	.....	....	.....	.....	20
Hallux valgus (Class XII, Inter. 149).	FA	.....	11	3	7	.....	.....	2	....	5	.....	50
	SY	.....	8	.....	2	.....	.....	3	....	3	.....	56
	H	2	1	9	8	1	.....	2	....	1	.....	410
Hammertoe (Class XII, Inter. 149).	FA	.....	12	1	5	.....	.....	4	....	4	.....	103
	SY	.....	16	2	2	.....	.....	10	....	6	.....	116
	H	2	2	11	10	2	.....	1	....	1	1	603
Hay-fever (Class XIV, Inter. 98).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	7
Headache (Class XVII, Inter. 189A).	FA	.....	12	1	10	1	.....	.....	....	2	.....	136
	SY	.....	3	1	1	1	.....	1	....	1	.....	40
	H	2	.....	3	2	1	.....	1	....	.....	1	126
Hematemesis (Class III, Inter. 103).	FA	.....	3	.....	.....	.....	.....	.....	....	3	.....	0
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	5	4	1	.....	.....	....	.....	.....	96
Hematocele of spermatic cord (Class VII, Inter. 127).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	0
Hematuria, renal (Class VII, Inter. 122).	FA	.....	4	1	3	.....	.....	.....	....	2	.....	22
	SY	.....	3	1	.....	.....	.....	.....	....	4	.....	10
	H	.....	1	6	3	3	.....	.....	....	.....	1	143

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Hemianopsia (Class VI, Inter. 75C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	9
	H	.....	1	2	2	1	.....	.....	....	.....	.....	114
Hemoglobinuric fever (Class VIII, Inter. 19).	FA	.....	1	1	1	.....	.....	.....	....	1	.....	26
	H	.....	.....	1	.....	.....	.....	.....	....	1	.....	26
Hemoptysis (Class XIV, Inter. 98).	FA	.....	3	2	1	.....	.....	.....	....	4	.....	28
	SY	.....	4	1	4	1	.....	.....	....	.....	.....	64
	H	.....	.....	4	1	3	.....	.....	....	.....	.....	27
Hemorrhage, epidural (Class XIII, Inter. 64).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	16
Hemorrhage, intestinal (Class III, Inter. 110B).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	1	3	2	2	.....	.....	....	.....	.....	32
Hemorrhage into cerebrum (Class XIII, Inter. 64).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	0
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	2	.....	5	2	1	1	1	....	1	1	425
Hemorrhage into medulla (Class XIII, Inter. 64).	SY	.....	.....	1	.....	.....	.....	.....	....	1	.....	60
	H	.....	1	1	.....	1	.....	.....	....	1	.....	5
Hemorrhage into retina (Class VI, Inter. 75C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	1	....	.....	.....	122
Hemorrhoids (Class III, Inter. 83).	FA	1	210	23	99	2	.....	.....	....	132	1	662
	SY	.....	121	12	34	.....	.....	2	....	96	1	403
	H	11	27	226	217	21	.....	1	1	2	22	6,550
Hernia, epigastric (Class XVI, Inter. 109).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	0
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	3	3	.....	.....	.....	....	.....	.....	172
Hernia, femoral (Class XVI, Inter. 109).	FA	.....	5	1	1	.....	.....	2	....	3	.....	96
	SY	.....	.....	1	.....	.....	.....	.....	....	1	.....	0
	H	1	1	3	2	2	.....	1	....	.....	.....	123
Hernia, inguinal (Class XVI, Inter. 109).	FA	3	205	69	72	1	.....	3	....	199	2	1,653
	SY	1	84	24	27	1	.....	12	....	68	1	785
	H	49	25	267	254	19	.....	5	2	26	35	12,755
Hernia, internal (Class XVI, Inter. 109).	FA	.....	1	.....	.....	.....	1	.....	....	.....	.....	3
Hernia of muscle, fascia, tendon, or sheath (Class XII, Inter. 149).	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	40
Hernia, umbilical (Class XVI, Inter. 109).	FA	.....	4	2	2	.....	.....	.....	....	4	.....	44
	H	.....	.....	3	1	.....	.....	.....	....	.....	2	142
Hernia, ventral (Class XVI, Inter. 109).	FA	.....	9	4	1	.....	.....	.....	....	12	.....	35
	SY	1	12	10	6	2	.....	6	....	9	.....	206
	H	4	5	22	20	6	.....	1	1	1	2	1,418
Herpes (Class XV, Inter. 145C).	FA	.....	19	.....	19	.....	.....	.....	....	.....	.....	83
	SY	.....	3	.....	1	.....	.....	.....	....	2	.....	0
	H	.....	3	2	4	1	.....	.....	....	.....	.....	90
Hodgkin's disease (Class X, Inter. 53A).	H	2	.....	.....	.....	.....	1	1	....	.....	.....	134
Hordeolum (Class VI, Inter. 75C).	FA	.....	9	.....	9	.....	.....	.....	....	.....	.....	29
	SY	.....	4	.....	4	.....	.....	.....	....	.....	.....	5
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	2
Hydrocele of spermatic cord (Class VII, Inter. 127).	FA	.....	6	.....	3	.....	.....	.....	....	3	.....	35
	SY	.....	4	.....	.....	.....	.....	.....	....	4	.....	0
	H	.....	1	7	6	1	.....	.....	....	.....	1	221
Hydrocele of tunica vaginalis (Class VII, Inter. 127).	FA	.....	18	3	5	.....	.....	.....	....	16	.....	83
	SY	.....	11	4	9	.....	.....	1	....	5	.....	137
	H	1	10	21	23	4	.....	.....	....	2	3	968
Hyperesthesia of retina (Class VI, Inter. 75C).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	11
Hyperidrosis (Class XV, Inter. 145C).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	8

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Hypermetropia (Class VI, Inter. 75C).	FA	.....	12	2	1	.....	.....	1	....	12	.....	20
	SY	.....	61	3	57	.....	.....	2	....	5	.....	250
	H	1	3	32	19	15	.....	1	....	1	.....	331
Hypernephroma (Class XIX, Inter. 45E).	H	.....	1	.....	.....	.....	.....	.....	....	.....	1	52
Hypertrophy of bone (Class XII, Inter. 146).	FA	.....	8	.....	.....	.....	.....	.....	....	8	.....	1
	SY	.....	23	1	2	.....	.....	.....	....	22	.....	28
	H	7	.....	32	32	3	.....	3	....	1	.....	770
Hypertrophy of heart (Class II, Inter. 79C).	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	2	.....	1	.....	.....	....	1	.....	48
Hypertrophy of mammary gland (Class XVII, Inter. 133).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	SY	.....	1	.....	.....	.....	.....	1	....	.....	.....	4
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	46
Hypertrophy of tonsil (Class III, Inter. 100).	FA	.....	40	4	12	.....	.....	.....	....	32	.....	74
	SY	.....	156	6	6	.....	.....	2	....	154	.....	87
	H	8	37	197	219	8	.....	1	1	3	10	4,767
Hypochondriasis (Class XIII, Inter. 68).	FA	.....	3	1	1	.....	.....	.....	....	3	.....	24
	SY	.....	2	.....	.....	.....	.....	.....	....	2	.....	9
	H	.....	1	5	1	2	.....	1	....	1	1	116
Hysteria (Class XIII, Inter. 73A).	FA	.....	14	4	6	1	.....	2	....	9	.....	125
	SY	1	8	6	6	1	.....	3	....	5	.....	185
	H	1	4	14	6	5	.....	2	....	2	4	222
Imbecility (Class XI, Inter. 74).	SY	.....	1	1	1	.....	.....	1	....	.....	.....	0
Impetigo contagiosa (Class XV, Inter. 145C).	FA	.....	13	.....	12	.....	.....	.....	....	1	.....	95
	SY	.....	9	.....	5	.....	.....	.....	....	4	.....	41
	H	1	1	6	7	1	.....	.....	....	.....	.....	107
Impetigo herpetiformis (Class XV, Inter. 145C).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	10
Impetigo simplex (Class XV, Inter. 145C).	FA	.....	2	.....	2	.....	.....	.....	....	.....	.....	28
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	15
Impotence (Class VII, Inter. 127).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	8
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	6
Incontinence of urine (Class VII, Inter. 124).	FA	.....	4	.....	1	.....	.....	.....	....	3	.....	0
	SY	.....	7	.....	.....	.....	.....	4	....	3	.....	162
	H	.....	.....	6	2	2	.....	.....	....	.....	2	133
Inflammation of salivary gland (Class III, Inter. 99B).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	9
	H	.....	.....	2	1	1	.....	.....	....	.....	.....	68
Inflammation of spermatic cord (Class VII, Inter. 127).	SY	.....	1	1	2	.....	.....	.....	....	.....	.....	13
Influenza (Class VIII, Inter. 10).	FA	36	2,420	50	2,333	24	.....	.....	....	104	45	9,685
	SY	5	1,660	41	1,396	13	.....	.....	....	284	13	5,643
	H	9	53	422	376	76	.....	.....	1	.....	31	5,459
Ingrowing nail (Class XV, Inter. 145C).	FA	.....	114	5	91	.....	.....	.....	....	26	2	461
	SY	.....	106	5	64	.....	.....	.....	....	47	.....	491
	H	5	4	72	75	3	.....	.....	....	1	2	1,424
Insomnia (Class XVII, Inter. 189A).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	5
Insufficiency of ocular muscle (Class VI, Inter. 75C).	FA	.....	1	1	.....	.....	.....	.....	....	2	.....	2
	SY	.....	3	1	3	.....	.....	1	....	.....	.....	13
	H	1	1	1	2	.....	.....	.....	....	1	.....	112
Intertrigo (Class XV, Inter. 145C).	FA	.....	1	.....	.....	.....	.....	.....	....	.....	1	4
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	2
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	10
Iridocyclitis (Class VI, Inter. 75C).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	1
	SY	.....	2	2	4	.....	.....	.....	....	.....	.....	140
	H	.....	.....	3	1	.....	.....	.....	....	2	.....	63

TABLE 1.—*[illegible] ... for the ... 1915 ...*

Dis.			
DISEAS			
Hemianop Inter.			22
			3
			57
Hemoglo VIII,			44
Hemop Inter.	4		113
			23
	4		175
Hemo XII		1	9
			2
		1	169
Hem (Cl	3	1	194
	20	2	280
			322
Hen (C.	6		47
			0
		1	486
He (			33
			12
			38
He			4
			7
H	4		28
			30
		1	145
H			0
		1	270
I			2
			0
		1	72
I			155
I		4	2,706
		13	1,958
		12	4,2[illegible]
I			144
			71
		9	736
I			180
			66
		2	338
I	[illegible]	5	4,271
	129	18	3,735
		15	4,088
Ho			1
			16
Ho			460
	1		27
			5
Hy (		1	17
			8
Hy	1		8
	31		45
	3	2	779
	2		1
	1	1	196

TABLE 1.—*Detailed statement of diseases and injuries for the calendar yea 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Masturbation (Class VII, Inter. 74).	H	.....	1	.....	.....	.....	.....	1	....	.....	.....	25
Measles (Class VIII, Inter. 6).	FA	.....	190	.....	37	.....	.....	.....	....	153	.....	757
	SY	.....	103	2	18	1	.....	.....	....	86	.....	269
	H	3	15	246	235	22	3	.....	....	.....	4	6,446
Melancholia, involutional (Class XI, Inter. 68).	FA	.....	2	2	.....	.....	.....	.....	....	4	.....	35
	SY	.....	1	2	.....	1	.....	.....	....	2	.....	3
	H	.....	.....	3	.....	2	.....	.....	....	.....	1	14
Ménière's disease (Class XIII, Inter. 76).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	6
	H	.....	.....	1	.....	.....	.....	1	....	.....	.....	76
Meningitis, cerebral (Class XIII, Inter. 61).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	5
	SY	.....	1	2	.....	2	1	.....	....	.....	.....	7
Meningitis, cerebrospinal (Class XIII, Inter. 61).	SY	.....	2	.....	.....	.....	.....	.....	....	2	.....	3
	H	.....	.....	2	1	.....	.....	1	....	.....	.....	194
Metatarsalgia (Class XII, Inter. 149).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	2
	SY	.....	1	.....	.....	.....	.....	1	....	.....	.....	6
	H	1	.....	1	1	1	.....	.....	....	.....	.....	165
Migraine (Class XVII, Inter. 74).	FA	.....	6	.....	4	.....	.....	.....	....	2	.....	7
	H	.....	.....	2	1	.....	.....	1	....	.....	.....	85
Miliaria (Class XV, Inter. 145C).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	3
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	12
Mumps (Class VIII, Inter. 19).	FA	.....	496	5	90	.....	.....	.....	....	408	3	1,536
	SY	1	521	10	57	.....	.....	.....	....	475	.....	1,915
	H	3	36	905	814	47	.....	.....	1	7	75	21,330
Mycosis fungoides (Class XV, Inter. 25B).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	4
Myelitis, transverse (Class XIII, Inter. 63).	H	.....	1	.....	.....	.....	.....	.....	....	.....	1	235
Myocarditis, acute (Class II, Inter. 78).	FA	.....	2	.....	1	.....	.....	.....	....	1	.....	6
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	10
Myocarditis, chronic (Class II, Inter. 79C).	FA	.....	5	3	2	.....	.....	1	....	5	.....	20
	SY	.....	3	5	4	.....	1	1	....	2	.....	296
	H	1	3	9	2	3	1	1	....	5	1	408
Myopia (Class VI, Inter. 75C).	FA	.....	10	2	4	.....	.....	1	....	7	.....	52
	SY	.....	50	4	41	.....	.....	10	....	3	.....	136
	H	1	2	13	6	4	.....	1	....	3	2	597
Myositis, acute (Class XII, Inter. 149).	FA	.....	18	2	17	.....	.....	.....	....	3	.....	98
	SY	.....	2	1	2	.....	.....	.....	....	1	.....	11
	H	.....	3	4	4	3	.....	.....	....	.....	.....	202
Myositis, chronic (Class XII, Inter. 149).	FA	.....	2	.....	1	.....	.....	.....	....	1	.....	17
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	32
Myositis, traumatic, ossifying (Class XII, Inter. 149).	H	.....	1	.....	.....	1	.....	.....	....	.....	.....	56
Myotonia congenita (Class XII, Inter. 149).	SY	.....	.....	1	.....	.....	.....	1	....	.....	.....	0
Myringitis, acute (Class V, Inter. 76).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	14
Myringitis, chronic (Class V, Inter. 76).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	23
Myxoma (Class XIX, Inter. 46).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	3
Nausea marina (Class XVII, Inter. 189A).	FA	.....	24	4	23	.....	.....	.....	....	5	.....	103
	SY	.....	.....	2	.....	.....	.....	2	....	.....	.....	30
	H	.....	.....	4	.....	1	.....	2	....	.....	1	128

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TABLE 1.—*Detailed statement of diseases and [illegible] for year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	[illegible]	[illegible]	[illegible]	[illegible]	Cont.	[illegible]	Days.
DISEASES—Continued.												
Obstruction, chronic intestinal (Class III, Inter. 109).	FA	.....	2	1	.....	.....	.....	.....	.....	.....	.....	3
	SY	.....	.....	2	1	.....	.....	.....	.....	.....	.....	3
	H	4	1	4	5	4	.....	.....	.....	.....	.....	729
Odontoma (Class XIX, Inter. 46).	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	[illegible]
Onychia (Class XV, Inter. 145C).	FA	.....	28	2	29	1	.....	.....	.....	.....	.....	[illegible]
	SY	.....	12	.....	10	.....	.....	.....	.....	.....	.....	[illegible]
	H	.....	.....	2	1	.....	.....	.....	.....	.....	.....	[illegible]
Opacity of vitreous humor (Class VI, Inter. 75C).	FA	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	[illegible]
	H	.....	.....	2	1	.....	.....	.....	.....	.....	.....	[illegible]
Ophthalmoplegia (Class VI, Inter. 75C).	H	1	.....	.....	.....	1	.....	.....	.....	.....	.....	[illegible]
Orchitis, acute (nonven.) (Class VII, Inter. 127).	FA	2	62	6	64	1	.....	.....	.....	4	1	[illegible]
	SY	.....	22	3	12	.....	.....	.....	.....	12	.....	[illegible]
	H	1	1	18	16	3	.....	.....	.....	.....	1	[illegible]
Orchitis, chronic (nonven.) (Class VII, Inter. 127).	FA	.....	4	1	.....	1	.....	.....	.....	4	.....	[illegible]
	SY	.....	5	2	2	.....	.....	2	.....	2	.....	[illegible]
	H	1	1	8	5	5	.....	.....	.....	.....	.....	[illegible]
Ossification of cartilage, unqualified (Class XII, Inter. 149).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	[illegible]
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	[illegible]
Osteoma (Class XIX, Inter. 46).	FA	.....	4	.....	1	.....	.....	.....	.....	3	.....	31
	SY	.....	5	.....	1	.....	.....	1	.....	2	1	43
	H	.....	6	6	6	2	.....	1	1	.....	2	602
Osteomyelitis, acute (Class XII, Inter. 146).	FA	.....	4	.....	1	.....	.....	.....	.....	3	.....	43
	H	.....	1	4	4	1	.....	.....	.....	.....	.....	175
Osteomyelitis, chronic (Class XII, Inter. 146).	FA	.....	2	.....	2	.....	.....	.....	.....	.....	.....	3
	H	1	.....	.....	1	.....	.....	.....	.....	.....	.....	112
Otitis, externa (Class V, Inter. 76).	FA	.....	94	7	82	.....	.....	.....	.....	18	1	324
	SY	.....	32	5	21	1	.....	.....	.....	15	.....	91
	H	4	6	32	33	4	.....	.....	.....	1	4	1,105
Otitis interna, acute (Class V, Inter. 76).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	.....	.....	1	65
Otitis interna, chronic (Class V, Inter. 76).	FA	.....	2	1	.....	.....	.....	.....	.....	3	.....	15
	SY	.....	2	.....	.....	.....	.....	.....	.....	2	.....	0
	H	1	.....	6	3	1	.....	2	.....	1	.....	243
Otitis media, acute (Class V, Inter. 76).	FA	.....	186	14	129	2	.....	.....	.....	66	3	727
	SY	1	88	5	51	4	.....	.....	.....	39	.....	371
	H	11	16	107	109	12	.....	2	.....	1	10	3,536
Otitis media, chronic (Class V, Inter. 76).	FA	.....	98	33	62	1	.....	2	.....	65	1	266
	SY	.....	86	25	38	.....	.....	48	.....	30	.....	455
	H	12	23	111	91	7	.....	15	1	18	14	5,759
Oxyuriasis (Class XVIII, Inter. 107).	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	7
Ozena (Class XIV, Inter. 86).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	1
	SY	.....	3	.....	1	.....	.....	.....	.....	2	.....	0
	H	2	.....	4	2	1	.....	2	.....	1	.....	232
Pachymeningitis, spinal (Class XIII, Inter. 86).	H	1	.....	.....	.....	.....	.....	1	.....	.....	.....	320
Palpitation, cardiac (Class II, Inter. 85).	FA	.....	6	.....	3	.....	.....	.....	.....	3	.....	14
	SY	1	.....	1	1	.....	.....	.....	.....	1	.....	204
	H	.....	4	6	6	3	.....	.....	.....	1	.....	78
Pancreatitis, acute (Class III, Inter. 118).	SY	.....	.....	1	.....	.....	1	.....	.....	.....	.....	37
Pancreatitis, chronic (Class III, Inter. 118).	SY	.....	2	.....	.....	.....	1	.....	.....	1	.....	0
	H	1	.....	2	1	2	.....	.....	.....	.....	.....	128

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Panophthalmitis (Class VI, Inter. 75 C).	H		1								1	54
Papilloma (Class XIX, Inter. 46).	FA		3		1					2		3
	SY		2		1					1		0
	H			4	2	2						103
Pappataci fever (Class VIII, Inter. 19).	SY		2		2							10
Paralysis, muscle, ischemic (Class XII, Inter. 149).	FA		1		1							1
	H	1						1				273
Paralysis of nerve (Class XIII, Inter. 66).	FA		7	1	3					5		15
	SY		2							2		0
	H	2		7	5	2		1		1		413
Paralysis of ocular muscle (Class VI, Inter. 75C).	FA		2							2		0
	SY		2							2		1
	H		1	8	3	3		1		1	1	282
Paralysis of vocal cords (Class XIV, Inter. 74).	H		1			1						26
Paranoia (Class XI, Inter. 68).	FA		1							1		10
	H			1							1	9
Paranoiac state (Class XI, Inter. 68).	H	2				1		1				81
Paraphimosis (Class VII, Inter. 127).	FA		8	1	5					2	2	47
	SY		2	1	2	1						48
	H			1	1							16
Paraplegia, ataxic (Class XIII, Inter. 66).	H	1		1								28
Paratyphoid fever (Class VIII, Inter. 1).	FA	1	2	1	3	1						130
	SY		2		1					1		13
	H		1	3	2	1					1	259
Pediculosis (Class XVIII, Inter. 145C).	FA		75		75							7
	SY		10		10							0
	H		1		1							9
Pemphigus (Class XV, Inter. 145C).	FA		1		1							10
	H		2		2							44
Perforated nasal septum (Class XIV, Inter. 86).	SY		1					1				10
	H		1					1				64
Pericarditis (Class II, Inter. 77).	FA		2							2		0
	SY		1							1		0
	H	1	2	3	2	2	2					144
Periostitis, acute (Class XII, Inter. 146).	FA		22		17					5		261
	SY		7		1					6		73
	H	4		14	13	2				2	1	642
Periostitis, chronic (Class XII, Inter. 146).	FA		4	1	2					3		13
	SY		1		1							0
	H	1	1	5	3	2			1		1	66
Peritonitis, acute general (Class III, Inter. 117).	FA		1							1		3
	H		4	2		1	5					5
Peritonitis, chronic general (Class III, Inter. 117).	FA		1							1		0
	H			2	1	1						32
Pes cavus (Class XII, Inter. 149).	FA		1							1		4
	H			1							1	13
Pes planus (Class XII, Inter. 149).	FA		62	10	32			12		27	1	415
	SY	1	68	30	18	1		64		16		460
	H	4	13	55	16	6		21		27	2	2,289
Pharyngitis, acute (Class III, Inter. 100).	FA		39		37					2		126
	SY		31		28					3		126
	H		3	6	8	1						80

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Pharyngitis, chronic (Class III, Inter. 100).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	3
	SY	.....	2	.....	2	.....	.....	.....	....	.....	.....	3
Phimosis (Class VII, Inter. 127).	FA	.....	151	4	123	.....	.....	.....	....	32	.....	729
	SY	.....	30	3	18	.....	.....	.....	....	15	.....	168
	H	2	14	47	57	5	.....	.....	....	.....	1	1,522
Phlebitis (Class II, Inter. 83).	FA	.....	6	.....	4	.....	.....	.....	....	2	.....	22
	SY	.....	3	2	3	.....	.....	1	....	1	.....	58
	H	1	5	3	4	1	.....	2	....	1	1	324
Pinta (Class XVIII, Inter. 25B).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	1
Pityriasis rosea (Class XV, Inter. 145C).	FA	1	2	.....	1	1	.....	.....	....	1	.....	14
	H	1	1	2	3	1	.....	.....	....	.....	.....	52
Pityriasis simplex (Class XV, Inter. 145C).	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	91
Pityriasis versicolor (Class XVIII, Inter. 25B).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	SY	.....	1	.....	.....	1	.....	.....	....	.....	.....	6
	H	.....	.....	2	1	1	.....	.....	....	.....	.....	14
Pleurisy, acute fibrinous (Class XIV, Inter. 93).	FA	.....	81	1	49	3	.....	.....	....	30	.....	464
	SY	.....	30	1	11	3	.....	.....	....	16	1	181
	H	4	5	48	30	19	.....	.....	....	2	6	1,196
Pleurisy, chronic fibrinous (Class XIV, Inter. 93).	FA	.....	5	2	3	1	.....	.....	....	3	.....	143
	SY	.....	4	2	.....	.....	.....	1	....	5	.....	7
	H	.....	.....	13	3	4	.....	2	....	2	2	562
Pleurisy, serofibrinous (Class XIV, Inter. 93).	FA	.....	22	1	5	2	.....	.....	....	16	.....	191
	SY	.....	6	3	1	1	.....	.....	....	4	3	165
	H	4	7	25	21	7	.....	.....	....	4	4	1,590
Pleurisy, suppurative (Class XIV, Inter. 93).	FA	1	1	2	.....	.....	.....	.....	....	4	.....	107
	SY	.....	4	3	1	.....	.....	.....	....	6	.....	135
	H	15	13	10	20	2	1	6	....	2	7	4,563
Pleuritic adhesions (Class XIV, Inter. 93).	FA	.....	4	.....	.....	.....	.....	.....	....	4	.....	6
	SY	.....	.....	1	1	.....	.....	.....	....	.....	.....	60
	H	.....	3	6	5	1	.....	1	....	2	.....	303
Pneumonia, broncho (Class XIV, Inter. 91).	FA	.....	34	.....	8	.....	.....	.....	....	25	1	187
	SY	.....	12	1	2	.....	.....	.....	....	10	1	51
	H	4	14	41	30	14	7	.....	....	2	6	1,827
Pneumonia, interstitial (Class XIV, Inter. 98).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	3
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	1
Pneumonia, lobar (Class XIV, Inter. 92).	FA	2	128	9	28	1	.....	.....	....	107	3	904
	SY	.....	51	6	7	5	1	1	....	38	5	493
	H	21	48	160	114	51	14	1	....	3	46	5,690
Poliomyelitis, acute anterior (Class VIII, Inter. 63).	FA	.....	1	.....	.....	.....	1	.....	....	.....	.....	8
Polypus, nasal (Class XIV, Inter. 46).	FA	.....	12	4	4	.....	.....	.....	....	12	.....	32
	SY	.....	3	4	5	.....	.....	.....	....	2	.....	36
	H	.....	1	16	10	4	.....	.....	....	1	2	499
Presbyopia (Class VI, Inter. 75C).	FA	.....	5	.....	1	.....	.....	.....	....	4	.....	0
	SY	.....	.....	1	.....	.....	.....	1	....	.....	.....	23
	H	.....	.....	4	2	.....	.....	1	....	1	.....	83
Proctitis (Class III, Inter. 110A).	FA	.....	3	1	.....	1	.....	.....	....	3	.....	10
	H	.....	.....	2	1	.....	.....	.....	....	.....	1	145
Prolapse of rectum (Class III, Inter. 110B).	FA	.....	4	.....	2	.....	.....	.....	....	2	.....	13
	SY	.....	1	.....	.....	.....	.....	1	....	.....	.....	3
	H	.....	.....	2	2	.....	.....	.....	....	.....	.....	55
Prostatitis, acute (nonven.) (Class VII, Inter. 126).	FA	.....	3	.....	2	.....	.....	.....	....	1	.....	37
	SY	.....	2	1	2	.....	.....	.....	....	1	.....	30
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	7
Prostatitis, chronic (nonven.) (Class VII, Inter. 126).	FA	.....	2	2	2	.....	.....	.....	....	2	.....	38
	H	.....	.....	4	3	.....	.....	.....	....	.....	1	240

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Psoriasis (Class XV, Inter. 145C).	FA		9	2	6					5		34
	SY		3	1	3			1				13
	H		1	7	4	3		1				514
Psychasthenia (Class XI, Inter. 68).	FA		7	1	2					5	1	30
	SY		12	6				5		13		262
	H	3	11	33	9	15		9		10	4	1,423
Psychosis, due to organic brain disease (Class XI, Inter. 74).	SY		2	1				2		1		0
	H			2	1	1						17
Psychosis, exhaustive, infective, and toxic (Class XI, Inter. 68).	FA		1							1		0
	SY		1	2	1					2		131
	H		1	2	2	1						75
Psychosis, hysterical (Class XI, Inter. 73A).	FA	1	3		1					3		6
	SY			1				1				0
	H	1	1	7		1		2		5	1	368
Psychosis, intoxication (Class XI, Inter. 68).	FA		5							5		2
	SY		3		2					1		3
	H	2	1	10	6	2		1		3	1	286
Psychosis, manic-depressive (Class XI, Inter. 68).	FA		3		1					1	1	87
	H	4	3	6		7				4	2	809
Psychosis, traumatic (Class XI, Inter. 68).	SY		1							1		0
	H			1							1	3
Pterygium (Class VI, Inter. 75C).	FA		27	1	9					18	1	80
	SY		18		8					10		68
	H		3	30	28	2		1		1	1	910
Purpura (Class I, Inter. 55).	FA		2	2	3	1						16
Purpura, hemorrhagic (Class I, Inter. 55).	FA		4		2					2		16
	H		1	3	2	1					1	56
Pyelitis (Class VII, Inter. 122).	FA		3		2					1		42
	SY	1			1							13
	H	1		5	2	1		1		2		365
Pyelonephritis (Class VII, Inter. 122).	FA		2		1					1		38
	SY			1	1							60
	H	2	3	1		2		2		1	1	473
Pylorospasm (Class III, Inter. 103).	SY		1	1	2							14
Pyorrhea, alveolar (Class III, Inter. 99A).	FA		23		19					4		108
	SY		6	1	4					3		5
	H		4	6	9						1	263
Redundant prepuce (Class VII, Inter. 127).	FA		101		97					4		379
	SY		98	1	87					11	1	610
	H	2	16	16	31				1		2	555
Redundant scrotum (Class VII, Inter. 127).	FA			1	1							18
	H	1			1							6
Retention cyst (Class XIX, Inter. 46).	FA		7		7							15
	SY		1		1							0
Retinitis (Class VI, Inter. 75C).	FA		6	1	3					4		25
	H	3	4	8	11	1				3		428
Rheumatic fever, acute (Class VIII, Inter. 47).	FA		145	40	98	3				83	1	1,734
	SY	2	90	17	37	2		2		65	3	786
	H	11	16	158	107	41		4		13	20	6,550
Rheumatic fever, subacute (Class VIII, Inter. 47).	FA	1	57	12	41	1				28		509
	SY	2	10	6	12			1		5		256
	H	4	2	40	21	13		2		6	4	1,913
Rheumatism, chronic articular (Class XVII, Inter. 48B).	FA	3	68	26	50					45	2	1,071
	SY		16	14	14			6		11	2	212
	H	6	15	59	35	9		3	1	14	15	4,083

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Rheumatism, muscular (Class XVII, Inter. 149).	FA	3	232	25	202	2	.....	.....	....	54	2	1,402
	SY	2	83	11	67	1	.....	2	....	21	5	550
	H	6	5	87	53	28	.....	.....	....	6	11	2,463
Rhinitis, acute (Class XIV, Inter. 86).	FA	.....	55	.....	51	.....	.....	.....	....	3	1	112
	SY	.....	23	.....	21	.....	.....	.....	....	1	1	70
	H	1	6	5	10	2	.....	.....	....	.....	.....	128
Rhinitis, atrophic (Class XIV, Inter. 86).	FA	.....	2	1	1	.....	.....	.....	....	2	.....	0
	H	.....	4	5	1	1	.....	3	....	2	2	362
Rhinitis, hypertrophic (Class XIV, Inter. 86).	FA	.....	10	.....	2	.....	.....	.....	....	8	.....	7
	SY	.....	5	1	3	1	.....	.....	....	2	.....	5
	H	2	10	10	19	1	.....	.....	....	1	1	353
Rhinoscleroma (Class XV, Inter. 86).	FA	.....	1	2	1	.....	.....	.....	....	2	.....	21
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	9
Sarcoma (Class XIX, Inter. 39–45).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	1	2	2	2	.....	.....	.....	....	1	2	466
Scabies (Class XVIII, Inter. 145B).	FA	.....	188	5	155	.....	.....	.....	....	36	2	498
	SY	1	85	15	38	1	.....	.....	....	60	2	410
	H	7	14	88	91	10	.....	.....	1	.....	7	2,641
Scarlet fever (Class VIII, Inter. 7).	FA	.....	30	.....	3	.....	.....	.....	....	27	.....	112
	SY	.....	16	.....	2	.....	.....	.....	....	14	.....	93
	H	2	15	53	47	16	.....	.....	....	.....	7	2,225
Schistosomiasis intestinal (Class XVIII, Inter. 107).	FA	.....	2	3	.....	1	.....	.....	....	4	.....	49
	H	.....	.....	2	.....	2	.....	.....	....	.....	.....	58
Scleritis (Class VI, Inter. 75C).	FA	.....	1	1	2	.....	.....	.....	....	.....	.....	9
	SY	.....	1	1	1	.....	.....	.....	....	1	.....	19
	H	1	.....	1	1	.....	.....	1	....	.....	.....	89
Sclerosis, disseminated (Class XIII, Inter. 63).	SY	.....	.....	2	.....	.....	.....	1	....	1	.....	17
	H	1	.....	3	.....	1	.....	1	....	2	.....	226
Sclerosis, lateral (Class XIII, Inter. 63).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	9
Seborrhea (Class XV, Inter. 145C).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	21
Senility (Class XVII, Inter. 154B).	FA	.....	5	1	.....	.....	.....	.....	....	6	.....	22
	SY	.....	.....	1	.....	.....	.....	1	....	.....	.....	0
	H	1	1	7	.....	1	.....	6	....	2	.....	424
Septicemia (Class VIII, Inter. 20).	FA	.....	2	.....	.....	.....	1	.....	....	1	.....	8
	H	.....	6	1	2	....	4	.....	....	1	.....	181
Shock (Class XVII, Inter. 189A).	SY	.....	2	.....	1	.....	.....	.....	....	1	.....	1
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	2
Sinus (Class XVII, Inter. 145C).	FA	.....	4	.....	2	.....	.....	.....	....	2	.....	20
	SY	.....	2	2	1	.....	.....	.....	....	3	.....	7
	H	2	2	5	6	1	.....	1	....	.....	1	261
Sinusitis, ethmoidal (Class XIV, Inter. 146).	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	1
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	6
Sinusitis, frontal (Class XIV, Inter. 146).	FA	1	18	1	15	.....	.....	.....	....	5	.....	78
	SY	.....	13	1	4	.....	.....	1	....	9	.....	71
	H	2	5	17	13	4	.....	1	....	2	4	735
Sinusitis, maxillary (Class XIV, Inter. 146).	FA	.....	4	.....	1	.....	.....	.....	....	3	.....	4
	SY	.....	4	.....	1	.....	.....	.....	....	3	.....	3
	H	1	4	11	11	2	.....	.....	....	.....	3	623
Smallpox (Class VIII, Inter. 5).	FA	.....	2	1	1	.....	1	.....	....	1	.....	73
	SY	1	1	.....	1	.....	.....	.....	....	1	.....	2
	H	.....	2	2	3	1	.....	.....	....	.....	.....	136
Somnambulism (Class XIII, Inter. 74).	SY	.....	1	.....	.....	.....	.....	1	....	.....	.....	9
Spermatorrhea (Class VII, Inter. 127).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	27

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Splanchnoptosis (Class III, Inter. 110B).	FA		2	1	1					2		4
	H		1	5	3	2				1		103
Splenitis, acute (Class IV, Inter. 116).	SY		1		1							5
Splenitis, chronic interstitial (Class IV, Inter. 116).	SY		1							1		2
	H		1	2		1	1	1				72
Spur on nasal septum (Class XIV, Inter. 86).	FA		1							1		0
	H	1		2	2	1						49
Stammering (Class XIII, Inter. 74).	FA		1							1		0
	SY		1	2				2		1		4
	H		1	3		1				3		99
Stenosis of punctum lacrimale (Class VI, Inter. 75C).	FA		1							1		0
	H			2	1	1						9
Stomatitis (Class III, Inter. 99B).	FA		5		3					2		27
	H			2	1	1						12
Stricture of esophagus (Class III, Inter. 101).	SY		1							1		0
	H			1		1						14
Stricture of rectum (Class III, Inter. 110B).	H		1		1							24
Stricture of urethra (Class VII, Inter. 125).	FA	1	19	6	15					10	1	53
	SY		15	2	7					10		35
	H	3	3	22	22	4					2	1,225
Strongyloides, intestinal (Class XVIII, Inter. 107).	FA		1							1		0
	H			1		1						68
Stuttering (Class XIII, Inter. 74).	SY		2					2				36
Synechia (Class VI, Inter. 75C).	SY		2		2							4
Syphilis (Class IX, Inter. 37).	FA	5	974	549	673	3	1	2		841	8	4,301
	SY	5	210	156	170	9		9		160	23	2,286
	H	160	270	1,150	1,118	137	2	49	3	79	192	59,095
Tachycardia (Class II, Inter. 85).	FA	1	9	1	6					5		38
	SY		5	3	3			3		2		40
	H	1	3	11	7	4		3			1	414
Talipes (Class XII, Inter. 149).	FA		2	1	1					2		7
	SY		1	1				2				3
	H		2	2				2	1	1		115
Teniasis (Class XVIII, Inter. 107).	FA		12	4	15					1		40
	SY		14	1	11	1				3		35
	H		2	5	6	1						63
Tenosynovitis (Class XII, Inter. 149).	FA	1	30	1	26	1				5		221
	SY	1	13	4	14	1				3		87
	H		1	7	6	1					1	173
Tetanus (Class VIII, Inter. 24).	H		1								1	53
Thrombosis (Class II, Inter. 82).	FA		3	1	1					3		81
	SY		1							1		0
	H	3		5	2			2			4	327
Thyroiditis, acute (Class IV, Inter. 88).	FA		1		1							3
	H	1						1				74
Thyroiditis, chronic (Class IV, Inter. 88).	FA		1							1		0
	SY		2					2				4
	H			1	1							119
Tonsillitis, acute follicular (Class III, Inter. 100).	FA	56	2,727	74	2,599	19				199	40	10,555
	SY	9	1,151	34	725	15				451	8	3,237
	H	34	74	676	667	78				3	36	9,846

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Tonsillitis, chronic (Class III, Inter. 100).	FA	.....	49	12	28	.....	.....	.....	....	32	1	167
	SY	1	25	4	13	.....	.....	.....	....	17	.....	75
	H	1	14	52	54	7	.....	.....	....	.....	6	1,294
Tracheitis (Class XIV, Inter. 89).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	4
Trachoma (Class VI, Inter. 75B).	FA	.....	28	2	2	.....	.....	21	....	7	.....	183
	SY	.....	2	2	.....	.....	.....	1	....	3	.....	0
	H	2	1	14	9	1	.....	2	....	4	1	666
Trichophytosis (Class XVIII, Inter. 145A).	FA	.....	84	3	75	.....	.....	.....	....	10	2	367
	SY	.....	22	3	17	.....	.....	.....	....	8	.....	156
	H	1	13	18	28	3	.....	.....	....	1	.....	823
Trichuriasis (Class XVIII, Inter. 107).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	12
Trichuris trichiura (Class XVIII, Inter. 107).	FA	.....	2	.....	1	.....	.....	.....	....	1	.....	4
	H	.....	.....	2	.....	2	.....	.....	....	.....	.....	106
Tuberculosis, abdominal (Class VIII, Inter. 31).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	SY	.....	.....	2	.....	1	.....	1	....	.....	.....	110
	H	1	1	.....	1	.....	.....	.....	....	.....	1	404
Tuberculosis, acute broncho-pneumonic (Class VIII, Inter. 29).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	16
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	H	3	.....	4	.....	.....	2	.....	....	3	2	1,008
Tuberculosis, acute, general (Class VIII, Inter. 29).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	1	.....	.....	....	.....	.....	1
Tuberculosis, acute pneumonic (Class VIII, Inter. 29).	FA	.....	10	2	.....	.....	.....	.....	....	12	.....	71
	SY	1	4	.....	.....	.....	.....	.....	....	5	.....	180
	H	10	.....	21	.....	9	.....	3	....	9	10	3,219
Tuberculosis, acute pulmonary miliary (Class VIII, Inter. 29).	FA	.....	4	.....	.....	.....	1	.....	....	3	.....	84
	SY	.....	3	.....	.....	.....	.....	.....	....	3	.....	3
	H	2	.....	10	1	6	.....	1	....	2	2	1,275
Tuberculosis, chronic pulmonary (Class VIII, Inter. 28).	FA	.....	96	26	3	1	.....	7	....	110	1	781
	SY	11	26	38	6	.....	1	17	....	47	4	2,734
	H	189	84	335	14	30	31	90	4	274	165	67,845
Tuberculosis of joint (Class VIII, Inter. 33).	H	1	2	1	.....	.....	.....	2	....	.....	2	1,142
Tuberculosis of larynx (Class VIII, Inter. 28).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	57
	H	.....	1	2	.....	.....	.....	.....	....	3	.....	100
Tuberculosis of pleura (Class VIII, Inter. 28).	SY	.....	1	2	.....	.....	.....	1	....	1	1	157
	H	.....	2	4	.....	.....	.....	.....	....	5	1	254
Tuberculosis of spinal column (Class VIII, Inter. 32).	H	.....	1	.....	.....	.....	.....	1	....	.....	.....	8
Tuberculosis, unqualified (Class VIII, Inter. 34).	FA	.....	6	2	.....	.....	.....	.....	....	8	.....	23
	SY	.....	.....	2	1	.....	.....	.....	....	1	.....	14
	H	7	6	18	6	5	1	3	....	11	5	2,745
Typhoid fever (Class VIII, Inter. 1).	FA	.....	6	4	1	.....	.....	.....	....	9	.....	180
	SY	1	6	3	4	.....	.....	.....	....	5	1	183
	H	1	6	18	10	10	1	.....	....	3	1	668
Typhus fever (Class VIII, Inter. 2).	FA	2	4	3	5	3	1	.....	....	.....	.....	86
Ulcer of bladder (Class VII, Inter. 124).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	10
	H	.....	1	2	1	.....	.....	1	....	1	.....	114
Ulcer of duodenum (Class III, Inter. 105A).	FA	.....	4	1	.....	.....	.....	.....	....	5	.....	22
	SY	.....	3	2	1	.....	.....	.....	....	4	.....	72
	H	3	5	11	9	3	.....	1	....	3	3	1,272
Ulcer of eye and adnexa (Class VI, Inter. 75C).	FA	.....	35	3	24	.....	.....	.....	....	14	.....	168
	SY	.....	7	1	8	.....	.....	.....	....	.....	.....	84
	H	2	5	17	12	5	.....	.....	....	2	5	701

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
DISEASES—Continued.												
Ulcer of mouth (Class III, Inter. 99B).	FA	.....	4	.....	2	1	.....	.....	....	1	.....	6
	SY	.....	1	1	.....	.....	.....	.....	....	1	1	20
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	3
Ulcer of nasal passage (Class XIV, Inter. 86).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	7
	H	.....	.....	2	1	1	.....	.....	....	.....	.....	10
Ulcer of rectum (Class III, Inter. 110B).	FA	.....	.....	2	.....	.....	.....	.....	....	2	.....	0
	H	.....	2	3	4	.....	.....	1	....	.....	.....	206
Ulcer of skin (Class XV, Inter. 145C).	FA	2	42	9	34	.....	.....	.....	....	17	2	585
	SY	.....	14	2	8	.....	.....	1	....	7	.....	128
	H	4	11	27	24	8	.....	.....	....	2	8	2,214
Ulcer of stomach (Class III, Inter. 102).	FA	.....	6	5	3	.....	.....	.....	....	8	.....	102
	SY	.....	5	7	5	.....	.....	.....	....	5	2	282
	H	2	9	24	12	11	4	2	....	5	1	1,576
Ulceromembranous angina (Class III, Inter. 100)	FA	.....	67	2	55	.....	.....	.....	....	14	.....	341
	SY	.....	15	1	10	1	.....	.....	....	4	1	110
	H	1	7	18	21	4	.....	.....	....	.....	1	440
Uncinariasis (Class XVIII, Inter. 106).	FA	.....	17	2	18	.....	.....	.....	....	1	.....	38
	SY	.....	4	.....	1	.....	.....	.....	....	3	.....	4
	H	1	13	6	16	3	.....	1	....	.....	.....	317
Union of fracture, faulty (Class XII, Inter. 146).	FA	1	10	6	6	.....	.....	5	....	6	.....	78
	SY	.....	5	2	1	.....	.....	3	....	3	.....	110
	H	5	2	10	5	3	.....	5	1	2	1	1,185
Ureteral colic (Class VII, Inter. 123).	FA	.....	6	.....	3	.....	.....	.....	....	3	.....	18
	SY	.....	3	.....	3	.....	.....	.....	....	.....	.....	8
	H	.....	.....	4	3	1	.....	.....	....	.....	.....	45
Urethritis, acute (nonven.) (Class VII, Inter. 125).	FA	.....	9	.....	9	.....	.....	.....	....	.....	.....	37
	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	4
Urethritis, chronic (nonven.) (Class VII, Inter. 125).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	1
Urticaria (Class XV, Inter. 145C).	FA	2	38	1	36	.....	.....	.....	....	5	.....	132
	SY	.....	14	2	12	1	.....	.....	....	3	.....	58
	H	1	4	11	11	4	.....	.....	....	.....	1	132
Vaccinia (Class VIII, Inter. 19).	FA	1	209	1	204	3	.....	.....	....	2	2	976
	SY	.....	152	3	148	3	.....	.....	....	3	1	682
	H	.....	1	5	5	1	.....	.....	....	.....	.....	81
Valvular disease, chronic cardiac (Class II, Inter. 79A).	FA	.....	38	4	14	.....	3	4	....	21	.....	232
	SY	1	26	5	6	.....	1	18	....	7	.....	221
	H	6	25	39	12	11	3	30	....	9	5	3,026
Varicocele (Class VII, Inter. 83).	FA	.....	104	4	42	.....	.....	1	....	65	.....	479
	SY	.....	57	4	19	1	.....	3	....	38	.....	308
	H	16	21	101	121	8	.....	.....	....	3	6	4,030
Varix (Class II, Inter. 83).	FA	.....	43	6	6	.....	.....	1	....	42	.....	60
	SY	.....	25	8	4	.....	.....	6	....	23	.....	108
	H	14	5	69	77	1	.....	.....	....	7	3	3,349
Vertigo (Class XVII, Inter. 189A).	FA	.....	9	2	5	.....	.....	1	....	4	1	121
	SY	.....	5	.....	2	.....	.....	1	....	2	.....	18
	H	1	1	8	7	2	.....	.....	....	.....	1	159
Vomiting, recurrent (Class III, Inter. 108).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	6
Wart (Class XV, Inter. 145C).	FA	.....	27	1	16	.....	.....	.....	....	12	.....	66
	SY	.....	12	1	6	.....	.....	.....	....	7	.....	19
	H	.....	2	19	15	2	.....	.....	1	1	2	506
Whooping cough (Class VIII, Inter. 8).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	0
Yaws (Class VIII, Inter. 19).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	11
Zoster (Class XIII, Inter. 145C).	FA	.....	26	.....	22	.....	.....	.....	....	4	.....	132
	SY	.....	4	.....	3	.....	.....	.....	....	1	.....	15
	H	.....	2	5	7	.....	.....	.....	....	.....	.....	146

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES.												
Abrasion, unqualified "G" (Class XX, Inter. 186).	FA	.....	16	1	17	.....	.....	.....	.....	.....	.....	101
	SY	.....	4	1	5	.....	.....	.....	.....	.....	.....	21
Abrasion, unqualified "H" (Class XX, Inter. 186).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	6
Abrasion, unqualified "I" (Class XX, Inter. 186).	FA	.....	2	.....	2	.....	.....	.....	.....	.....	.....	4
	SY	.....	3	.....	3	.....	.....	.....	.....	.....	.....	28
	H	.....	1	1	2	.....	.....	.....	.....	.....	.....	50
Abrasion, unqualified "J" (Class XX, Inter. 186).	FA	.....	5	.....	5	.....	.....	.....	.....	.....	.....	25
	SY	.....	2	.....	2	.....	.....	.....	.....	.....	.....	7
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	33
Abrasion, unqualified "L" (Class XX, Inter. 186).	FA	1	82	3	84	.....	.....	.....	.....	1	1	464
	SY	.....	41	.....	22	2	.....	.....	.....	17	.....	197
	H	2	4	17	20	3	.....	.....	.....	.....	.....	344
Abrasions, multiple "G" (Class XX, Inter. 186).	FA	.....	5	.....	5	.....	.....	.....	.....	.....	.....	39
	SY	.....	4	1	4	.....	.....	.....	.....	1	.....	12
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	42
Abrasions, multiple "H" (Class XX, Inter. 186).	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	5
Abrasions, multiple "I" (Class XX, Inter. 186).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	4
Abrasions, multiple "J" (Class XX, Inter. 186).	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1
Abrasions, multiple "L" (Class XX, Inter. 186).	FA	.....	18	.....	18	.....	.....	.....	.....	.....	.....	108
	SY	.....	2	.....	2	.....	.....	.....	.....	.....	.....	13
	H	2	.....	1	3	.....	.....	.....	.....	.....	.....	70
Avulsion of limb "H" (Class XX, Inter. 186).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	12
Avulsion, unqualified "H" (Class XX, Inter. 186).	FA	.....	6	1	4	.....	.....	.....	.....	3	.....	161
	SY	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	5	3	.....	.....	.....	.....	1	1	228
Avulsion, unqualified "I" (Class XX, Inter. 186).	FA	.....	4	.....	2	.....	.....	.....	.....	2	.....	27
	H	1	.....	2	1	1	.....	.....	.....	.....	1	106
Avulsion, unqualified "L" (Class XX, Inter. 186).	FA	.....	2	1	2	.....	.....	.....	.....	1	.....	44
Blood donor "L" (Class XX, Inter. 189B).	H	1	4	.....	5	.....	.....	.....	.....	.....	.....	22
Burn "C" (Class XX, Inter. 167).	FA	.....	6	.....	5	.....	.....	.....	.....	1	.....	51
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	34
Burn "E" (Class XX, Inter. 167).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1
	SY	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	4
Burn "F" (Class XX, Inter. 167).	FA	.....	11	1	11	1	.....	.....	.....	.....	.....	96
	SY	.....	3	.....	3	.....	.....	.....	.....	.....	.....	16
Burn "H" (Class XX, Inter. 167).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	7
Burn "L" (Class XX, Inter. 167).	FA	.....	134	3	128	.....	.....	.....	.....	6	3	857
	SY	1	34	1	27	.....	.....	.....	.....	8	1	182
	H	2	4	15	17	.....	.....	.....	.....	1	3	606
Burns, multiple "C" (Class XX, Inter. 167).	FA	.....	3	.....	1	.....	.....	.....	.....	2	.....	4
	SY	.....	2	.....	1	.....	.....	.....	.....	1	.....	7
	H	.....	.....	2	1	.....	1	.....	.....	.....	.....	70
Burns, multiple "F" (Class XX, Inter. 167).	FA	.....	60	3	35	1	10	.....	.....	17	.....	604
	SY	.....	9	2	7	.....	.....	.....	.....	3	1	85
	H	1	.....	18	10	.....	5	1	.....	1	2	535
Burns, multiple "L" (Class XX, Inter. 167).	FA	.....	64	2	59	.....	.....	.....	.....	5	2	531
	SY	.....	10	.....	5	.....	.....	.....	.....	5	.....	59
	H	2	1	10	13	.....	.....	.....	.....	.....	.....	397

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Compression of chest "I" (Class XX, Inter. 186).	FA		3		1		2					6
Compression of nerve "G" (Class XX, Inter. 186).	H		1		1							7
Compression of nerve "L" (Class XX, Inter. 186).	FA		1							1		0
	H		1	2	2					1		161
Contusion "C" (Class XX, Inter. 186).	FA		1		1							4
Contusion "F" (Class XX, Inter. 186).	FA		3		1					1	1	15
	SY		1		1							3
	H		1	2	2	1						35
Contusion "G" (Class XX, Inter. 186).	FA	3	223	13	211	3				22	3	1,207
	SY	1	51	5	43	1		1		10	2	302
	H	3	7	34	31	10				1	2	925
Contusion "H" (Class XX, Inter. 186).	FA		40	1	37					3	1	353
	SY		10		10							74
	H		1	1	1						1	31
Contusion "I" (Class XX, Inter. 186).	FA	1	109	1	102					7	2	614
	SY	2	15		12					5		92
	H			17	7	9					1	341
Contusion "J" (Class XX, Inter. 186).	FA	3	79	5	77	1				9		437
	SY		57	5	48					14		158
	H		1	26	19	7					1	405
Contusion "L" (Class XX, Inter. 186).	FA	4	397	5	373	5				25	3	2,054
	SY	4	61	4	55	2		3		8	1	614
	H		9	34	32	8		1		1	1	819
Contusions, multiple "F" (Class XX, Inter. 186).	FA		1								1	3
Contusions, multiple "G" (Class XX, Inter. 186).	FA		45	1	34					12		212
	SY		3	1	1	1				2		4
	H		1	16	11	3					3	561
Contusions, multiple "H" (Class XX, Inter. 186).	FA		1							1		0
	SY		1	1	1	1						20
	H			1	1							10
Contusions, multiple "I" (Class XX, Inter. 186).	FA		6	1	5	2						87
	SY		2							2		1
	H			2	2							88
Contusions, multiple "J" (Class XX, Inter. 186).	FA		1		1							4
	SY		9	1	10							22
Contusions, multiple "L" (Class XX, Inter. 186).	FA	1	25		25					1		138
	SY		4	1	5							60
	H		3	2	3	1					1	84
Crush of lower limb "I" (Class XX, Inter. 186).	FA		4		3						1	63
	SY		2		2							46
	H	1						1				125
Crush of lower limb "L" (Class XX, Inter. 186).	SY		1							1		0
	H			1	1							8
Crush of upper limb "H" (Class XX, Inter. 186).	FA			1	1							18
	SY		1	1				1		1		8
	H	1	1	1	1					1	1	392
Crush of upper limb "I" (Class XX, Inter. 186).	FA		2	1	2					1		26
	H			1				1				61
Crush of upper limb "L" (Class XX, Inter. 186).	FA		1		1							2
	SY		1		1							10
Decapitation "L" (Class XX, Inter. 186).	FA		1				1					0

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Dislocation about ankle "J" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	1	.....	1	.....	.....	.....	.....	.....	.....	7
Dislocation about ankle "L" (Class XX, Inter. 185A).	H	1	.....	.....	1	.....	.....	.....	.....	.....	.....	54
Dislocation about wrist "G" (Class XX, Inter. 185A).	FA	.....	3	.....	1	.....	.....	.....	.....	2	.....	42
	SY	.....	2	.....	.....	.....	.....	.....	.....	2	.....	5
	H	.....	.....	4	2	1	.....	.....	.....	.....	1	114
Dislocation about wrist "J" (Class XX, Inter. 185A).	FA	.....	2	.....	1	.....	.....	.....	.....	1	.....	40
	H	.....	1	1	1	1	.....	.....	.....	.....	.....	22
Dislocation of clavicle "G" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	5
	H	.....	1	1	2	.....	.....	.....	.....	.....	.....	118
Dislocation of clavicle "J" (Class XX, Inter. 185A).	FA	.....	2	.....	1	.....	.....	.....	.....	1	.....	48
	SY	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	3	1	1	.....	.....	.....	.....	1	38
Dislocation of clavicle "L" (Class XX, Inter. 185A).	FA	.....	2	.....	.....	.....	.....	.....	.....	2	.....	7
	H	.....	.....	2	1	.....	.....	.....	.....	.....	1	27
Dislocation of elbow "G" (Class XX, Inter. 185A).	FA	.....	3	.....	2	.....	.....	.....	.....	1	.....	26
	SY	.....	2	1	1	.....	.....	1	.....	1	.....	12
	H	.....	2	3	5	.....	.....	.....	.....	.....	.....	238
Dislocation of elbow "J" (Class XX, Inter. 185A).	FA	.....	4	.....	2	.....	.....	.....	.....	2	.....	39
	SY	.....	3	.....	1	.....	.....	.....	.....	2	.....	24
	H	.....	.....	4	3	1	.....	.....	.....	.....	.....	119
Dislocation of elbow "L" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	15
	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	2
	H	1	.....	2	1	1	.....	.....	.....	1	.....	27
Dislocation of intra-articular cartilage of joint "G" (Class XX, Inter. 185A).	FA	.....	1	1	.....	.....	.....	.....	.....	2	.....	0
	H	.....	1	2	3	.....	.....	.....	.....	.....	.....	284
Dislocation of intra-articular cartilage of joint "J" (Class XX, Inter. 185A).	FA	.....	3	1	.....	.....	.....	.....	.....	4	.....	30
	SY	.....	4	1	2	.....	.....	.....	.....	3	.....	37
	H	1	2	5	6	1	.....	.....	.....	.....	1	556
Dislocation of intra-articular cartilage of joint "L" (Class XX, Inter. 185A).	FA	.....	7	2	4	.....	.....	.....	.....	5	.....	68
	SY	.....	.....	1	.....	.....	.....	1	.....	.....	.....	0
	H	.....	1	8	7	.....	.....	.....	.....	1	1	737
Dislocation of lens "L" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	2	1	1	.....	.....	.....	.....	.....	48
Dislocation of patella "G" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	7
	SY	.....	.....	1	1	.....	.....	.....	.....	.....	.....	40
Dislocation of patella "J" (Class XX, Inter. 185A).	SY	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	.....	.....	1	14
Dislocation of shoulder "G" (Class XX, Inter. 185A).	FA	.....	12	.....	9	.....	.....	.....	.....	3	.....	83
	SY	.....	3	.....	2	.....	.....	.....	.....	1	.....	21
	H	.....	1	7	3	2	.....	.....	.....	.....	3	162
Dislocation of shoulder "J" (Class XX, Inter. 185A).	FA	.....	10	2	10	.....	.....	.....	.....	2	.....	83
	SY	.....	5	1	2	.....	.....	.....	.....	4	.....	34
	H	.....	.....	6	4	1	.....	.....	.....	1	.....	82
Dislocation of shoulder "L" (Class XX, Inter. 185A).	FA	.....	9	3	10	.....	.....	.....	.....	1	1	97
	SY	.....	6	.....	4	.....	.....	1	.....	1	.....	20
	H	1	.....	2	2	.....	.....	.....	.....	.....	1	92
Dislocation, unqualified "G" (Class XX, Inter. 185A).	FA	.....	7	.....	5	.....	.....	.....	.....	2	.....	33
	H	.....	1	3	3	1	.....	.....	.....	.....	.....	56
Dislocation, unqualified "I" (Class XX, Inter. 185A).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	84
Dislocation, unqualified "J" (Class XX, Inter. 185A).	FA	.....	3	.....	3	.....	.....	.....	.....	.....	.....	10
	SY	.....	8	1	7	.....	.....	.....	.....	2	.....	28
	H	.....	.....	2	2	.....	.....	.....	.....	.....	.....	21

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Dislocation, unqualified "L" (Class XX, Inter. 185A).	FA		8	2	8					2		60
	SY		1		1							8
	H		1	2	1						2	85
Drowning "A" (Class XX, Inter. 169B).	FA		1				1					0
Drowning "D" (Class XX, Inter. 169B).	FA		43				43					0
	SY		8				8					0
Electric shock, injury from "L" (Class XX, Inter. 181).	FA		2		2							4
	SY		1		1							4
Epiphyseal separation "G" (Class XX, Inter. 185C).	SY		1							1		3
	H			1	1							29
Epiphyseal separation "J" (Class XX, Inter. 185C).	H		1		1							77
Exhaustion from overexertion and exposure "J" (Class XX, Inter. 177A).	FA		1		1							3
Exhaustion from overexertion and exposure "L" (Class XX, Inter. 177A).	FA		5	1	4	1				1		63
	H		5	3	3	3				2		109
Foreign body, traumatic "H" (Class XX, Inter. 186).	FA		8		6					2		13
	SY		1		1							1
	H			2	2							83
Foreign body, traumatic "L" (Class XX, Inter. 186).	FA		45		39					6		143
	SY		4		4							13
	H	1		6	7							59
Fracture about ankle joint, compound "A" (Class XX, Inter. 185C).	SY		1							1		0
	H			1						1		163
Fracture about ankle joint, simple "F" (Class XX, Inter. 185C).	FA		1							1		1
	H			1		1						33
Fracture about ankle joint, simple "G" (Class XX, Inter. 185C).	FA	2	8	3	3			1		9		229
	SY		4	1	2					3		101
	H	5	5	14	14	4				2	4	1,634
Fracture about ankle joint, simple "H" (Class XX, Inter. 185C).	H	1	1		1			1				49
Fracture about ankle joint, simple "I" (Class XX, Inter. 185C).	FA		1		1							35
Fracture about ankle joint, simple "J" (Class XX, Inter. 185C).	FA		5		1	1				3		69
	SY		2							2		1
	H	1	2	5	7					1		437
Fracture about ankle joint, simple "L" (Class XX, Inter. 185C).	FA		4							4		9
	SY		2	1						1	2	27
	H	2	1	5	5	2					1	322
Fracture about wrist joint, compound "G" (Class XX, Inter. 185C).	FA		2	1	1					2		26
	H			1	1							87
Fracture about wrist joint, simple "G" (Class XX, Inter. 185C).	FA		11	1	9					2	1	222
	SY		7		2					5		47
	H		5	7	9	2				1		473
Fracture about wrist joint, simple "H" (Class XX, Inter. 185C).	FA		3		1					2		24
	SY		4		2					2	1	61
	H	2		3	4	1						141
Fracture about wrist joint, simple "I" (Class XX, Inter. 185C).	FA		1		1							25

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Fracture about wrist joint, simple "J" (Class XX, Inter. 185C).	FA	.....	6	.....	5	.....	.....	.....	....	1	.....	121
	SY	.....	5	.....	2	.....	.....	.....	....	2	1	40
	H	.....	.....	3	2	.....	.....	.....	....	.....	1	71
Fracture about wrist joint, simple "K" (Class XX, Inter. 185C).	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	79
Fracture about wrist joint, simple "L" (Class XX, Inter. 185C).	FA	1	7	2	8	.....	.....	.....	....	1	1	111
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	33
	H	1	2	.....	2	.....	.....	.....	....	.....	1	106
Fracture of clavicle, simple "G" (Class XX, Inter. 185C).	FA	.....	5	1	2	.....	.....	.....	....	4	.....	61
	SY	.....	4	.....	.....	.....	.....	.....	....	4	.....	1
	H	1	1	9	10	.....	.....	.....	....	1	.....	525
Fracture of clavicle, simple "H" (Class XX, Inter. 185C).	H	1	.....	.....	1	.....	.....	.....	....	.....	.....	57
Fracture of clavicle, simple "I" (Class XX, Inter. 185C).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	42
Fracture of clavicle, simple "J" (Class XX, Inter. 185C).	FA	.....	6	1	3	.....	.....	.....	....	3	1	112
	SY	.....	1	1	1	.....	.....	.....	....	1	.....	40
	H	1	3	3	6	.....	.....	.....	....	1	.....	311
Fracture of clavicle, simple "L" (Class XX, Inter. 185C).	FA	1	1	.....	1	.....	.....	.....	....	1	.....	19
	SY	.....	2	1	1	1	.....	1	....	.....	.....	49
	H	.....	.....	3	1	1	.....	.....	....	1	.....	101
Fracture of femur, compound "I" (Class XX, Inter. 185C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	2
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	219
Fracture of femur, compound "L" (Class XX, Inter. 185C).	FA	.....	1	1	1	.....	.....	.....	....	1	.....	18
Fracture of femur, simple "F" (Class XX, Inter. 185C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	113
Fracture of femur, simple "G" (Class XX, Inter. 185C).	FA	.....	2	.....	.....	.....	.....	.....	....	2	.....	31
	SY	.....	1	1	.....	.....	.....	1	....	1	.....	0
	H	2	.....	3	3	..	.....	.....	....	1	1	309
Fracture of femur, simple "I" (Class XX, Inter. 185C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	2	1	.....	.....	.....	....	1	.....	146
Fracture of femur, simple "J" (Class XX, Inter. 185C).	H	.....	1	.....	1	.....	.....	.....	....	.....	.....	45
Fracture of femur, simple "L" (Class XX, Inter. 185C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	1
	H	.....	.....	2	1	.....	.....	.....	....	.....	1	312
Fracture of forearm, compound "G" (Class XX, Inter. 185C).	FA	.....	.....	1	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	70
Fracture of forearm, compound "H" (Class XX, Inter. 185C).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	1	.....	1	.....	1	.....	.....	....	1	.....	315
Fracture of forearm, compound "I" (Class XX, Inter. 185C).	FA	.....	1	1	.....	1	.....	.....	....	1	.....	21
Fracture of forearm, compound "J" (Class XX, Inter. 185C).	H	1	.....	.....	1	.....	.....	.....	....	.....	.....	120
Fracture of forearm, simple "F" (Class XX, Inter. 185C).	SY	1	.....	.....	1	.....	.....	.....	....	.....	.....	4

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Fracture of forearm, simple "G" (Class XX, Inter. 185C).	FA	1	15	1	7					10		265
	SY		9	2	5					6		138
	H	5		16	14	3				1	3	1,029
Fracture of forearm, simple "H" (Class XX, Inter. 185C).	FA		3		2					1		64
	SY		1		1							23
	H			4	3					1		158
Fracture of forearm, simple "I" (Class XX, Inter. 185C).	FA		1		1							30
	H			1	1							157
Fracture of forearm, simple "J" (Class XX, Inter. 185C).	FA		2	1						3		0
	SY		1	4	1					4		51
	H	1		8	5	1				1	2	413
Fracture of forearm, simple "L" (Class XX, Inter. 185C).	FA		9		2					7		62
	SY		3	1	2			1		1		26
	H	2	1	9	9					2	1	629
Fracture of humerus, simple "G" (Class XX, Inter. 185C).	FA		2		1					1		48
	SY		3	1	1			1		2		1
	H	3		3	4					1	1	375
Fracture of humerus, simple "J" (class XX, Inter. 185C).	FA		1							1		12
	SY		3	1						4		1
	H			7	4	2				1		286
Fracture of humerus, simple "L" (Class XX, Inter. 185C).	FA		1							1		0
	H	1		1	2							247
Fracture of leg, compound "B" (Class XX, Inter. 185C).	SY			1				1				0
	H	1								1		43
Fracture of leg, compound "F" (Class XX, Inter. 185C).	FA		1							1		0
	H			1							1	113
Fracture of leg, compound "G" (Class XX, Inter. 185C).	FA		1							1		1
	SY			1						1		45
	H			2	1					1		91
Fracture of leg, compound "H" (Class XX, Inter. 185C).	FA		1							1		0
	H	1		2	2					1		248
Fracture of leg, compound "I" (Class XX, Inter. 185C).	FA			1						1		1
	SY		1					1				1
	H	1		1	2							31
Fracture of leg, compound "J" (Class XX, Inter. 185C).	H	1			1							146
Fracture of leg, compound "L" (Class XX, Inter. 185C).	FA		3							3		7
	SY		1					1				5
	H	3		3	1			2		1	2	867
Fracture of leg, simple "F" (Class XX, Inter. 185C).	FA		2							1	1	4
	H			1							1	203
Fracture of leg, simple "G" (Class XX, Inter. 185C).	FA		5		1					4		68
	SY		1								1	40
	H	4	1	6	4	3				1	3	705
Fracture of leg, simple "H" (Class XX, Inter. 185C).	FA		1							1		0
	H			1	1							108
Fracture of leg, simple "I" (Class XX, Inter. 185C).	FA		4	1	2					3		120
	SY		1		1							66
	H	1		3	2	1					1	204
Fracture of leg, simple "J" (Class XX, Inter. 185C).	FA		2		1					1		33
	SY	1	3		3					1		85
	H	1	1	2	4							228
Fracture of leg, simple "L" (Class XX, Inter. 185C).	FA		10	2	1					10	1	102
	H	4		12	9	1				3	3	1,268

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Fracture of maxilla, inferior, compound "G" (Class XX, Inter. 185C).	FA		2							2		3
	H			2	1	1						131
Fracture of maxilla, inferior, compound "J" (Class XX, Inter. 185C).	FA		2		2							79
Fracture of maxilla, inferior, compound "L" (Class XX, Inter. 185C).	FA		9	1	5					5		213
	SY		3		1					2		47
	H	3	1	8	8	2					2	346
Fracture of maxilla, inferior, simple "G" (Class XX, Inter. 185C).	SY		1							1		0
	H		1	2	3							123
Fracture of maxilla, inferior, simple "J" (Class XX, Inter. 185C).	FA		2							2		3
	SY			1	1							31
	H	1		1	2							45
Fracture of maxilla, inferior, simple "K" (Class XX, Inter. 185C).	H			1	1							58
Fracture of maxilla, inferior, simple "L" (Class XX, Inter. 185C).	FA		14		2					12		39
	SY		6							6		3
	H	4	1	17	19					1	2	782
Fracture of patella, simple "G" (Class XX, Inter. 185C).	FA		6	2	1					7		96
	H	1		7	4					2	2	764
Fracture of patella, simple "J" (Class XX, Inter. 185C).	SY		2		1					1		52
	H			1	1							19
Fracture of pelvis, simple "H" (Class XX, Inter. 185C).	SY		1				1					0
Fracture of pelvis, simple "I" (Class XX, Inter. 185C).	FA		1							1		16
	H			1	1							35
Fracture of penis "L" (Class XX, Inter. 186).	FA		1	1	2							11
Fracture of rib, simple "G" (Class XX, Inter. 185C).	FA	1	9		9					1		128
	SY		3		2					1		19
	H			2	2							44
Fracture of rib, simple "H" (Class XX, Inter. 185C).	FA		1		1							30
	SY		1							1		1
	H			1	1							40
Fracture of rib, simple "I" (Class XX, Inter. 185C).	H			1	1							16
Fracture of rib, simple "J" (Class XX, Inter. 185C).	FA		4	1	4					1		9
	SY		3		3							7
Fracture of rib, simple "L" (Class XX, Inter. 185C).	FA		5		4					1		56
	SY		3		2					1		37
	H		1	2	3							123
Fracture of skull, compound "A" (Class XX, Inter. 185C).	SY		1				1					0
Fracture of skull, compound "B" (Class XX, Inter. 185C).	FA		1				1					0
Fracture of skull, compound "G" (Class XX, Inter. 185C).	FA		8		1		3			3	1	102
	SY		2	1			2	1				16
	H	2	1	5	4	2		2				330
Fracture of skull, compound "I" (Class XX, Inter. 185C).	FA		2				1			1		0
	H			1			1					0

TABLE [illegible].—Detailed statement of [illegible] for the calendar year 1915—Con.

[illegible]		[illegible]	Total
[illegible]—Continued.			
Fractured skull, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture of skull, [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture of skull, [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture of skull, [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fractured vertebra, simple (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fractured vertebra, simple (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, compound [illegible] (Class XX, Inter. 185[illegible]).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, simple [illegible] (Class XX, Inter. 185C).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, simple [illegible] (Class XX, Inter. 185C).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, simple [illegible] (Class XX, Inter. 185C).	[illegible]	[illegible]	[illegible]
Fracture, unqualified, simple "H" (Class XX, Inter. 185C).	[illegible]	[illegible]	[illegible]
	H	[illegible]	11
Fracture, unqualified, simple "I" (Class XX, Inter. 185C).	[illegible]	[illegible]	314
	[illegible]	[illegible]	[illegible]
	H	[illegible]	[illegible]
Fracture, unqualified, simple "J" (Class XX, Inter. 185C).	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
	H	[illegible]	[illegible]
Fracture, unqualified, simple "L" (Class XX, Inter. 185C).	[illegible]	[illegible]	1,7[illegible]
	[illegible]	[illegible]	[illegible]
	H	[illegible]	1,[illegible]
Frostbite "L" (Class XX, [illegible]	[illegible]	[illegible]	[illegible]

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Heat cramps "L" (Class XX, Inter. 179A).	FA		66		66							145
	SY		1	1	2							9
Heat exhaustion "L" (Class XX, Inter. 179A).	FA		57	1	56		1			1		193
	SY		1							1		4
	H	1	1	4	4	2						105
Hematoma, traumatic "G" (Class XX, Inter. 186).	FA		1							1		5
	SY		1							1		6
	H			2	1						1	162
Hematoma, traumatic "L" (Class XX, Inter. 186).	FA		1	1	1						1	27
Hemorrhage into eyeball "H" (Class XX, Inter. 186).	FA		1							1		0
	H			1	1							18
Hemorrhage into eyeball "J" (Class XX, Inter. 186).	FA		2							2		0
	SY		1							1		0
	H			3	3							51
Hemorrhage into eyeball "L" (Class XX, Inter. 186).	FA		2		1					1		10
	H	1		1	2							19
Hemorrhage under conjunctiva, traumatic "G" (Class XX, Inter. 186).	FA		1		1							0
Hemorrhage under conjunctiva, traumatic "L" (Class XX, Inter. 186).	FA		3							3		7
	H		1	3	3						1	58
Intracranial injury "G" (Class XX, Inter. 186).	FA	1	10	1	4		2			6		65
	SY		1	1				1		1		0
	H			7	5	1					1	100
Intracranial injury "J" (Class XX, Inter. 186).	FA		4		2					2		13
	SY		1		1							1
	H			2	1		1					37
Intracranial injury "L" (Class XX, Inter. 186).	FA		12	1	7					6		71
	SY		1	1	1					1		30
	H	1	1	8	6	1		2			1	129
Multiple injuries, extreme "H" (Class XX, Inter. 186).	FA		2				2					0
Multiple injuries, extreme "I" (Class XX, Inter. 186).	SY	1			1							18
Multiple injuries, extreme "L" (Class XX, Inter. 186).	FA		1				1					0
	SY		1				1					0
Rupture of globe "E" (Class XX, Inter. 186).	H			1				1				228
Rupture of globe "F" (Class XX, Inter. 186).	FA		1	1						2		11
Rupture of ligament "H" (Class XX, Inter. 186).	SY			1				1				10
	H		1		1							8
Rupture of ligament "J" (Class XX, Inter. 186).	FA		1							1		0
	H		1	1	2							22
Rupture of ligament "L" (Class XX, Inter. 186).	FA		1		1							13
Rupture of muscle "I" (Class XX, Inter. 186).	FA		1							1		0
	H			1				1				148
Rupture of muscle "J" (Class XX, Inter. 186).	FA		2		1					1		16
	SY		1		1							6
	H			1	1							1

[illegible]

[illegible]—Contd.

[illegible]												[illegible]
[illegible]												30 16
[illegible]												3 3
[illegible]												0 0
[illegible]												0 15
[illegible]												[illegible] 2
[illegible]												2 [illegible]
[illegible]												13 3
[illegible]												0 22
[illegible]	[illegible]		[illegible]		[illegible]					[illegible]		[illegible]
[illegible]	[illegible]		[illegible]		[illegible]							[illegible]
[illegible]	[illegible]		[illegible]		[illegible]							30 6
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	[illegible]
[illegible]												4
[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]					[illegible]	3 5	[illegible]
[illegible]	[illegible]		[illegible]		2							[illegible]
[illegible]	VA		2		2							3
[illegible]	VA		[illegible]		[illegible]						1	58
	NY		22	[illegible]	20					3		58
	H			5	3	[illegible]					1	51
[illegible]	VA		22	1	50					3	1	206
	NY		14	2	[illegible]					1		96
	H		4	6	6	2						91
[illegible]	VA		2		1		1					1
	NY		1				1					0
[illegible] Class XX, [illegible]	VA		5		4					1		21
	H			1	1							6
[illegible] Class XX, [illegible]	VA		7		7							18
	NY		1							1		1
	H			1	1							5
[illegible] Class XX, [illegible]	VA		25		25							73
	NY		25		21					1		100
	H		2	1	3							31
[illegible] Class XX, [illegible]).	VA		1		1							4

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Sunstroke "L" (Class XX, Inter. 179B).	FA	.....	4	.....	4	.....	.....	.....	....	.....	.....	8
	SY	.....	1	.....	1	.....	.....	.....	....	.....	.....	5
Synovitis, traumatic "G" Class XX, Inter. 186).	FA	1	28	2	23	1	.....	.....	....	7	.....	243
	SY	.....	7	4	5	.....	.....	.....	....	6	.....	38
	H	1	2	15	12	1	.....	2	....	2	1	598
Synovitis, traumatic "H" (Class XX, Inter. 186).	FA	.....	2	.....	1	.....	.....	.....	....	1	.....	2
Synovitis, traumatic "I" (Class XX, Inter. 186).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	3
	SY	.....	.....	1	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	25
Synovitis, traumatic "J" (Class XX, Inter. 186).	FA	.....	7	.....	3	.....	.....	.....	....	3	1	108
	SY	.....	17	3	11	1	.....	.....	....	8	.....	87
	H	.....	.....	12	9	.....	.....	.....	....	.....	3	202
Synovitis, traumatic "L" (Class XX, Inter. 186).	FA	.....	18	3	14	.....	.....	.....	....	6	1	205
	SY	.....	11	.....	6	.....	.....	2	....	3	.....	97
	H	1	1	11	8	2	.....	2	....	.....	1	593
Thermic fever "L" (Class XX, Inter. 179A).	FA	.....	9	.....	9	.....	.....	.....	....	.....	.....	29
Wound, gunshot, abdominal viscera "A" (Class XX, Inter. 170).	FA	.....	2	.....	.....	.....	2	.....	....	.....	.....	0
	H	.....	.....	1	.....	.....	1	.....	....	.....	.....	0
Wound, gunshot, abdominal viscera "E" (Class XX, Inter. 170).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	3	.....	1	.....	.....	....	1	1	280
Wound, gunshot, abdominal viscera "K" (Class XX, Inter. 170).	FA	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
Wound, gunshot, brain "A" (Class XX, Inter. 170).	FA	.....	2	.....	.....	.....	2	.....	....	.....	.....	0
	SY	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
	H	.....	3	.....	.....	1	2	.....	....	.....	.....	163
Wound, gunshot, brain "K" (Class XX, Inter. 170).	FA	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
	SY	.....	1	.....	.....	.....	1	.....	....	.....	.....	0
Wound, gunshot, lower limb "B" (Class XX, Inter. 170).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	0
Wound, gunshot, lower limb "E" (Class XX, Inter. 170).	FA	1	2	.....	3	.....	.....	.....	....	.....	.....	178
	SY	.....	5	.....	2	.....	.....	.....	....	2	1	15
	H	.....	.....	3	2	.....	.....	.....	....	.....	1	146
Wound, gunshot, lower limb, "K" (Class XX, Inter. 170).	FA	.....	4	4	2	.....	.....	.....	....	6	.....	256
	SY	.....	4	.....	1	.....	.....	.....	....	3	.....	158
	H	.....	.....	7	1	.....	.....	1	....	1	4	144
Wound, gunshot, lung "A" (Class XX, Inter. 170).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	7
	SY	.....	2	.....	1	1	.....	.....	....	.....	.....	34
Wound, gunshot, lung "B" (Class XX, Inter. 170).	SY	.....	1	.....	.....	.....	.....	.....	....	1	.....	0
	H	.....	.....	1	1	.....	.....	.....	....	.....	.....	23
Wound, gunshot, lung "E" (Class XX, Inter. 170).	SY	.....	1	.....	.....	.....	1	.....	....	.....	.....	5
Wound, gunshot, lung "K" (Class XX, Inter. 170).	FA	.....	1	.....	.....	.....	.....	.....	....	1	.....	71
	H	.....	.....	1	.....	.....	.....	.....	....	.....	1	25
Wound, gunshot, neck "E" (Class XX, Inter. 170).	FA	.....	1	.....	1	.....	.....	.....	....	.....	.....	10
Wound, gunshot, neck "K" (Class XX, Inter. 170).	FA	.....	.....	2	.....	.....	.....	.....	....	2	.....	1
	H	.....	.....	2	1	1	.....	.....	....	.....	.....	19

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Wound, gunshot, upper limb "B" (Class XX, Inter. 170).	FA		1		1							10
Wound, gunshot, upper limb "E" (Class XX, Inter. 170).	FA		5	1	2					4		120
	SY		4	2	1			1		4		67
	H	2		7	4			1		3	1	740
Wound, gunshot, upper limb "F" (Class XX, Inter. 170).	FA		2		2							15
Wound, gunshot, upper limb "K" (Class XX, Inter. 170).	FA		2	1						3		80
	SY		1							1		64
	H	1		4	1					1	3	141
Wound, gunshot, upper limb "L" (Class XX, Inter. 170).	SY			1	1							60
Wound, gunshot, unqualified "E" (Class XX, Inter. 170).	FA		6	1	5					2		51
	SY		2	2	2			1		1		89
	H	2		3	2		1			2		129
Wound, gunshot, unqualified "F" (Class XX, Inter. 170).	FA		1								1	3
	SY			1				1				0
	H	1								1		30
Wound, gunshot, unqualified "K" (Class XX, Inter. 170).	FA		1	2	1					2		41
	SY		1		1							18
	H	1		2	1			1			1	277
Wound, gunshot, unqualified "L" (Class XX, Inter. 170).	SY		1							1		0
	H			1	1							7
Wound, incised (main) artery or vein "L" (Class XX, Inter. 171).	H			1	1							62
Wound, incised, lower limb "G" (Class XX, Inter. 171).	FA		5		4					1		43
	SY		2		1					1		12
Wound, incised, lower limb "H" (Class XX, Inter. 171).	FA		3		3							30
Wound, incised, lower limb "I" (Class XX, Inter. 171).	FA		2		1					1		18
	H			1	1							134
Wound, incised, lower limb "J" (Class XX, Inter. 171).	FA		2		2							13
	SY		1		1							1
Wound, incised, lower limb "L" (Class XX, Inter. 171).	FA		28	2	28					1	1	197
	SY		13	1	11					3		62
	H			6	3						3	160
Wound, incised, neck "A" (Class XX, Inter. 171).	FA		1							1		0
	SY		1				1					0
	H			1		1						37
Wound, incised, neck "K" (Class XX, Inter. 171).	SY		1				1					0
Wound, incised, neck "L" (Class XX, Inter. 171).	SY		1		1							4
Wound, incised, pleura "B" (Class XX, Inter. 171).	SY		1							1		3
	H			1	1							52
Wound, incised, upper limb "A" (Class XX, Inter. 171).	SY		1							1		0
	H			1	1							30
Wound, incised, upper limb "B" (Class XX, Inter. 171).	FA		1		1							1
	H			2	2							74

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Wound, incised, upper limb "E" (Class XX, Inter. 171).	SY	.....	2	.....	1	.....	.....	.....	.....	.....	1	1
Wound, incised, upper limb "G" (Class XX, Inter. 171).	FA	.....	4	.....	4	.....	.....	.....	.....	.....	.....	37
Wound, incised, upper limb "H" (Class XX, Inter. 171).	FA	.....	8	.....	6	.....	.....	.....	.....	2	.....	34
	SY	.....	6	.....	6	.....	.....	.....	.....	.....	.....	87
	H	.....	2	1	3	.....	.....	.....	.....	.....	.....	93
Wound, incised, upper limb "I" (Class XX, Inter. 171).	FA	.....	2	.....	2	.....	.....	.....	.....	.....	.....	14
	SY	.....	1	.....	1	.....	.....	.....	.....	.....	.....	7
Wound, incised, upper limb "L" (Class XX, Inter. 171).	FA	.....	90	2	82	1	.....	.....	.....	6	3	636
	SY	.....	25	2	21	.....	.....	2	.....	4	.....	121
	H	3	1	8	8	2	.....	.....	.....	1	1	182
Wound, incised, unqualified "B" (Class XX, Inter. 171).	FA	1	4	1	5	.....	.....	.....	.....	1	.....	88
	H	.....	.....	1	1	.....	.....	.....	.....	.....	.....	24
Wound, incised, unqualified "G" (Class XX, Inter. 171).	FA	.....	9	.....	9	.....	.....	.....	.....	.....	.....	48
Wound, incised, unqualified "H" (Class XX, Inter. 171).	FA	.....	8	.....	7	.....	.....	.....	.....	1	.....	52
	H	.....	.....	2	1	.....	.....	.....	.....	.....	1	22
Wound, incised, unqualified "I" (Class XX, Inter. 171).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	13
Wound, incised, unqualified "J" (Class XX, Inter. 171).	FA	.....	1	.....	1	.....	.....	.....	.....	.....	.....	4
Wound, incised, unqualified "L" (Class XX, Inter. 171).	FA	1	56	2	52	1	.....	.....	.....	6	.....	237
	SY	.....	15	1	9	.....	.....	.....	.....	7	.....	66
	H	.....	1	16	12	3	.....	1	.....	.....	1	434
Wound, lacerated, abdominal viscera "I" (Class XX, Inter. 186).	FA	.....	1	.....	.....	.....	1	.....	.....	.....	.....	18
Wound, lacerated, abdominal viscera "L" (Class XX, Inter. 186).	SY	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	2	1	1	.....	.....	.....	.....	.....	34
Wound, lacerated, brain "G" (Class XX, Inter. 186).	FA	.....	1	.....	.....	.....	1	.....	.....	.....	.....	0
Wound, lacerated, brain "L" (Class XX, Inter. 186).	FA	.....	1	.....	.....	.....	.....	.....	.....	1	.....	0
	H	.....	.....	2	.....	1	1	.....	.....	.....	.....	0
Wound, lacerated, lower limb "G" (Class XX, Inter. 186).	FA	.....	28	.....	25	1	.....	.....	.....	2	.....	184
	SY	.....	2	.....	1	.....	.....	.....	.....	1	.....	16
	H	.....	1	1	2	.....	.....	.....	.....	.....	.....	52
Wound, lacerated, lower limb "H" (Class XX, Inter. 186).	FA	.....	8	.....	6	.....	.....	.....	.....	2	.....	173
	SY	.....	3	.....	1	.....	.....	.....	.....	2	.....	11
	H	1	.....	3	4	.....	.....	.....	.....	.....	.....	246
Wound, lacerated, lower limb "I" (Class XX, Inter. 186).	FA	.....	20	.....	17	.....	.....	.....	.....	3	.....	222
	SY	.....	3	2	1	.....	.....	.....	.....	3	1	49
	H	1	.....	6	4	.....	.....	1	.....	1	1	408
Wound, lacerated, lower limb "J" (Class XX, Inter. 186).	FA	.....	7	3	9	.....	.....	.....	.....	1	.....	114
	SY	.....	3	.....	3	.....	.....	.....	.....	.....	.....	18
	H	.....	.....	2	2	.....	.....	.....	.....	.....	.....	46
Wound, lacerated, lower limb "L" (Class XX, Inter. 186).	FA	1	50	.....	50	.....	.....	.....	.....	.....	1	397
	SY	.....	8	1	9	.....	.....	.....	.....	.....	.....	90
	H	.....	2	.....	1	.....	.....	.....	.....	1	.....	14

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Wound, lacerated, neck "A" (Class XX, Inter. 186).	FA		1							1		0
	H			1				1				46
Wound, lacerated, neck "L" (Class XX, Inter. 186).	FA		1								1	14
Wound, lacerated, upper limb "B" (Class XX, Inter. 186).	FA		1	1	1					1		14
Wound, lacerated, upper limb "E" (Class XX, Inter. 186).	FA		1		1							4
Wound, lacerated, upper limb "F" (Class XX, Inter. 186).	FA		6		6							62
Wound, lacerated, upper limb "G" (Class XX, Inter. 186).	FA		15		14					1		116
	SY		3		2	1						10
	H	1		2	3							97
Wound, lacerated, upper limb "H" (Class XX, Inter. 186).	FA		80	2	74					6	2	1,015
	SY	1	6	1	5					3		152
	H	3		8	4			4		1	2	557
Wound, lacerated, upper limb "I" (Class XX, Inter. 186).	FA	1	59	2	57					4	1	753
	SY		11	2	12					1		105
	H			4	2			1		1		117
Wound, lacerated, upper limb "J" (Class XX, Inter. 186).	FA		2		2							6
	SY		6		6							56
Wound, lacerated, upper limb "L" (Class XX, Inter. 186).	FA	1	101	2	92					5	7	863
	SY		20	1	17	1				2	1	194
	H	2	3	5	10							233
Wound, lacerated, unqualified "B" (Class XX, Inter. 186).	FA		2		1					1		20
	H			1	1							14
Wound, lacerated, unqualified "E" (Class XX, Inter. 186).	FA		3		3							2
	H			1				1				53
Wound, lacerated, unqualified "F" (Class XX, Inter. 186).	FA		5		3					2		12
	SY		2		2							9
	H			2	2							26
Wound, lacerated, unqualified "G" (Class XX, Inter. 186).	FA		47		41					6		186
	SY		14	1	13					2		70
	H	1		8	7	2						146
Wound, lacerated, unqualified "H" (Class XX, Inter. 186).	FA		41	1	38					3	1	287
	SY		6		4					2		83
	H	1		3	3						1	150
Wound, lacerated, unqualified "I" (Class XX, Inter. 186).	FA	2	27		26				1	2		179
	SY		6		6							49
	H			3	3							50
Wound, lacerated, unqualified "J" (Class XX, Inter. 186).	FA		7		6					1		23
	SY		7		7							37
	H			1	1							13
Wound, lacerated, unqualified "L" (Class XX, Inter. 186).	FA	1	186	2	171					17	1	829
	SY		31	1	26					5	1	188
	H	2	2	23	20	2		2		1	2	678
Wound, punctured, lower limb "G" (Class XX, Inter. 171).	FA		1		1							9
	H		2		2							64
Wound, punctured, lower limb "J" (Class XX, Inter. 171).	SY		1		1							2

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

Diagnosis.	PL.	Rem.	A.	RA.	D.	C.	DD.	IS.	R.	T.	Cont.	Days.
INJURIES—Continued.												
Wound, punctured, lower limb "L" (Class XX, Inter. 171).	FA		44	2	41	1				4		222
	SY		14		12					2		97
	H		3	6	9							252
Wound, punctured, neck "L" (Class XX, Inter. 171).	SY		1		1							0
Wound, punctured, upper limb "G" (Class XX, Inter. 171).	FA		1		1							4
Wound, punctured, upper limb "H" (Class XX, Inter. 171).	FA		1		1							43
	SY		2		2							15
Wound, punctured, upper limb "I" (Class XX, Inter. 171).	FA		1		1							6
Wound, punctured, upper limb "L" (Class XX, Inter. 171).	FA		9		7					2		44
	SY		9		7					2		37
	H	2		4	5	1						214
Wound, punctured, unqualified "A" (Class XX, Inter. 171).	FA		1							1		0
	H			1		1						40
Wound, punctured, unqualified "B" (Class XX, Inter. 171).	SY		1								1	3
Wound, punctured, unqualified "E" (Class XX, Inter. 171).	FA		1		1							1
	SY		1	1	1					1		34
	H			1	1							44
Wound, punctured, unqualified "G" (Class XX, Inter. 171).	FA		5		3					2		36
	H			1	1							11
Wound, punctured, unqualified "J" (Class XX, Inter. 171).	SY		1		1							14
Wound, punctured, unqualified "L" (Class XX, Inter. 171).	FA		15	1	13					3		64
	SY		8		6					2		39
	H		1	9	7	1		1		1		312
POISONS.												
Insect sting "L" (Class XXI, Inter. 165A).	FA		2		1					1		2
	SY		5		5							30
	H			1	1							13
Poisoning by alcohol "L" (Class XXI, Inter. 56B).	FA		167	4	118	2				51		296
	SY		53	12	39	2	2			22		140
	H	3	13	77	70	12	3				8	902
Poisoning by fish "L" (Class XXI, Inter. 164).	FA		1							1		2
	SY		6		6							21
	H			1	1							38
Poisoning by fish venom "L" (Class XXI, Inter. 165A).	FA		3		3							27
	SY		1							1		2
	H			2	2							14
Poisoning by gasoline inhaled "L" (Class XXI, Inter. 168B).	FA		5		2					3		12
	H			3	3							38
Poisoning by illuminating gas "A" (Class XXI, Inter. 168B).	FA		2				1			1		0
	SY		2		1		1					0
	H			1	1							7
Poisoning by illuminating gas "L" (Class XXI, Inter. 168B).	FA		8		4		1			3		29
	SY		1				1					0
	H			4	2	1					1	19

TABLE 1.—*Detailed statement of diseases and injuries for the calendar year 1915*—Contd.

SUMMARY.

Summary and comparative rates with previous years.	For the year 1915.				Average entire service 10 years, 1905–1914.
	Force afloat.	Stations and yards.	Hospitals.	Entire service.	
Average complement	46,186	19,250	2,639	68,075	55,496
Number of cases treated (Rem, A, and RA)	33,618	14,465	16,991	65,074	48,332
Rate per 1,000 of complement	727.66	751.42	.....	955.91	870.90
Deaths	109	45	151	305	282
Rate per 1,000 of complement	2.36	2.33	.....	4.48	5.08
Invalided from service	141	466	665	1,272	1,442
Rate per 1,000 of complement	3.05	24.20	.....	18.68	25.98
Total number of sick days	142,348	73,151	560,704	776,203	591,641
Rate per 1,000 of complement	3,082.05	3,800.05	.....	11,402.17	10,660.96

DISTRIBUTION AMONG

TABLE 2.—*Table showing distribution of diseases and injuries among occupational rates, deaths and death rates, invalided from service and invalided*

Class No.	Class.[1]	Officers.		Artificers.				Miscellaneous force.	
		Navy and Marine.	Mid-shipmen.	Electricians.	Engine room.	Fire room.	All others.	Clerical.	Culinary.
	Average complement...	3,963	894	2,312	3,805	11,501	2,078	1,545	3,975
1	Diseases of blood.....	1	0	0	0	4	2	1	0
	Rate per 1,000.....	0.25	.....	.....	.....	0.34	0.96	0.64	.....
2	Diseases of circulatory system	17	5	8	15	40	6	3	11
	Rate per 1,000.....	4.28	5.59	3.46	3.94	3.47	2.88	1.94	2.76
3	Diseases of digestive system..	417	318	230	308	1,272	189	156	311
	Rate per 1,000.....	105.22	355.70	99.47	80.94	110.58	90.95	100.96	78.23
4	Diseases of ductless glands and spleen.	3	1	1	1	3	0	0	1
	Rate per 1,000.....	0.75	1.11	0.43	0.26	0.26	.....	.....	0.25
5	Diseases of ear.....	29	23	20	22	121	13	11	14
	Rate per 1,000.....	7.31	25.72	8.65	5.78	10.51	6.25	7.11	3.52
6	Diseases of eye and adnexa...	32	104	16	28	97	22	12	21
	Rate per 1,000.....	8.07	116.33	6.92	7.35	8.43	10.58	7.76	5.28
7	Diseases of genito-urinary system (nonvenereal).	43	14	33	60	193	28	20	36
	Rate per 1,000.....	10.85	15.65	14.27	15.76	16.77	13.47	12.94	9.05
8	Diseases of infective type (nonvenereal).	485	629	256	337	1,392	227	160	381
	Rate per 1,000.....	122.38	703.57	110.72	88.56	121.02	109.23	103.55	95.84
9	Diseases of infective type (venereal).	31	1	270	469	2,418	248	191	646
	Rate per 1,000.....	7.82	1.11	116.78	123.25	210.22	119.34	123.62	162.51
10	Diseases of lymphatic system.	7	3	10	25	94	14	3	21
	Rate per 1,000.....	1.76	3.35	4.32	6.57	8.17	6.73	1.94	5.28
11	Diseases of mind.....	8	2	4	7	15	11	2	7
	Rate per 1,000.....	2.01	2.23	1.73	1.83	1.30	5.28	1.29	1.76
12	Diseases of motor system.....	17	7	13	24	116	17	8	19
	Rate per 1,000.....	4.28	7.82	5.62	6.30	10.08	8.18	5.17	4.77
13	Diseases of nervous system...	54	8	16	23	64	15	9	12
	Rate per 1,000.....	13.62	8.94	6.92	6.04	5.56	7.21	5.82	3.01
14	Diseases of respiratory system	133	56	65	79	274	51	50	78
	Rate per 1,000.....	33.56	62.63	28.11	20.76	23.82	24.54	32.36	19.62
15	Diseases of skin, hair, and nails.	22	20	16	31	133	24	13	31
	Rate per 1,000.....	5.55	22.37	6.92	8.14	11.56	11.54	8.41	7.79
16	Hernias.....	21	4	14	24	63	12	10	22
	Rate per 1,000.....	5.29	4.47	6.05	6.30	5.47	5.77	6.47	5.53
17	Miscellaneous diseases and conditions.	51	21	15	39	158	36	16	48
	Rate per 1,000.....	12.86	23.48	6.41	10.24	13.73	17.32	10.35	12.07
18	Parasites.....	8	4	21	19	96	15	12	50
	Rate per 1,000.....	2.01	4.47	9.08	4.99	8.34	7.21	7.76	12.57
19	Tumors.....	8	1	6	4	18	5	2	2
	Rate per 1,000.....	2.01	1.11	2.59	1.05	1.56	2.40	1.29	0.50
20	Wounds and other injuries...	152	223	150	284	1,164	217	45	217
	Rate per 1,000.....	38.35	249.44	64.87	74.63	101.19	104.42	29.12	54.58
21	Poisons.....	15	1	11	33	111	40	15	12
	Rate per 1,000.....	3.78	1.11	4.75	8.67	9.65	19.24	9.70	3.01
22	Totals for all classes.....	1,554	1,445	1,175	1,832	7,846	1,192	739	1,940
	Rate per 1,000.....	392.12	1,616.33	508.21	292.24	682.20	573.62	478.31	488.04
23	Deaths.....	26	1	13	19	50	9	6	22
	Rate per 1,000.....	6.56	1.11	5.62	4.99	4.34	4.33	3.88	5.53
24	Suicides.....	1	0	1	2	2	3	2	0
	Rate per 1,000.....	0.25	.....	0.43	0.52	0.17	1.44	1.29	.....
25	Invalided from service.....	34	4	18	25	166	30	23	63
	Rate per 1,000.....	8.57	4.47	7.78	6.57	14.43	14.43	14.88	15.84
26	Total sick days.....	38,301	8,589	23,463	40,927	133,823	25,335	14,200	43,579
27	Damage [2].....	134.91	26.02	79.77	134.12	474.57	88.90	53.39	161.86

[1] For classes, see table in preface to statistics.

OCCUPATIONAL GROUPS.

groups of the personnel for the calendar year 1915, by classified admissions and admission rates, suicides and suicide rates, sick days, and the computed damage.

Miscellaneous force.				Seaman branch.			Totals for all occupations.					
Hospital.	Marines.	Musicians.	Prisoners.	Apprentices.	Ordnance.	All others.	Number.	Deaths.	Invalided from service.	Sick days.	Damage.[2]	Class No.
1,584	9,620	1,483	656	2,991	2,291	19,377	68,075	.....	.....	.....	.....	
1	5	0	0	0	1	5	20	2	0	574	2.25	1
0.63	0.51	.....	.....	.....	0.43	0.25	0.29	0.02	.....	.....	.....	
9	48	3	4	31	5	60	265	20	85	12,896	87.40	2
5.68	4.98	2.02	6.09	10.36	2.18	3.09	3.89	0.29	1.24	.....	.....	
224	926	114	79	1,105	139	2,003	7,791	22	39	92,466	283.62	3
141.41	96.25	76.87	120.42	369.44	60.67	103.36	114.44	0.32	0.57	.....	.....	
1	4	2	0	5	2	7	31	3	16	1,185	12.43	4
0.63	0.41	1.34	.....	1.67	0.87	0.36	0.45	0.04	0.23	.....	.....	
13	94	10	4	133	19	168	694	0	81	15,619	84.65	5
8.20	9.77	6.74	6.09	44.46	8.29	8.66	10.19	.....	1.23	.....	.....	
15	87	8	8	94	16	134	694	0	78	12,930	74.22	6
9.47	9.04	5.39	12.19	31.42	6.98	6.91	10.19	.....	1.14	.....	.....	
23	194	18	45	174	26	299	1,206	13	93	27,065	127.90	7
14.51	20.16	12.13	68.59	58.17	11.34	15.42	17.75	0.19	1.36	.....	.....	
227	1,464	129	71	2,202	155	2,584	10,699	63	140	196,739	640.10	8
143.30	152.18	86.98	108.23	736.20	67.65	133.35	157.16	0.92	2.05	.....	.....	
97	1,713	152	20	246	208	3,608	10,318	3	97	150,939	463.22	9
61.23	178.06	102.49	30.48	82.24	90.78	186.19	151.56	0.04	1.42	.....	.....	
10	92	5	0	25	7	134	450	0	0	11,824	32.39	10
6.31	9.56	3.37	.....	8.35	3.05	6.92	6.60	.....	.....	.....	.....	
5	22	2	0	29	4	72	190	5	123	15,545	106.23	11
3.15	2.28	1.34	.....	9.69	1.74	3.71	2.79	0.07	1.80	.....	.....	
8	128	4	12	112	3	108	596	0	164	17,600	129.90	12
5.05	13.30	2.69	18.29	37.44	1.30	5.57	8.75	.....	2.40	.....	.....	
4	82	17	0	39	5	83	431	7	121	15,774	106.86	13
2.52	8.52	11.46	.....	13.04	2.18	4.28	6.32	0.10	1.77	.....	.....	
79	293	33	16	786	37	461	2,491	24	61	51,865	184.30	14
49.87	30.45	22.25	24.38	262.78	16.14	23.78	36.59	0.35	0.89	.....	.....	
21	166	10	34	46	17	182	766	0	10	12,915	40.14	15
13.25	17.25	6.74	51.82	15.37	7.41	9.39	11.25	.....	0.14	.....	.....	
11	41	7	6	30	11	78	354	1	30	17,811	64.11	16
6.94	4.26	4.72	9.14	10.03	4.80	4.02	5.19	0.01	0.44	.....	.....	
15	90	7	8	147	28	186	865	1	54	19,074	79.48	17
9.47	9.35	4.72	12.19	49.14	12.22	9.59	12.70	0.01	0.79	.....	.....	
7	195	13	5	46	20	183	694	1	0	9,211	25.57	18
4.41	20.27	8.76	7.62	15.37	8.72	9.44	10.19	0.01	.....	.....	.....	
1	19	2	3	13	7	21	112	3	6	3,964	14.94	19
0.63	1.97	1.34	4.57	4.34	3.05	1.08	1.64	0.04	0.08	.....	.....	
58	702	52	30	531	113	1,643	5,611	116	70	86,575	329.77	20
36.61	72.97	35.06	45.73	177.53	62.41	84.78	82.42	1.70	1.02	.....	.....	
13	91	7	0	6	16	94	465	21	1	3,632	20.50	21
8.20	9.45	4.72	.....	2.00	6.98	4.85	6.82	0.30	0.01	.....	.....	
842	6,456	595	345	5,800	869	12,113	44,743	305	1,272	776,203	2,914.55	22
531.56	671.10	401.20	525.91	1,939.15	379.30	625.12	657.26	4.47	18.68	.....	.....	
5	48	2	2	17	23	62	305	.....	.....	.....	.....	23
3.15	4.98	1.34	3.04	5.68	10.03	3.19	4.47	.....	.....	.....	.....	
3	4	0	0	1	0	2	21	.....	.....	.....	.....	24
1.89	0.41	.....	.....	0.33	.....	0.10	0.30	.....	.....	.....	.....	
27	262	14	9	373	12	212	1,272	.....	.....	.....	.....	25
17.04	27.23	9.44	13.71	124.70	5.23	10.94	18.68	.....	.....	.....	.....	
16,968	110,804	10,630	11,148	82,999	20,276	195,161	776,203	.....	.....	.....	.....	26
62.47	458.50	37.11	36.03	422.37	73.03	671.58	2,914.55	.....	.....	.....	.....	27

[2] Damage is in terms of individuals whose loss of service by sickness, discharge from service, or death would be represented as continuous throughout the year.

DEATHS.

TABLE 3.—*Casualties in the Navy and Marine Corps during the calendar year 1915.*

Cause.	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
DISEASES.					
Abscess of brain	3		2		1
Abscess of liver	2		1		1
Abscess, unqualified	1		1		
Acidosis, nondiabetic	1		1		
Aneurysm	3		2		1
Apoplexy	3	1		1	1
Appendicitis, acute	6	2	4		
Appendicitis, chronic	1		1		
Arteriosclerosis, general	1			1	
Carbuncle	1		1		
Carcinoma	2		2		
Cerebrospinal fever	4	1	3		
Cirrhosis of liver, atrophic	1				1
Dementia paralytica	5		4		1
Dilatation, acute cardiac	3		3		
Diphtheria	1		1		
Dysentery, bacillary	1		1		
Dysentery, endamebic	1				1
Dysentery, unclassified	1		1		
Erysipelas	2		2		
Gangrene of lung	1				1
Glioma	1		1		
Goiter	1		1		
Gonococcus infection, unqualified (endocarditis)	1		1		
Hemorrhage into cerebrum	1				1
Hernia, internal	1		1		
Hodgkin's disease	1		1		
Leukemia	2	1	1		
Malaria	3	1	1		1
Measles	3		3		
Meningitis, cerebral	1		1		
Myocarditis, chronic	2		2		
Nephritis, acute	5		5		
Nephritis, chronic interstitial	5	1	4		
Nephritis, chronic parenchymatous	3		3		
Obstruction, acute intestinal	2	1	1		
Pancreatitis, acute	1	1			
Pancreatitis, chronic	1	1			
Pericarditis	2	1	1		
Peritonitis, acute general	5		4		1
Pleurisy, suppurative	1				1
Pneumonia, broncho	7		6		1
Pneumonia, lobar	15	1	10		4
Poliomyelitis, acute anterior	1	1			
Septicemia	5		4		1
Smallpox	1		1		
Splenitis, chronic interstitial	1		1		
Syphilis	3		3		
Tuberculosis, acute bronchopneumonic	2		2		
Tuberculosis, chronic pulmonary	32	1	24		7
Tuberculosis, acute pulmonary miliary	1		1		
Tuberculosis, unqualified	1		1		
Typhoid fever	1		1		
Typhus fever	1		1		
Ulcer of stomach	4	1	3		
Valvular disease, chronic cardiac	7		6		1
Total	168	15	125	2	26
INJURIES.					
Burns, multiple "C"	1		1		
Burns, multiple "F"	15		15		
Compression of chest "I"	2		2		
Decapitation "L"	1		1		
Drowning "A"	1		1		
Drowning "D"	51	4	40		7
Fracture of pelvis, simple "H"	1				1
Fracture of skull, compound "A"	1				1
Fracture of skull, compound "B"	1		1		
Fracture of skull, compound "G"	5	2	3		
Fracture of skull, compound "I"	2	1	1		
Fracture of skull, compound "L"	1		1		
Fracture of skull, simple "G"	2		1	1	

TABLE 3.—*Casualties in the Navy and Marine Corps during the calendar year 1915*—Continued.

Cause.	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
INJURIES—continued.					
Fracture of skull, simple "J"	1				1
Fracture of vertebra, simple "G"	2				2
Fracture of vertebra, simple "I"	1				1
Heat exhaustion "L"	1		1		
Intracranial injury "G"	2		2		
Intracranial injury "J"	1		1		
Multiple injuries, extreme "H"	2		2		
Multiple injuries, extreme "L"	2	1	1		
Strangulation "A"	2		2		
Wound, gunshot, abdominal viscera "A"	3		2		1
Wound, gunshot, abdominal viscera "K"	1		1		
Wound, gunshot, brain "A"	5		4	1	
Wound, gunshot, brain "K"	2		1		1
Wound, gunshot, lung "E"	1		1		
Wound, gunshot, unqualified "E"	1		1		
Wound, incised, neck "A"	1				1
Wound, incised, neck "K"	1				1
Wound, lacerated, abdominal viscera "I"	1		1		
Wound, lacerated, brain "G"	1		1		
Wound, lacerated, brain "L"	1		1		
Total	116	8	89	2	17
POISONS.					
Poisoning by alcohol "L"	5		3		2
Poisoning by illuminating gas "A"	2		2		
Poisoning by illuminating gas "L"	2		1		1
Poisoning by mercury, acute "L"	1				1
Poisoning by methyl alcohol "L"	3		3		
Poisoning by opium, acute "L"	1		1		
Poisoning by phenol "A"	2		1		1
Poisoning, unqualified "A"	4		4		
Poisoning, unqualified "L"	1		1		
Total	21		16		5
Grand total diseases, injuries, and poisons	305	23	230	4	48

INVALIDED FROM SERVICE.

TABLE 4.—*Discharged from the service by reason of physical disability during the calendar year 1915.*

Disability.	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
DISEASES.					
Abscess, unqualified	2				2
Adhesions about stomach	1		1		
Adhesions of peritoneum	9		7		2
Amblyopia	5	1	4		
Amputation stump	10		10		
Anemia of brain	1				1
Aneurysm	3	1	1		1
Ankylosis of joint	4		3		1
Aphasia	1	1			
Arterial sclerosis, general	2		1		1
Arthritis, chronic	6		5		1
Arthritis, deformans	1		1		
Asthma	6	1	4		1
Astigmatism	10	1	5		4
Atrophy of muscle	2		2		
Atrophy of optic nerve	1		1		
Atrophy of testicle	2		1		1
Balanoposthitis	1		1		

TABLE [illegible]—Discharges from the service in consequence of disease, disability, during the calendar year 1901—Continued.

Disability	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
[illegible]—continued.					
[illegible]	2		2		1
[illegible]	2		2		
[illegible]	22		21		1
[illegible]	2		2		
[illegible]	5		5		1
[illegible]	2				1
[illegible]	3		2		1
[illegible]	2		1		1
[illegible]	1		1		
[illegible]	1		1		
[illegible]	2				2
[illegible]	4		4		
[illegible]	1		1		
[illegible]	26		17		9
[illegible]	22	2	20		
[illegible]	5		4		1
[illegible]	3		3		
[illegible]	1		1		
Dysentery	16	1	15		
Dysmenorrhœa, acute, severe	1		1		
Dysmenorrhœa, functional	5		4		1
Dysmenorrhœa, primary	46		33		13
Deviation of nasal septum	9		9		
Diabetes insipidus	3		2		1
Diabetes mellitus	4		4		
Diagnosis undetermined	1			1	
Diphtheria	1		1		
Dystrophy, progressive muscular	1				1
Eczema	2		2		
Endocarditis, acute	4		4		
Endocarditis, chronic	6		4		2
Epilepsy	31		30		12
Epilepsy, Jacksonian	1		1		
Eustachian salpingitis, chronic	2		2		
Fermentation, gastric	1				1
Fibroma	1		1		
Fistula of kidney	1		1		
Gastritis, chronic catarrhal	4		2		2
Gastroptosis	1				1
Genu valgum	1		1		
Goiter	11		10		1
Gonococcus infection of conjunctiva	2		1		1
Gonococcus infection of joints	21		19		2
Gonococcus infection of urethra	11		11		
Gonococcus infection, unqualified	3		3		
Hallux valgus	7		7		
Hammertoe	15		12		3
Headache	2		1		1
Hemorrhage into cerebrum	1		1		
Hemorrhage into retina	1		1		
Hemorrhoids	3		2		1
Hernia, femoral	3		3		
Hernia, inguinal	20	1	13		6
Hernia, ventral	7	2	3		2
Hodgkin's disease	1		1		
Hydrocele of tunica vaginalis	1		1		
Hypermetropia	4		3		1
Hypertrophy of bone	3		3		
Hypertrophy of mammary gland	1		1		
Hypertrophy of tonsil	3		3		
Hypochondriasis	1		1		
Hysteria	7		5		2
Imbecility	1		1		
Incontinence of urine	4		4		
Insufficiency of ocular muscle	1				1
Iritis	1		1		
Laryngitis, chronic	1				1
Leukoma	1		1		
Locomotor ataxia	1		1		
Loose body in joint	1				1
Malaria	1		1		
Malformations, congenital	7		7		
Mastoiditis, acute	1		1		

TABLE 4.—*Discharged from the service by reason of physical disability during the calendar year 1915*—Continued.

Disability.	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
DISEASES—continued.					
Mastoiditis, chronic	1		1		
Masturbation	1		1		
Ménière's disease	1		1		
Meningitis, cerebrospinal	1		1		
Metatarsalgia	1		1		
Migraine	1		1		
Myocarditis, chronic	3		2		1
Myopia	12		7		5
Myotonia, congenital	1				1
Nausea marina	4		4		
Nephritis, acute	3		3		
Nephritis, chronic interstitial	11	2	8	1	
Nephritis, chronic parenchymatous	11		8		3
Nephrolithiasis	1		1		
Neurasthenia	31	2	24		5
Neuritis	8	2	3		3
Neuritis, multiple	1		1		
Neuritis, optic	1		1		
Neurosis of bladder	46		34		12
Neurosis, traumatic	1		1		
No disease	1		1		
Nystagmus	1		1		
Orchitis, chronic	2		1		1
Osteoma	2		1		1
Otitis interna, chronic	2		2		
Otitis media, acute	2		2		
Otitis media, chronic	60	4	52		4
Ozena	2		2		
Pachymeningitis, spinal	1		1		
Paralysis, muscle, ischemic	1				1
Paralysis of nerve	1		1		
Paralysis of ocular muscle	1				1
Paranoiac state	1				1
Perforated nasal septum	2		2		
Pes planus	97		59		38
Phlebitis	3		2		1
Pleurisy, chronic fibrinous	3		2		1
Pleurisy, suppurative	6		6		
Pleuritic adhesions	1				1
Pneumonia, lobar	2		2		
Presbyopia	2		2		
Prolapse of rectum	1				1
Psoriasis	2		2		
Psychasthenia	14		9		5
Psychosis due to organic brain disease	2				2
Psychosis, hysterical	3		2		1
Psychosis, intoxication	1		1		
Pterygium	1		1		
Pyelitis	1				1
Pyelonephritis	2	1			1
Rheumatic fever, acute	6		4		2
Rheumatic fever, subacute	3		2		1
Rheumatism, chronic articular	9		7		2
Rheumatism, muscular	2		1		1
Rhinitis, atrophic	3		3		
Scleritis	1		1		
Sclerosis, disseminated	2		1		1
Senility	7		6		1
Sinus	1		1		
Sinusitis, frontal	2		2		
Somnambulism	1		1		
Splenitis, chronic interstitial	1		1		
Stammering	2				2
Stuttering	2		2		
Syphilis	60		50		10
Tachycardia	6		5		1
Talipes	4		3		1
Thrombosis	2		2		
Thyroiditis, acute	1		1		
Thyroiditis, chronic	2		2		
Trachoma	24		23		1
Tuberculosis, abdominal	1		1		
Tuberculosis, acute pneumonic	3	1	2		
Tuberculosis, acute pulmonary miliary	1		1		
Tuberculosis, chronic pulmonary	114	11	77		26

TABLE 4.—*Discharged from the service by reason of physical disability during the calendar year 1915*—Continued.

Disability.	Number.	Navy.		Marine.	
		Officers.	Men.	Officers.	Men.
DISEASES—continued.					
Tuberculosis of joint	2		2		
Tuberculosis of pleura	1				1
Tuberculosis of spinal column	1		1		
Tuberculosis, unqualified	3		3		
Ulcer of bladder	1		1		
Ulcer of duodenum	1				1
Ulcer of rectum	1		1		
Ulcer of skin	1		1		
Ulcer of stomach	2		1		1
Uncinariasis	1		1		
Union of fracture, faulty	13		11		2
Valvular disease, chronic cardiac	52	1	45		6
Varicocele	4		3		1
Varix	7	1	4		2
Vertigo	2		2		
Total	1,201	35	919	2	245
INJURIES.					
Burns, multiple	1		1		
Contusion	5		2		3
Crush of lower limb	1		1		
Crush of upper limb	2		1		1
Dislocation of elbow	1				1
Dislocation of intra-articular cartilage of joint	1				1
Dislocation of shoulder	1		1		
Fracture about ankle joint, simple	2		2		
Fracture of clavicle, simple	1		1		
Fracture of femur, simple	1				1
Fracture of forearm, simple	1				1
Fracture of humerus, simple	1				1
Fracture of leg, compound	5		4		1
Fracture of skull, compound	4		3		1
Fracture of skull, simple	2		2		
Fracture of vertebra, simple	1		1		
Fracture, unqualified, simple	5		4		1
Intracranial injury	3	1	2		
Rupture of globe	1		1		
Rupture of ligament	1				1
Rupture of muscle	1		1		
Sprain of joint	3		1		2
Synovitis, traumatic	6		5		1
Wound, gunshot, lower limb	1		1		
Wound, gunshot, upper limb	2				2
Wound, gunshot, unqualified	3				3
Wound, incised, upper limb	2				2
Wound, incised, unqualified	1				1
Wound, lacerated, lower limb	1		1		
Wound, lacerated, neck	1		1		
Wound, lacerated, upper limb	5		5		
Wound, lacerated, unqualified	3		3		
Wound, punctured, unqualified	1		1		
Total	70	1	45		24
POISONS.					
Poisoning by lead, chronic	1		1		
Grand total, diseases, injuries, and poisons	1,272	36	965	2	269

[illegible]

[illegible]

TABLE [illegible]

[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

TABLE 6.—[illegible]

[illegible]		
Annapolis, Md.	[illegible]	[illegible]
Canacao, P. I.	[illegible]	[illegible]
Chelsea, Mass.	[illegible]	[illegible]
Great Lakes, Ill.	[illegible]	[illegible]
Guam	[illegible]	[illegible]
Las Animas, Colo.	[illegible]	[illegible]
Mare Island, Cal.	[illegible]	[illegible]
Narragansett Bay, R. I.	[illegible]	[illegible]
New York, N. Y.	[illegible]	[illegible]
Norfolk, Va.	[illegible]	[illegible]
Olongapo, P. I.	[illegible]	[illegible]
Philadelphia, Pa.	[illegible]	[illegible]
Port Royal, S. C.	[illegible]	[illegible]
Portsmouth, N. H.	[illegible]	[illegible]
Puget Sound, Wash.	[illegible]	[illegible]
Washington, D. C.	[illegible]	[illegible]
Yokohama, Japan	[illegible]	[illegible]

TABLE 7.—Statement of the [illegible]

[illegible]	
New York, N. Y.	[illegible]
Mare Island, Cal.	[illegible]
Canacao, P. I.	[illegible]

[illegible] er its, our the four ll have

rs of the cers shall would hold dvancement made from the line or

anks shall be g which time Navy if found two years they n to determine

REPORT OF THE MAJOR GENERAL COMMANDANT OF THE UNITED STATES MARINE CORPS.

HEADQUARTERS UNITED STATES MARINE CORPS,
Washington, October 5, 1916.

From: The Major General Commandant.
To: The Secretary of the Navy.
Subject: Annual report of the condition and service of the United States Marine Corps.

MARINE CORPS MANEUVER GROUNDS AND BARRACKS.

1. I commenced my annual report of last year with the following statement: "The paramount need of the Marine Corps is an increase of officers and men. As at present constituted it is inadequate to perform its varied and important duties."

Congress incorporated in the naval appropriation bill for the fiscal year ending June 30, 1917, provisos increasing the corps by 255 officers and 5,034 enlisted men.

No provision was made, however, for barracks in which to house these additional men, or for maneuver fields on which to train them. The proposed development of navy yards will require all available space therein for the industrial establishments, leaving no room for the enlargement of Marine Corps plants except at Philadelphia, which has been made the permanent station of the advance base fixed defense force, and at Mare Island, where the Marine Corps west coast recruit training station is located. The establishment, therefore, of a large Marine Corps post on each coast, as training stations for its expeditionary forces, has now become the paramount need of the Marine Corps.

2. Prior to the War with Spain the duties of the Marine Corps were limited to supplying marine detachments to vessels of the fleet, and to furnishing guards for the navy yards. Since that time, however, its field of activity has greatly widened. The duty of seizing, fortifying, and defending advance bases for the use of the fleet in time of war has been assigned to the Marine Corps by the Navy Department, and foreign expeditionary duty, in conjunction with the fleet, has become one of its chief missions.

Preparedness for war demands that training in peace should approximate as closely as possible to war conditions and that a military force should be so organized and equipped as to be constantly in immediate readiness for war service. Furthermore, it is essential in the interests of war efficiency that officers should be given the opportunity to command, in time of peace, the organizations which they would be required to command in time of war. A brigadier general or a colonel, for instance, can not command a brigade or a

regiment efficiently in time of war unless he has commanded the unit mentioned in time of peace.

The Navy Department has followed this policy consistently and has mobilized the vessels of the Navy into fleets, squadrons, divisions, and flotillas for the purpose of so training its flag and commanding officers that the entire naval forces may pass from a state of peace to a state of war without any violent changes in their organization. The same principle applies with equal force to the Marine Corps.

Initial steps to supply the need of the corps for a large post on the west coast were taken at the last session of Congress by the incorporation in the naval appropriation bill of a proviso appropriating $250,000 for the purchase of land near San Diego, Cal. It is of vital importance to the efficiency of the Marine Corps that a similar post on the east coast should be provided and equipped.

3. The following considerations should govern in the selection of the site for this post:

(*a*) It should be conveniently located with reference to the waters in which the fleet would be concentrated upon the outbreak of war.

(*b*) It should be located on a harbor of sufficient depth to permit of transports coming alongside the docks.

(*c*) It should have railway facilities.

(*d*) It should be of sufficient extent to provide quarters and maneuver fields for the troops and target ranges for small-arm, machine-gun, and field-artillery practice.

(*e*) Its terrain should be varied, so that it may be suitable for purposes of military instruction.

(*f*) The site should be a healthy one, and it should be so located as to afford facilities for recreation and liberty for the enlisted men.

Strategic considerations demand that a site on the shores of Chesapeake Bay, or of one of its tributaries, which fulfills the other conditions mentioned above, should be selected.

4. A program based on the general principles outlined above has been embodied in the annual estimates submitted to the department. The main features of this program are as follows:

(*a*) The purchase of a site for a Marine Corps post on the east coast and the beginning of the construction of the necessary buildings thereon.

(*b*) The construction of a portion of the buildings for quartering the west coast expeditionary force on the site to be purchased near San Diego, Cal., together with the necessary docks, roads, etc.

(*c*) The construction of the additional buildings at the navy yard, Philadelphia, Pa., required for the accommodation of the additional fixed defense companies required by the plans of the department for the advance-base force.

MARINE CORPS LEGISLATION.

5. The current naval appropriation bill authorized a substantial increase of officers and enlisted men and provided as well for a much-needed reorganization of the corps. This reorganization not only corrected existing defects but also supplied the corps with a definite policy for its future governance which will, I believe, be most

far-reaching, lasting, and beneficial in its effects. The defects mentioned above were, in brief, as follows:

(*a*) An inadequate proportion of officers to enlisted men.

(*b*) An insufficient number of officers in the higher grades.

(*c*) A lack of officers with the rank of brigadier general to command the large advance base and expeditionary forces.

(*d*) A permanent system of staff appointments instead of a detail system.

(*e*) Inequality of promotion of officers in the line and staff.

(*f*) The lack of a procedure, other than trial by general court-martial, by which officers appointed from civil life and from the ranks could be removed from the service should they be found. during their course of instruction, to be unfit or unworthy.

(*g*) Inequality in the loss of files by officers who failed to qualify professionally in their examinations for promotion.

(*h*) The lack of sufficient opportunity for advancement of efficient and faithful enlisted men.

(*i*) No authority for the organization of a Marine Corps Reserve.

(*j*) No proviso for a temporary increase in the Marine Corps, by executive order, in the event of an emergency.

(*k*) An insufficient proportion of noncommissioned officers to privates.

(*l*) No reserve of small-arms ammunition.

6. The naval appropriation bill remedied the defects in question by providing:

(*a*) That the total number of officers of the line and staff of the active list of the Marine Corps shall be 4 per cent of the authorized enlisted strength.

(*b*) That these officers shall be distributed in the various grades in accordance with a proportion based on the needs of the service.

(*c*) That the grade of brigadier general be established, the number of general officers being a definite percentage of the total number of officers authorized.

(*d*) That the number of officers in each staff department shall be a fixed percentage of the total number of officers; that no further permanent appointments shall be made in the staff departments, but that line officers shall be detailed therein for periods of four years; that hereafter when vacancies occur in the senior grade of the staff departments they shall be filled by detail for a period of four years; and that the heads of the three staff departments shall have the rank of brigadier general while so serving.

(*e*) That in order to equalize future promotions of officers of the line and staff of the Marine Corps, the names of such officers shall be placed on a common list, in the order of seniority each would hold had he remained continuously in the line, and that all advancement in rank, to and including the grade of colonel, shall be made from officers of the next junior respective rank, whether of the line or staff, in the order that their names appear on said list.

(*f*) That appointees from civil life and from the ranks shall be placed on probation for a period of two years, during which time they are subject to removal by the Secretary of the Navy if found to be inefficient or unworthy; and that at the end of two years they shall submit to a competitive professional examination to determine their rank in the service with reference to each other.

acting favorably on this recommendation, has made it practicable for the Marine Band to maintain its former high standard and to continue to be, what the President's band should be, the leading military band of the United States.

EXPEDITIONS.

HAITI.

10. At the date of my last report the First Brigade, consisting of the First and Second Regiments, the Artillery Battalion, and the Signal Company, under the command of Col. Littleton W. T. Waller, was in occupation of the Republic of Haiti and was engaged in the restoration of order and the preservation of peace in that country. This brigade has carried out its mission in a signally effective manner. Peace has been restored, the inhabitants have returned to their various vocations, and business has rapidly progressed. The work of the Navy and Marine Corps in Haiti was of such a successful nature as to cause the State Department to recommend the enactment of a law authorizing officers and enlisted men to accept appointments as officers in the Haitian Constabulary, the organization of which was provided for in the treaty between the United States and Haiti. This recommendation of the State Department was enacted into law on June 12, 1916, and the constabulary has been fully organized under the command of Maj. Smedley D. Butler, United States Marine Corps, as commandant. It consists of approximately 100 officers and enlisted men of the Marine Corps, 12 officers and enlisted men of the Navy, and 2,500 native Haitian gendarmes. It is expected that as Haitian citizens become qualified to serve as officers they will gradually replace the American officers and enlisted men who are now serving as officers of the constabulary.

In connection with this subject, Navy Department General Order No. 197, March 25, 1916, publishing to the service the letter of the State Department concerning the services of the Navy and Marine Corps in Haiti, is quoted:

GENERAL ORDER No. 197.

NAVY DEPARTMENT,
Washington, D. C., March 25, 1916.

SERVICE IN HAITI.

The department has received with gratification a letter from the Department of State dated March 4, 1916, transmitting a copy of a letter addressed by that department on the same date to the chairman of the Committee on Naval Affairs of the House of Representatives, a paragraph of which reads:

"I can not too strongly recommend that officers and enlisted men of the Navy and Marine Corps of the United States may be made available for service in Haiti, not only because I am convinced that the purpose of the treaty would be most advantageously carried to a successful completion by them, but particularly on account of the fact that by their excellent behavior and considerate bearing they have gained the confidence and esteem of the Government and people of Haiti, toward whom this Government has now assumed great responsibilities and obligations."

The department takes much pleasure in expressing, through the medium of this general order, its warm appreciation of the excellent services rendered in Haiti by the officers and enlisted men of the United States Navy and Marine Corps.

JOSEPHUS DANIELS,
Secretary of the Navy.

SANTO DOMINGO.

11. In April of this year the situation in Santo Domingo became very serious, owing to a revolution against the constituted authorities, which placed in jeopardy the lives and property of American citizens and other foreigners residing in that country.

In accordance with the orders of the commander of the cruiser force, the Sixth and Ninth Companies, having been transferred from Haiti to the *Prairie*, proceeded to Santo Domingo City and landed there on May 5, 1916, occupying the American legation and consulate. This force was later augmented by the First, Fourth, Fifth, Thirteenth, Fourteenth, Nineteenth, and Twenty-fourth Companies.

On May 21, 1916, the marine detachments of the *New Jersey*, *Rhode Island*, and *Louisiana*, which vessels had been placed in reserve, sailed from the United States for Santo Domingo via the *Salem* and the *Memphis*.

On June 1, 1916, a landing was effected at Puerto Plata by a battalion consisting of the *Rhode Island's* and *New Jersey's* marine detachments, and a landing force from the *Sacramento*. During the landing operations Capt. Herbert J. Hirshinger, United States Marine Corps, was killed.

On June 5, 1916, the Fourth and Ninth Companies from Santo Domingo City were landed at Puerto Plata, and on the following day the Field and Staff of the Artillery Battalion, together with the Sixth and Thirteenth Companies, were landed at Monte Cristi.

The commander of the cruiser force having reported that an additional regiment was necessary in order to effect the complete pacification of the interior of Santo Domingo, the Fourth Regiment, under command of Col. Joseph H. Pendleton, was, on June 4, 1916, ordered to proceed with its expeditionary outfit from its station at San Diego, Cal., by rail to New Orleans, La. The regiment left San Diego on June 6, 1916, and arrived at New Orleans on June 9, 1916, and with the Eighth Company from New Orleans, embarked and sailed on the *Hancock* on June 11, 1916. This regiment was disembarked at Monte Cristi on June 21 and 22. Col. Joseph H. Pendleton, relieving Col. Theodore P. Kane, was assigned to the command of all the forces operating on shore in Santo Domingo, and was directed to occupy Santiago, an interior city about 75 miles distant from Monte Cristi. At this time the interior of Santo Domingo was under the control of the revolutionary forces, only the principal ports having been occupied by the American forces.

Careful preliminary preparations were made for the expedition, and on June 26, 1916, the column, under the command of Col. Pendleton, advanced from Monte Cristi toward Santiago. It consisted of the following organizations:

Field and Staff, Fourth Regiment.
Field and Staff, Artillery Battalion.
Thirteenth Company (Artillery Battalion).
Eighth Company.
Twenty-sixth Company.
Twenty-seventh Company.
Twenty-eighth Company.
Twenty-ninth Company.

Thirty-first Company.
Thirty-second Company.
Thirty-fourth Company.
The Sixth Company guarded the train.

The Twenty-fifth Company and the marine detachments of the *Louisiana* and the *Memphis* remained on duty at the base at Monte Cristi, while the Fourth, Ninth, and Twenty-fourth Companies and the marine detachments of the *New Jersey* and the *Rhode Island* operated from Puerto Plata toward Navarrete, under the command of Maj. Hiram I. Bearss.

The advance of the main column was continuously resisted by large forces of revolutionists, and was impeded as well by bad roads and the fact that nearly all the bridges were destroyed. It, however, made excellent progress. On July 3 it was found to be necessary, on account of the bad roads, to bring up its train and to sever its communications with Monte Cristi. On July 4, 1916, the force under Maj. Bearss, after several engagements, succeeded in opening the railroad to Navarrete and effected a junction with the main column at that place. Thereafter the expeditionary force was supplied by rail from Puerto Plata.

About this time, through the negotiations of a peace commission, it was arranged that the revolutionists should lay down their arms and that a provisional government should be organized. The column then advanced into Santiago without further opposition, entering that city on July 6, 1916. It has since occupied all of the important points in the interior of Santo Domingo.

This campaign was skillfully and efficiently conducted, and the expeditionary force accomplished the mission assigned to it most successfully and with small loss. Since the occupation of the interior a complete state of peace has reigned in Santo Domingo and law and order have been reestablished.

12. During the operations in Haiti and Santo Domingo the following-named officers and men of the Marine Corps were killed or wounded in action:

HAITI.

Killed.

Sergt. John Platt, September 25, 1915, at Petite Reviere.
Sergt. Edward C. Thompson, September 27, 1915, near Jeremie.
Pvt. Peter Kulick, July 10, 1916, at Acul Samedi.

Wounded.

First Lieut. Edward A. Ostermann, November 11, 1916, near Bahon.
Corpl. George W. Strout, September 26, 1915, at Haut du Cap.
Corpl. Joseph R. Wedor, January 5, 1916, at Port au Prince.
Corpl. John D. Greelish, May 31, 1916, at Port au Prince.
Pvt. Frank J. Brandle, September 26, 1915, at Haut du Cap.
Pvt. Julus Cooey, September 26, 1915, at Haut du Cap.
Pvt. William Dushek, November 2, 1915, at Le Trou.
Pvt. Vincent Gage, September 26, 1915, at Haut du Cap.

Pvt. Bernard C. Glassner, September 26, 1915, at Haut du Cap.
Pvt. Goff E. Jordan, September 26, 1915, at Haut du Cap.
Pvt. Frederick W. Remani, September 26, 1915, at Haut du Cap.
Pvt. Charles F. Schropp, September 26, 1915, at Haut du Cap.
Pvt. John Wittek, September 26, 1915, at Haut du Cap.
Pvt. Howard P. Youngs, September 26, 1915, at Haut du Cap.

SANTO DOMINGO.

Killed.

Capt. Herbert J. Hirshinger, June 1, 1916, at Puerto Plata.
Corpl. George Frazee, July 1, 1916, at Guayacanas.
Pvt. John J. Awkerman, June 27, 1916, about 27 kilometers from Monte Cristi.
Pvt. Kleme Milles, June 30, 1916, at Dana Antonio.

Wounded.

Capt. Russell B. Putnam, A. P. M., July 3, 1916, at Guayacanas.
Second Lieut. Douglas B. Roben, June 29, 1916, at Alta Mira.
First Sergt. Fernando L. Birrer, June 28, 1916, near Puerto Plata.
Corpl. Leo P. Cartier, June 27, 1916, about 25 kilometers from Monte Cristi.
Corpl. Joseph A. Glowin, July 3, 1916, at Guayacanas.
Corpl. Oscar J. Johnson, July 3, 1916, at Guayacanas.
Drummer Graeg E. Meriwether, July 3, 1916, at Guayacanas.
Trumpeter Julius Goldsmith, June 29, 1916, at Alta Mira.
Pvt. Joseph E. Daley, July 3, 1916, at Guayacanas.
Pvt. Leon B. Dooley, July 3, 1916, at Guayacanas.
Pvt. Edward F. Dorsey, June 27, 1916, about 27 kilometers from Monte Cristi.
Pvt. Elmer C. Harkness, July 28, 1916, while on sentry duty at Santo Domingo City.
Pvt. William F. Jonseck, July 3, 1916, at Guayacanas.
Pvt. James Martin, July 3, 1916, at Guayacanas.
Pvt. Clive Oates, July 3, 1916, at Guayacanas.
Pvt. Franklin R. Paine, July 3, 1916, at Guayacanas.
Pvt. George E. Raines, June 27, 1916, about 27 kilometers from Monte Cristi.
Pvt. Benjamin Rollins, June 27, 1916, about 27 kilometers from Monte Cristi.
Pvt. Albert Vielbaum, June 27, 1916, about 27 kilometers from Monte Cristi.

WEST COAST OF MEXICO.

13. On November 25, 1915, the First Battalion of the Fourth Regiment, which had been stationed at the San Francisco Exposition, was embarked on board the *San Diego*, and was joined by two companies of the Second Battalion, which had been stationed at San Diego, Cal. On November 28, 1915, the *San Diego* proceeded to the west coast of Mexico, and the regiment was held in readiness for shore operations. The situation having improved the regiment, in February, 1916, returned to San Diego, Cal., and took up its permanent station there.

RELIEF WORK AT SAN DIEGO, CAL.

14. A detachment consisting of two officers and 50 enlisted men, detailed from the Marine Barracks, San Diego, Cal., cooperated with a naval detachment from the Pacific Reserve Fleet in the rescue work incident to the flooding of the Otay and Tia Juana districts near San Diego in February last. Their work was commended in the report of Rear Admiral William F. Fullam, commanding the Pacific Reserve Fleet, and in a memorial of the mayor and common council of the city of San Diego, adopted February 23, 1916, and forwarded to the Commanding Officer, Marine Barracks, San Diego, Cal.

CAMPS OF INSTRUCTION.

15. The current naval appropriation bill provides an appropriation of $31,000 for the establishment and maintenance, under the supervision of the Marine Corps of training camps for the instruction of citizens of the United States who make application and are designated for such training; the said camps to be controlled and regulated by the Secretary of the Navy.

Prior to the above enactment a camp for the instruction of citizens, the expenses of which were defrayed by the Philadelphia Military Training Corps, was established at Lansdowne, Pa., during the period July 21 to August 28. This camp was placed under the supervision of Capt. Logan Feland, United States Marine Corps, and the following officers, who had volunteered their services, were assigned to duty in connection therewith: Capt. Frank Halford, acting quartermaster, Capt. Andrew B. Drum, and First Lieut. Ralph S. Keyser. Twenty enlisted men of the Marine Corps, who had also volunteered their services, were detailed to duty as instructors. I inspected this camp at its opening and at its close, and found that the results achieved were extremely satisfactory. Due to the efforts of the officers and men of the Marine Corps, the citizens who had volunteered for this course of instruction attained in the short time available a very creditable degree of efficiency. In all about 350 citizens received training at this camp.

APPOINTMENT OF SECOND LIEUTENANTS.

16. Last June 6 graduates of the Naval academy were appointed second lieutenants in the Marine Corps, and on August 7, 1916, 18 noncommissioned officers who had been recommended to take the examination for appointment, appeared before an examining board at the Marine Barracks, Washington, D. C. Twelve of these noncommissioned officers passed the examination satisfactorily, and have received their appointments. This examination of noncommissioned officers was a new procedure in the Marine Corps, as heretofore they had taken the examination in competition with candidates from civil life. It was deemed, however, that worthy noncommissioned officers should have the first opportunity for appointment, so as to secure the advantage of being commissioned senior to appointees from civil life. The course followed was in exact accord with the terms of existing law relative to this matter.

On account of the vital and urgent need of additional officers with military training, an examination of graduates of distinguished military colleges was held on September 15, 1916, and as a result of the examination 24 were appointed second lieutenants. These officers, by reason of the military training received at the military colleges, will be available for duty immediately, without the customary 12 months' preliminary instruction required in the case of second lieutenants who have not had the benefit of prior military instruction.

Arrangements have been made for holding a competitive examination of civilian applicants for appointment, under the supervision of the Civil Service Commission, at various places in the United States in November next. It will not be practicable to fill all the remaining vacancies in the immediate future, but it is intended, during the year 1917, to hold additional examinations of noncommissioned officers and civilians.

ADVANCE BASE.

17. Owing to the necessity of utilizing the companies of the fixed defense regiment of the advance base force for infantry duties in Haiti and Santo Domingo, all advance base training during the past year was suspended. As stated in my last annual report, this interruption of training is most detrimental to the efficiency of the advance base organizations. When the additional officers and enlisted men authorized by the current naval appropriation bill have been appointed, enlisted, and trained, it is hoped that it will be unnecessary to divert the fixed defense companies from their specialties for the performance of infantry duties.

An appropriation for advance base material of approximately $189,000 was incorporated under "Bureau of Ordnance" in the current naval appropriation bill. This appropriation will greatly improve the equipment of the advance base force and will add, therefore, to its efficiency. Estimates for the next fiscal year have been submitted to the Bureau of Ordnance.

TRANSPORTS.

18. The transport authorized for the Marine Corps was launched on June 17, 1916, at the navy yard, Philadelphia, Pa. It was named the *Henderson*, in honor of Brig. Gen. Archibald Henderson, who was commandant of the Marine Corps from 1820 to 1859, and who had a most distinguished record at sea in the War of 1812, on shore in the Indian wars, and as commandant of the Marine Corps.

The three-year building program enacted into law in the current naval appropriation bill provides for the construction of an additional transport.

MARINE OFFICERS' SCHOOL.

19. The regular course of instruction at the Marine Officers' School, Marine Barracks, Norfolk, Va., was suspended on January 1 last, at which time the class, consisting of 10 graduates of the Naval Academy, completed its course of instruction. The course was resumed in July of this year, and a class of six graduates of the Naval Academy, who had recently been appointed second lieutenants, was assigned to the school for a six months' course. The student officers

were encamped at Gettysburg during the month of August, where they received practical instruction in field engineering, minor tactics, military topography, etc. During the first two weeks in September their instruction was continued at the Marine Corps rifle range, Winthrop, Md. This class will graduate in December next, and will be followed by a large class, consisting of appointees from civil life and from the ranks. It will be necessary to increase the number of instructors at the school and to provide additional quarters for the student officers. The construction of a building for this purpose has been authorized by the department, and it will be built and ready for occupancy in the near future.

INSTRUCTION OF OFFICERS AT THE ARMY SERVICE SCHOOLS.

20. The opening of the Army War College, and the Army School of the Line, has been postponed. One officer has been detailed to take the course at the Army War College, and two officers at the Army School of the Line, Fort Leavenworth, Kans.

The existing war in Europe has demonstrated conclusively the great importance of the machine gun. This arm is of special value to the Marine Corps in its advance base and expeditionary work, and it is important that all officers and enlisted men of the Marine Corps should be trained in its use. With this end in view, request has been made that the War Department allow officers of the corps to take the course of instruction at the Army Machine Gun School at Fort Sill, Okla.

AVIATION.

21. Five officers and 18 enlisted men are now engaged in aviation duty. In the current naval appropriation bill a complete reorganization of the Naval Flying Corps was effected. As soon as a sufficient number of officers and men become available, the Marine Corps complement will be brought up to the number authorized. Aviation has made great strides in the present war, and has become of great importance to the military and naval services.

By direction of the department a Marine Corps aviation company, consisting of 10 officers and 40 enlisted men, will be organized for duty with the advance base force at as early a date as practicable. This company will be trained in the use of both land and water machines. Two officers who have been trained in the use of seaplanes are now under instruction in the use of land planes at the Army Flying School, San Diego, Cal.

INSPECTIONS.

22. During the period covered by this report the undersigned has inspected the Marine Barracks at Port Royal, S. C., Charleston, S. C., Key West, Fla., Pensacola, Fla., and New Orleans, La., and the officers of the Adjutant and Inspector's Department have made the usual annual inspections of most of the posts and organizations of the Marine Corps. Special reports of these inspections have been submitted when made, and the defects noted have been remedied so far as funds available have permitted.

RECRUIT DEPOTS.

23. On October 28, 1915, by order of the Navy Department, the disciplinary barracks at Port Royal, S. C., was turned over to the Marine Corps for use as a recruit depot, in place of Norfolk, Va. The recruit depot was removed to Port Royal on October 30, 1915. The change in location has resulted in greatly increased efficiency, as the training of the recruits is not interfered with by the necessity of guarding a large industrial establishment. A number of improvements have been made in the buildings at Port Royal. Additional barracks buildings and officers' quarters are essential for the proper housing of the personnel.

TRANSPORTATION.

24. The expeditionary forces in Haiti and Santo Domingo have been equipped with motor trucks, and the results obtained have been extremely satisfactory. In the march of the column from Monte Cristi to Santiago motor trucks instead of horses were used for moving the battery of artillery and its caissons. The officer in command of this battery, in his report, recommended the adoption of motor traction for Marine Corps artillery companies. This will be done, and the mobility and usefulness of these organizations will thereby, it is expected, be greatly increased.

RIFLE PRACTICE.

QUALIFICATIONS.

25. The following table shows the number of enlisted men of the Marine Corps who have qualified as marksman or better in the last six years:

	October 31.			June 30.		May 31.
	1911	1912	1913	1914	1915	1916
Expert riflemen	435	446	663	596	883	1,295
Sharpshooters	1,165	2,067	2,863	2,749	2,536	1,990
Marksmen	784	634	811	757	1,471	2,524
All grades	2,884	3,147	4,307	4,102	4,900	5,809
Per cent of total enlisted strength qualified	0.318	0.335	0.434	0.415	0.493	0.61

During the year every possible effort was made to enable all enlisted men of the Marine Corps to fire for qualification. The absence of a large number of men on expeditionary duty has prevented them from firing the prescribed course.

RANGES.

26. The Marine Corps rifle range at Winthrop, Md., is being used by the posts at Indian Head, Washington, Norfolk, Philadelphia, and by some of the marine detachments from ships. Arrangements were made for the use of the Bay State rifle range at Wakefield, Mass., under a lease, and a camp of rifle instruction was opened there

on June 1, 1916. The range at Port Royal was used for the target practice of recruits from the depot there, who were given an opportunity to fire during their course of instruction. A new range was opened at the navy yard, Puget Sound, Wash. There are now range facilities sufficient to enable all marines stationed at posts in the United States to fire each year, except at New Orleans, and it is hoped that a range will be constructed at that post in the near future. All permanent posts outside the continental limits of the United States, with the exception of Pearl Harbor, Hawaii, have ample facilities to conduct target practice. The matter of the construction of a range at Pearl Harbor is now under consideration, and will no doubt be carried out in the course of the next year.

Practically all marine detachments on board ships of the Atlantic Fleet were enabled to fire either at Guantanamo Bay, Cuba, or at one of the ranges in the United States, and vessels of the Pacific and Asiatic fleets have been afforded the use of various ranges in their vicinity.

When ranges have been constructed at New Orleans, La., and Pearl Harbor, Hawaii, the Marine Corps will have sufficient range facilities to enable every man to fire each year.

COMPETITIONS.

27. A Marine Corps competition was held at Winthrop, Md., June 29 and 30, 1916, under the conditions prescribed for departmental competitions in the Army. This was won by Pvt. Thomas W. Wayble, with a very creditable score of 651. The usual number of medals were awarded. In addition, on June 26, an interpost competition was held. Twelve teams representing the posts on the Atlantic coast were entered, and the competition was won by the Port Royal team with a score of 2,698.

RIFLE TEAM (1915)

28. The Marine Corps rifle team of 1915 was very successful in the matches held at Jacksonville, Fla., which comprised the Florida State, Southern Rifle Association, National Rifle Association, and national matches. The following results indicate the showing of the team:

Florida State matches.—Hale cup match, won by Gunnery Sergt. Ollie M. Schriver. Three-hundred-yard rapid-fire match, won by Sergt. Archie Farquharson.

Southern Rifle Association matches.—State-team match, won by Marine Corps team. Long-range team match, won by Marine Corps team. Three-hundred-yard match, won by Corpl. William H. Ford. One-thousand-yard match, won by Pvt. Theodore B. Crawley.

National Rifle Association matches.—The President's match, won by Gunnery Sergt. Andrew Hagen. Members' match, won by Corpl. James F. Coppedge. Rapid-fire match, won by Sergt. Jacob Lienhard. Enlisted men's team match, Marine Corps teams took second, third, and fourth places.

National matches.—National individual match, Pvt. Theodore B. Crawley, second (tied for first place, but outranked in rapid fire). National team match, Marine Corps team, second.

In the national individual match 8 of the 14 gold medals were won by marines. Pvt. Crawley also won a gold medal for the highest aggregate slow fire, and Gunnery Sergt. Joseph Jackson won a similar medal for the highest rapid-fire score. In the shoot-off for the latter medal Gunnery Sergt. Jackson gave the greatest exhibition of rapid-fire shooting ever seen on a rifle range, it having been necessary for him to make 90 straight bull's-eyes at 300 yards before he was declared the winner. The Marine Corps lost the national team match by three points, the Infantry team winning after a most exciting finish.

A Marine Corps team for 1916 was assembled at the rifle range at Winthrop, Md., about July 1, 1916, and after the personnel for try outs was selected the team was transferred to the Marine Corps camp of rifle instruction, Wakefield, Mass., for preliminary training. To date no matches have been held.

ENLISTED FORCE.

29. Gains and losses in the enlisted force during the year have been as follows:

Enlisted	2,718
Reenlisted from Marine Corps	862
Reenlisted from Army	324
Reenlisted from Navy	18
Joined from desertion	150
Prisoners restored	34
Total gain	4,106
Discharged	3,171
Died	52
Deserted	659
Retired	20
Prisoners sentenced to dishonorable discharge	116
Total loss	4,018
Net gain	**88**

DISTRIBUTION OF FORCE.

30. Summary of distribution of officers and enlisted men June 30, 1916:

	Officers.	Enlisted men.
On shore duty:		
In the United States	129	4,156
Outside the United States—		
Foreign stations	40	1,243
Expeditionary duty	122	2,893
On board ship:		
Prison and receiving ships		86
Cruising vessels	50	1,678
Total in service June 30, 1916	341	10,056
Allowed by law	377	9,947

The following shows the distribution of officers and enlisted men on September 30, 1916:

	Officers.	Enlisted men.
On shore duty:		
In the United States	141	4,896
Outside the United States—		
Foreign stations	71	1,243
Expeditionary duty	85	2,993
On board ship:		
Prison and receiving ships		86
Cruising vessels	47	1,678
Total in service Sept. 30, 1916	344	10,896
Allowed by law	597	14,981

APPOINTMENTS, RETIREMENTS, DISMISSALS, DEATHS, ETC.

31. During the year there were six appointments to the grade of second lieutenant from the Naval Academy, and there have been two retirements, one dismissal, and two deaths of officers on the active list.

CAMPAIGN BADGES.

32. Since the last report the following campaign badges and bars have been issued to officers and enlisted men of the Marine Corps: Nine medals of honor (N. G. O. 177), 11 West Indian campaign medals, 3 Civil War campaign badges, 14 Spanish campaign badges, 24 Philippine campaign badges, 16 China campaign badges, 14 Army of Cuban pacification badges, and 32 Nicaraguan campaign badges.

GOOD-CONDUCT MEDALS.

33. During the year 1,021 good-conduct medals and 258 good-conduct medal bars were awarded to enlisted men of the Marine Corps.

34. RECRUITING.

	Fiscal year ending June 30—		
	1914	1915	1916
Total number enlisted	3,889	4,068	3,922
Decrease in enlistments of 3.5 per cent.			
Net desertions	856	786	577
Percentage of desertions to total borne on rolls	6.0	5.4	4.0
Decrease in desertions of 1.4 per cent.			
Apprehended and surrendered from desertion	400	205	150
Decrease in apprehensions of 26.8 per cent.			
Dishonorable discharge, sentence of general court-martial	185	192	187
Reenlisted from Marine Corps	854	820	862
Percentage reenlisting from Marine Corps	21.9	20.2	22.0
Total reenlistments (including those from Army)	1,181	1,277	1,186
Percentage of reenlistments (to total enlistments)	30.0	31.4	30.2
Discharges by medical survey within three months from date of enlistment	20	23	56
Cost per recruit, including transportation	$47.40	$39.93	$55.05
Cost per recruit, excluding transportation	$28.57	$26.51	$34.01

There are now 4 recruiting divisions, 25 districts, and 160 stations. The recruiting service has been very economically and efficiently administered, and there has been no difficulty in keeping the Marine Corps recruited to its full strength. Every effort is now being made to secure the additional men authorized by Congress, and about 1,000 of these men have already been enlisted.

The cost, including transportation, was increased during the year by $15.12 per recruit. This increase in cost per recruit was due to the expenditure made in anticipation of a large increase in enlisted personnel, and to the fact that the recruiting service was kept up to its full quota after the corps was enlisted to its authorized strength, in order to provide for the prompt enlistment of the newly authorized men.

The above table also indicates that the percentage of desertions is steadily decreasing.

During June, 1916, three automobile trucks were purchased, and are now in operation in connection with recruiting at Boston, Mass., Atlanta, Ga., and San Francisco, Cal. The system of recruiting by automobile has hardly been in operation long enough to determine its worth, but it is believed that it will eventually prove a great aid to recruiting.

MANAGUA.

35. The legation guard at Managua, Nicaragua, is quartered in buildings belonging to the Nicaraguan Government. These buildings are in such bad repair and in such an insanitary condition as to be uninhabitable. It has, therefore, now become necessary either to expend a large amount of money in repairs to buildings belonging to a foreign Government or else to construct new buildings. The State Department has under consideration the purchase of a very desirable tract of land just outside the city of Managua as a site for the legation. If this be done, new buildings for the legation guard should be erected on this tract in the vicinity of the legation buildings. It is strongly urged that an early decision in this matter be reached, and action taken to secure the necessary appropriation at the next session of Congress. The sum of $20,000 should be authorized for the erection of suitable buildings for the officers and enlisted men of the guard.

PEKING.

36. The buildings occupied by the legation guard at Peking, China, were constructed about 15 years ago as temporary shelter for the guard at that place. They are no longer fit for occupancy, and should be replaced by new buildings. Unless it is the intention to withdraw the legation guard in the immediate future, it is urged that the estimates for new buildings at Peking be approved by the department.

GUAM.

37. It is essential that the officers and men stationed at Guam should be supplied with permanent quarters as soon as possible. In my last annual report it was stated that "The officers and men in

Guam at present are occupying temporary huts erected by the labor of the troops, and should, at the earliest date practicable, be supplied with permanent quarters." An appropriation of $10,000 was incorporated in the current naval appropriation bill for officers' quarters in Guam, but this is altogether insufficient to house the officers on duty there. No appropriation was made for barracks for the enlisted men. It is again urged that steps be taken to select a site for a Marine Corps barracks in Guam and to erect the necessary buildings thereon.

MARINE BARRACKS, SAN DIEGO, CAL.

38. On January 18, 1916, the department designated the Marine Barracks, San Diego, Cal., as the permanent station of the Marine Corps west coast expeditionary force. Upon the purchase of the land provided for in the current naval appropriation bill, and the assignment of a site to the Marine Corps, it is the intention of this office to station there the west coast expeditionary force, consisting of about 1,400 officers and men. It is earnestly recommended that the estimates submitted for the erection of the necessary buildings, etc., at that place be approved by the department.

PHILADELPHIA DEPOT OF SUPPLIES.

39. In my last annual report it was stated: "There is great necessity for a further addition to the depot of supplies in Philadelphia, Pa., not only for use as storage space for clothing of enlisted men and miscellaneous military supplies but for manufacturing purposes." An appropriation of $175,000 was incorporated in the current naval appropriation bill for the extension of the depot. The purchase of the ground and the construction of the building has already been taken up, and it is expected that this matter will be settled in the near future.

NEW BARRACKS AT NORFOLK AND MARE ISLAND.

40. Work on the new buildings at Norfolk and Mare Island is progressing satisfactorily. The contract for the former was awarded on October 22, 1915, and provides for the completion of the building on October 22, 1916. The contract for the latter was awarded on November 4, 1915, and provides for the completion of the building on November 4, 1916. These buildings are being erected in accordance with the provisions of the act of March 3, 1915.

GEORGE BARNETT.

OPERATIONS OF THE NAVAL MILITIA.

NAVY DEPARTMENT,
DIVISION OF NAVAL MILITIA AFFAIRS,
Washington, D. C., July 1, 1916.

From: Chief of the Division of Naval Militia Affairs.
To: The Secretary of the Navy.
Subject: Report of the organization, training, etc., of the Naval Militia from July 1, 1915, to June 30, 1916.

1. The following report of the organization, training, etc., of the Naval Militia for the fiscal year 1916, with recommendations for the improvement of the Naval Militia, is submitted.

OFFICE MANAGEMENT.

OFFICERS.

2. The Chief of the Division of Naval Militia Affairs during the year was Capt. F. B. Bassett, jr., United States Navy.

3. Lieut. (Junior Grade) F. T. Chew, United States Navy, on June 5, 1916, reported for duty as assistant to the Chief of the Division of Naval Militia Affairs.

4. The following officers are now on duty in the division:

Capt. F. B. Bassett, jr., United States Navy, chief of division.
Capt. T. P. Magruder, United States Navy, ordered as the relief of Capt. F. B. Bassett, jr., United States Navy.
Lieut. (Junior Grade) A. S. Carpender, United States Navy, assistant to chief of division (personnel).
Lieut. (Junior Grade) F. T. Chew, United States Navy, will relieve Lieut. (Junior Grade) A. S. Carpender, United States Navy.
Ensign F. G. Blasdel, United States Navy (retired), assistant to chief of division (matériel).
NOTE.—Capt. F. B. Bassett, jr., and Lieut. (Junior Grade) A. S. Carpender will be relieved on or about July 20, 1916.

OFFICE SPACE.

5. In June, 1915, the division was assigned its present office space. This space is adequate under present conditions, but if the new legislation hoped for is passed the work will so increase that the assignment of additional rooms will be necessary. The division at present is seriously handicapped, due to the lack of adequate storage space, and the assignment of an additional room for the storage of supplies, publications, etc., is an urgent necessity, as many publications that must necessarily be distributed by the division, should be kept in the division.

OFFICE EQUIPMENT.

6. The division has endeavored to obtain the latest labor-saving office equipment in order to cope with the large amount of work. This equipment has accomplished results entirely commensurate with its cost.

CLERICAL FORCE.

7. The present force consists of a chief clerk, seven clerks, and one messenger. The division in its annual report for the fiscal year 1915 stated that an increase in the clerical force was imperative. With the constantly increasing volume of work incident to carrying out the provisions of the Naval Militia act the present force is taxed beyond its capacity. The one additional clerk available July 1, 1916, will relieve the situation only slightly. "An act for making further and more effectual provision for the national defence, and for other purposes," approved June 3, 1916, for the Army, carries with it a provision for Federal retainer pay for the National Guard, and the Navy Department has proposed a bill that will give Federal retainer pay to the Naval Militia. If this bill becomes a law, additional clerical assistance and an additional messenger will be still more necessary.

8. The division recommended in its estimates for the fiscal year 1917 that the salary of the chief clerk be increased from $1,600 to $1,800 per annum, but this increase was not allowed by Congress. It is believed that this increase is well deserved and it is hoped that it may be obtained in the appropriation for the fiscal year 1918.

9. During the year this division has operated under the Chief of Naval Operations in all matters affecting operations, and has handled its own internal affairs, but all bureaus and offices have been freely consulted in matters pertaining to those bureaus and offices.

10. The clerical force of the Division of Naval Militia Affairs has been satisfactory in every respect. One and all have handled the constantly increasing volume of business intelligently and with dispatch.

Operation of the Naval Militia Act.

11. The fiscal year 1916 was the second full year during which the Naval Militia operated under the Naval Militia act of February 16, 1914. The operation under this act has been very satisfactory—especially so from an administrative standpoint.

12. All matters pertaining to the provisions of section 21 of the Naval Militia act for ex-officers and enlisted men of the Navy have been handled by the Bureau of Navigation, and the application of section 21 to former officers and enlisted men of the Naval Militia is now under consideration by that bureau.

INSPECTOR-INSTRUCTORS.

13. The Naval Militia act provides that officers and enlisted men of the Navy may, on application of the governor of a State or Territory or the commanding general of the District of Columbia Militia, be assigned to duty as inspector-instructors of the Naval Militia. There are now 32 officers assigned to this duty, but in only 7 case

has this duty been independent; in the other cases this duty being in addition to officer's regular duties. Of these 7 officers, 3 are on the active list and 4 on the retired list.

14. It is essential, generally, that officers detailed as inspector-instructors devote their entire time to the Naval Militia, and that they have no additional duties.

15. The instruction of enlisted men of the Naval Militia can, as a rule, best be given by the enlisted men of the Navy. Several petty officers have been detailed as assistants to the inspector-instructors, but the number so detailed is still inadequate. The enlisted men assigned as ship keepers on vessels loaned to the Naval Militia are available for the instruction of the enlisted men on board the vessels loaned and also at drills in the local armories. The assistance given by these men has been very valuable in the instruction of the Naval Militia enlisted men.

16. The assignment of inspector-instructors has been very beneficial, and the importance of assigning officers to those Naval Militia organizations that now have no inspector-instructors so detailed, should not be overlooked by the department. Retired officers have in many cases been given this duty, and it is believed that the employment of retired officers for this purpose is well justified, if active officers are not available.

FEDERAL INSPECTION REQUIRED BY THE NAVAL MILITIA ACT.

17. In accordance with the provisions of section 11 of the Naval Militia act, inspections of all Naval Militia organizations and divisions were made by officers of the Regular Navy during the spring of 1916, to determine whether or not the divisions were entitled to participate in the allotment of Federal funds for the fiscal year 1917. The reports of these inspections were, with the exception of one division of the North Carolina Naval Militia, favorable, and the governors of the several States were so informed.

18. On January 17, 1916, Lieut. Commander Charles H. Fischer, United States Navy, was ordered as Federal inspector of the Naval Militia of the Great Lakes, with headquarters at Erie, Pa. This officer has performed valuable service in inspecting the Naval Militia organizations of western New York, Erie, Pa., Ohio, Michigan, Wisconsin, Illinois, and Missouri.

MEETINGS OF NATIONAL NAVAL MILITIA BOARD.

CHANGE IN PERSONNEL.

19. On November 1, 1915, the Secretary of the Navy appointed Lieut. John A. McGee, California Naval Militia, as a member of the National Naval Militia Board vice Lieut. John T. McMillan, California Naval Militia, resigned.

[illegible]NG.

20. The fi[illegible]val Militia Board during the fiscal ye[illegible] December 6–10, 1915. At this me[illegible]es, and suggestions nec[illegible]itia were con-

sidered and recommendations made to the Navy Department. These recommendations as approved by the Secretary of the Navy were subsequently issued to the Naval Militia Service in the form of bulletin of the division of March 21, 1916, on Appendix A. In addition to the members of the National Naval Militia Board, the following Naval Militia officers were present:

Commodore J. P. Parker, retired, Massachusetts Naval Militia.
Commander Alfred B. Fry, New York Naval Militia.
Commander G. A. Eaton, Minnesota Naval Militia.
Officers representing the various bureaus of the Navy Department were present at different times during the meeting and answered various questions of the board.

SECOND MEETING.

21. The second meeting of the National Naval Militia Board was held at Washington, D. C., on April 6–10, 1916, for the purpose of formulating a bill to be introduced into Congress for the federalization of the Naval Militia. All members of the board were present with the exception of Lieut. John A. McGee, California Naval Militia, who was not ordered on account of the distance involved in travel. In addition to the members of the National Naval Militia Board, the following Naval Militia officers were present:

Commodore J. P. Parker, Massachusetts Naval Militia.
Capt. A. B. Fry, New York Naval Militia.
Commander Anthony F. Nicklett, Ohio Naval Militia.
Commander T. T. Nelson, jr., Pennsylvania Naval Militia.

22. A bill was prepared and submitted to the Navy Department for approval. It was approved by the Navy Department and on June 30, 1916, was sent to Congress as an amendment to the naval appropriation bill.

23. As it is considered very important in drawing up instructions for the Naval Militia that the Naval Militia itself be freely consulted and its advice obtained, the policy of this division will be to call meetings of the National Naval Militia Board as frequently as may be considered advisable.

GENERAL ORDER No. 150.

24. The provisions of Navy Department General Order No. 150 covering the standard physical examinations for officers and enlisted men of the Naval Militia have been adopted by all States with the exception of North Carolina and Rhode Island, and the Territory of Hawaii, and the boards for the physical examination of the officers and enlisted men have in all but the cases enumerated above, been appointed. By the provisions of this general order all members of the Naval Militia are required to be examined by a board of medical officers, nominated by the governor and appointed by the Secretary of the Navy. This examination is required periodically every three years, and whenever an officer is promoted from one rank or grade to another.

The fact that officers and enlisted men have been found qualified physically by the above-mentioned board does not relieve them from again being examined by the board of naval medical officers in the event the Naval Militia is called forth for service, and all officers

and enlisted men must pass this physical examination before they can be mustered into the Federal service, unless such examination is waived by the Navy Department. It is believed that the examinations conducted by this board of State officers will insure a higher physical standard being maintained by all Naval Militia organizations and will reduce to a minimum the number of rejections which would occur previous to mustering into the service of the United States.

General Orders No. 153 and 198.

25. General Order No. 153 was published on July 10, 1915. The principal features of this general order were given in the report of this division for the fiscal year 1915. This general order is operating successfully.

26. General Order No. 198 contains minor changes in General Order No. 153 and also the complete scope of examinations for officers and enlisted men for aeronautic duties only. These examinations for aeronautic duties only are based on conditions similar to the examinations for officers of all other corps as set forth in General Order No. 153, so that a discussion of these examinations is not considered necessary.

Professional Examinations for Naval Militia Officers.

27. A circular letter of this division, No. 89, of August 13, 1915, established a schedule for the professional examinations of Naval Militia officers. In preparing this schedule it was decided to hold four examinations prior to February 16, 1917, so that officers might be given an opportunity to fully qualify professionally previous to the date on which the Naval Militia act finally becomes effective. To date two of these examinations have been completed and two more will be held. The complete examination papers of all officers are kept as a part of their records in the files of the division of Naval Militia affairs.

28. There are to date 92 Naval Militia officers fully qualified professionally for their ranks in all corps, and in addition to the officers fully qualified professionally, many officers have qualified in certain parts of their examinations. The names of all Naval Militia officers who are fully qualified professionally in accordance with General Order 153 are now published in the Monthly Navy and Marine Corps List and Directory, and will be published in the Annual Naval Register.

29. The Navy Department has approved a "Certificate of qualification" to be issued to the Naval Militia officers who are found fully qualified professionally, and these certificates will be issued to each individual officer as soon as practicable after his professional examination has been completed. These certificates read as follows:

This is to certify that in accordance with existing law ——— ——— has qualified and is eligible to be called forth by the President of the United [illegible] into the service of the United States as a ——— in the Naval Militia [illegible] without further professional examination.

Given at Washington, D. C., this —— day of ———, 19[illegible]

Chief of Division of Na[illegible]

30. A card index is kept for each officer of the organized Naval Militia. This card is known as N. N. M. 40. The following information is kept corrected to date on these cards: Name, rank, State, city, battalion, division, present duty, civil occupation, date of birth, native or naturalized, date of entry into the Naval Militia service, date of present commission, licenses held, residence, next of kin, a résumé of all duty performed, record of all examinations and qualifications, Regular and Naval Militia service, merchant or pleasure craft service.

Strength of Organizations.

31. The personnel returns of the Naval Militia, June 30, 1916, show a total of 9,808 officers and enlisted men, an increase of 32 officers and 1,464 enlisted men over the strength of June 30, 1915. For detailed statement of strength see Appendix B.

32. At the present time many of the organizations are deficient in many of the ratings required by General Order 153. This deficiency is principally noticeable in the artificer branch (deck force), special branch, and commissary and messmen branches. The number of officers and enlisted men required in each organization is specified in General Order No. 153, and all but two States have adopted this as a standard. It is expected that before the Naval Militia act finally becomes effective in February, 1917, the organizations will have been rounded out and the number and proportion of officers and enlisted men brought to accord with the standards prescribed. This rounding out of the organizations is of the utmost importance, as it has been very difficult in arranging cruises for the Naval Militia to counteract the marked shortage in men in the branches enumerated above. It is also noted that some of the organizations are top-heavy with high ranking officers, and enlisted men too high in rating; but this difficulty will be remedied when the Naval Militia act becomes fully effective February 16, 1917.

New Organizations and Divisions.

33. It was stated in the annual report of this division for the fiscal year 1915 that new organizations were being formed in the State of Texas and Territory of Hawaii. The formation of these organizations has progressed favorably and, while still in their infancy, it is anticipated that they will be completely organized and will constitute efficient units of the Naval Militia in the near future.

34. It is regretted that the expected formation of new organizations in the States of Alabama and Delaware has not been accomplished.

35. New divisions were established in States already maintaining Naval Militia organizations as follows:

Los Angeles, Cal., aeronautic section.
San Diego, Cal., deck division.
Washington, D. C., aeronautic section.
Sarasota, Fla., deck division.
Jacksonville, Fla., deck divisions (2).
Jacksonville, Fla., engineer division.
Key West, Fla., aeronautic section.
Chicago, Ill., marine company.
Honolulu, Territory of Hawaii, deck division.

Honolulu, Territory of Hawaii, engineer division.
Slidell, La., deck division.
Baltimore, Md., deck division.
Newburyport, Mass., deck division.
Marblehead, Mass., deck division.
Detroit, Mich., engineer division.
Bemidji, Minn., deck division.
Crosby, Minn., deck division.
Lindstrom, Minn., deck division.
Newark, N. J., aeronautic section.
New York, N. Y., aeronautic section.
Brooklyn, N. Y., marine company.
Niagara Falls, N. Y., deck division.
Cleveland, Ohio, marine company.
Portland, Oreg., marine section.
Galveston, Tex., deck division.
Houston, Tex., deck division.
Everett, Wash., deck division.

36. The Wisconsin Naval Militia was, by executive order of the governor of Wisconsin, disbanded during April, 1916. The formation of a new battalion of the Wisconsin Naval Militia at Milwaukee, Wis., has been authorized and it is hoped that this battalion will be organized during the fiscal year 1917.

37. The division again wishes to emphasize its approval and hopes that Naval Militia organizations will be established in all States having seacoast frontage on the large lakes, or bordering on navigable rivers, that have not Naval Militia organizations at the present time. It is believed that all States so located should have such organizations and should bear their part in creating this form of a reserve for the Navy.

38. The recruiting poster which is now being used by the Naval Militia has proven very satisfactory and has materially increased the enlistments in several of the Naval Militia organizations.

Appropriations.

39. There are two appropriations for the Naval Militia:

(*a*) "Arms, Uniforms, Equipment, etc., Naval Militia," a fixed annual appropriation of $200,000 permanently provided by section 10 of the Naval Militia act. This appropriation is available for the purchase and upkeep of material, equipment, uniforms, and naval stores of all kinds for the use of the Naval Militia. At the present time all organizations are not fully outfitted, and the sum available under this appropriation is not sufficient to fully outfit all organizations in any one year or in several years. It will, however, based on the present strength of the Naval Militia, when organizations are once outfitted, maintain them and suffice for the upkeep of the material and equipment in their possession. For this reason, an increase in this appropriation has not been requested at this time, but a material increase in strength of the Naval Militia will necessitate an increase in the appropriation.

(*b*) "Arming and Equipping Naval Militia," in the annual naval appropriation bill, carried for [illegible] year 1916, $250,000. This appropriation must, by the te[illegible]val Militia act, provide for the pay, transportation [illegible] of officers and enlisted men of the Na[illegible] encampments on shore, auth[illegible] clerical and

reduced to a minimum, the making of these returns has enormously increased the absolutely essential clerical work pertaining to the Naval Militia in those States. The failure to make the necessary returns has been caused partly by the fact that the State authorities have not known how to make these returns, but principally because the States have not yet begun to realize the burden put upon them by the passage of the Naval Militia act, and have not, in the majority of cases, provided a State clerical force made necessary by its provisions. States having Naval Militia organizations have been urged to make provision for the necessary State clerical help. The question was taken up by the National Naval Militia Board. (See Appendix A.)

42. Ensign F. G. Blasdel, United States Navy, of the Division of Naval Militia Affairs, made the following trips during the year for the purpose of instituting a proper system of accounting for Federal property in the possession of the Naval Militia:

July, 1915, North Carolina.
August 11–22, 1915, Erie, Pa.
October, 1915, New Jersey.
January 6–12, 1916, Philadelphia, Pa.
February 18–25, 1916, Charleston and Beaufort, S. C.

The work done by Ensign Blasdel was highly satisfactory, and much good has accrued from his visits.

Vessels Loaned to the Naval Militia.

43. The following vessels were loaned to the Naval Militia organizations:

Amphitrite, State of Connecticut, in "Reserve commission."
Chicago, State of Pennsylvania, in "Reduced complement commission."
Flusser, State of Louisiana, in "Reduced complement commission."
Kearsarge, State of Massachusetts, in "Reduced complement commission."
Lamson, State of South Carolina, in "Reduced complement commission."
Marblehead, State of Oregon, in "Reserve commission."
Oregon, State of California, in "Reduced complement commission."
Preston, State of Florida, in "Reduced complement commission."
Reid, State of Texas, in "Reduced complement commission."
Smith, State of Florida, in "Reduced complement commission."

Note.—The destroyers *Flusser*, *Lamson*, *Preston*, *Reid*, and *Smith* failed to report to their respective States, due to existing conditions of national affairs which could not be avoided.

The following vessels were withdrawn from the Naval Militia organizations indicated:

Amphitrite, from Louisiana Naval Militia.
Chicago, from Massachusetts Naval Militia.
Marblehead, from California Naval Militia.

During a hurricane at New Orleans, La., the U. S. S. *Stranger*, loaned to the Louisiana Naval Militia, was sunk, and later was stricken from the navy list.

44. The loan of the *Oregon* to the California Naval Militia, the *Kearsarge* to the Massachusetts Naval Militia, and the *Chicago* to the Pennsylvania Naval Militia in the status of "Reduced complement commission" is a new form of loan of naval vessels to the Naval Militia. Under this form of loan, the vessels remain under the command of an officer of the Regular Navy and are manned by a small

complement of regular officers, and a complement of approximately 40 per cent of a full service complement of enlisted men. The vessel constantly remains under the command of a naval officer and is used by the Naval Militia for training purposes and may be withdrawn at any time for such use as the Navy Department may deem necessary.

45. The vessels loaned to the Naval Militia are in most cases entirely inadequate for the purpose, and steps should be taken to provide proper vessels on which the officers and enlisted men can be properly trained. The department has recommended to Congress an appropriation to repair the U. S. S. *Topeka* for the Naval Militia of Minnesota and to purchase a vessel for the Naval Militia of Illinois.

46. The recommendations of this division in its last two annual reports that the older battleships be loaned to the Naval Militia under suitable agreements with States has been carried out to the extent mentioned above, covering the assignment of the *Oregon* and the *Kearsarge*. It is hoped that this recommendation may be fully complied with and that a battleship may be loaned to the First Battalion New Jersey Naval Militia, to be stationed at New York, and that battleships may be loaned to the Second Battalion New Jersey Naval Militia and to the Pennsylvania Naval Militia stationed at Philadelphia, this ship to replace the *Chicago*, now loaned to those organizations.

47. In general, the practice should be followed that the Naval Militia train in time of peace on the vessels or on similar vessels to those that they will man in time of war. Gunboats and the older type of destroyers, which through age will not accompany the fleet, should be assigned to the Atlantic, Gulf, and Pacific coast organizations of the Naval Militia not recommended to be provided with battleships; the organizations on the Great Lakes should be provided with small gunboats and the river organizations with special type river gunboats to be built especially for that service. Generally speaking, the vessels loaned to the Naval Militia should be of a size commensurate with that of the organizations using them, in order that a large part of these organizations may cruise at one time, thus cutting down the number of cruises necessary to train the personnel.

48. The condition of the vessels loaned to the Naval Militia as shown by the report of the Board of Inspection and Survey for Ships shows a marked improvement over that noted in the annual report for the fiscal year 1915. This division again renews its request that an adequate number of enlisted men of the Regular Navy be detailed to the Naval Militia vessels as ship keepers. While it is not the policy of the division to condone lack of care shown by the Naval Militia in instances of deterioration, it is felt that the blame for the deterioration is not entirely with the Naval Militia but is due in a large degree to the shortage of enlisted men of the Navy furnished as ship keepers.

49. There are still certain Naval Militia organizations which have no ship assigned to them for training purposes, and it is recommended that steps be taken to provide ships for loan to all Naval Militia organizations. A Naval Militia organization can not exist or attain any degree of efficiency unless it has some vessel loaned to it on which to train.

50. For a list of vessels loaned to the Naval Militia see Appendix C.

Summer Cruises.

51. The summer cruises were participated in by a large percentage of the personnel of nearly all the Naval Militia organizations, and on the whole were satisfactory. Reports of these cruises are published in Report of Naval Militia Cruises, 1916. (For a summary of the cruises see Appendix D.)

52. The division wishes again to make recommendations as set forth in its annual report for the fiscal year 1915, in connection with the Naval Militia cruises.

(*a*) An officer of the Navy should be on all vessels loaned to the Naval Militia on their annual cruises.

(*b*) Officers making these cruises should be ordered to report at least four or five days before the commencement of the cruise in order that they may give instruction regarding the routine of drills, assist in making plans for the cruise, and in making out watch, quarter, and station bills. This is necessary in order that the maximum benefit may be received from the cruise and that this division may be properly informed of the work of the organizations.

(*c*) It is of the utmost importance that the officers and enlisted men of the Naval Militia should have ample notice of the dates for the annual cruise in order that they may arrange for their vacations. The dates of cruises for the summer of 1916 were determined a sufficient time in advance and the Naval Militia notified so that there was little difficulty in arranging the vacations of the officers and enlisted men. This not only increases the number of officers and enlisted men who can make the cruise, but materially decreases the work in this division in arranging the details of such cruises.

(*d*) The cruises of the Naval Militia should be attractive, but every effort should be devoted to work of instruction. Liberty should be a secondary consideration.

(*e*) Organizations should be divided up among various ships, and no one should be overcrowded with several organizations.

(*f*) At the present time the duration of Naval Militia cruises is approximately 15 days and estimates for Congress are based on that period. Fifteen days has been considered the average length of the annual vacation that men in civil life can get, but it is thought that the increased interest in preparedness will make it possible to make longer cruises. The Division of Naval Militia Affairs is considering the policy of estimating next year for a 15-day cruise for the organizations of States that require a small amount of travel and 20 days for States like Minnesota and Louisiana that consume about 4 days for the round trip from home to ship, in order that such States may have the same length of time at sea as the near-by States.

Participation in Cruises in Vessels of the Atlantic Fleet, Etc.

53. In accordance with the provisions of section 12 of the Naval Militia act authority was granted by the Secretary of the Navy for certain members of the Naval Militia to participate in cruises on vessels of the regular service.

54. The following Naval Militia officers and enlisted men were granted authority and participated in cruises on vessels of the United States Atlantic Fleet:

Commander C. L. Poor, First Battalion, New York Militia.
Commander E. J. Kelly, Second Battalion, Ohio Naval Militia.
Lieut. Commander H. G. Black, Texas Naval Militia.
Lieut. Commander G. B. Graham, First Battalion, Florida Naval Militia.
Lieut. Commander N. F. Hugo, Minnesota Naval Militia.
Lieut. R. R. Riggs, First Battalion, New York Naval Militia.
Lieut. H. Vanderwerp, Second Battalion, Michigan Naval Militia.
Lieut. J. T. Wentz, Louisiana Naval Militia.
Lieut. (Junior Grade) N. R. Wilber, Pennsylvania Naval Militia.
M. J. Monahan, E. B. Delano, G. E. Herrick, M. L. Lewis, H. T. German, and A. Schreiner, seamen, first class, Third Battalion, New York Naval Militia.

Several enlisted men made cruises on vessels of the Regular Navy. Several enlisted men were authorized to pursue courses of instruction, but due to various reasons were unable to take advantage of the authority granted.

55. Seventeen petty officers were granted authority to participate in a two weeks' tour of duty at the Marine Corps Rifle Range, Winthrop, Md., during September, 1915. This duty proved very valuable, and an estimate to enable two petty officers from each Naval Militia battalion to participate in a similar course of instruction during the ensuing fiscal year was contained in the estimate for appropriation "Arming and Equipping Naval Militia, 1917." The petty officers who participated in the above-mentioned tour of duty were divided among the States as follows: New York, 5; New Jersey, 4; North Carolina, 3; Massachusetts, 3; District of Columbia, 2.

Instruction Under Section 13 of the Naval Militia Act.

56. The department should encourage the Naval Militia to take advantage of section 13 of the Naval Militia act, which allows officers and enlisted men of the Naval Militia, when recommended by the governor of any State or Territory or by the commanding general of the District of Columbia Militia, to attend and pursue a regular course of study at military or naval schools or colleges in the United States. This section also provides that on approval of such request by the Secretary of the Navy such officers and enlisted men shall receive from the annual appropriation for the support of the Navy (not from Naval Militia appropriations) the same travel allowances and quarters or commutation of quarters to which officers and enlisted men of the Regular Navy would be entitled for attending such school or college, under orders of the proper authority. If the provisions of this section are carried out, it is thought that much good will accrue to the Naval Militia, and thus to the naval service.

57. The following Naval Militia officers and enlisted men were granted authority to pursue courses of instruction under section 13 of the Naval Militia act:

Assistant Paymaster G. E. Dow, Oregon Naval Militia, Navy Pay Officers' School, Washington, D. C.
Ensign L. H. Harris, First Battalion, New York Naval Militia, [illegible] Aeronautic Station, Pensacola, Fla.
Electrician, second class, D. Crane, Pennsylvania Naval Militia, [illegible] trical school, navy yard, New York.
Seaman R. Kocerobsky, Illinois Naval Militia, electrical [illegible] yard, New York.

Special Naval Militia Schools.

58. The establishment by the State of Massachusetts of what is known as the "Massachusetts Naval Militia Cadet School," which was mentioned in this division's annual report of 1915, has been justified.

The members of this school participated during the summer of 1915 in a cruise on board the U. S. S. *Nebraska* during the maneuvers of the United States Atlantic Fleet. The first class of this school has nearly reached its time for graduation, and graduates will be commissioned as acting ensigns in the Massachusetts Naval Militia.

Naval Militia Target Practice.

59. Naval Militia target practice for the year was held by most of the organizations. The final standing of the organizations has not yet been determined, but when determined a full report of the target practice will be published by the office of Target Practice and Engineering Competitions in a separate report.

On August 4, 1915, Capt. F. B. Bassett, chief of this division, presented the division trophy in behalf of the Navy Department to the First Division, Second Battalion, Ohio Naval Militia, at Cleveland, Ohio, and on August 5, 1915, the organization trophy to the Illinois Naval Militia at Chicago, Ill. Both of these presentations were made with proper ceremonies.

Ship Keepers.

60. The division again invites attention to the shortage of ship keepers on board vessels loaned to the Naval Militia. This shortage has been a decided drawback to the efficient upkeep of these vessels throughout the year. The Board of Inspection and Survey has frequently noted the unsatisfactory condition of these ships in the past and has recommended a larger number of ship keepers in many cases.

61. Officers and men of the Naval Militia give their time voluntarily, and what time they are able to give should be devoted to drills and instruction, and as much cleaning, painting, and repair work as possible should be taken out of their hands. The ship keepers assigned to vessels loaned to the Naval Militia organizations are, by the Naval Militia act, in addition to the regular Naval Establishment. Estimates have been submitted for the coming year for a proper number of ship keepers for vessels loaned to the Naval Militia in addition to the regular Naval Establishment.

62. The policy of not relieving the senior ship keepers of the engineer force and of the deck force until new men have been on duty long enough to understand their duties has had a beneficial effect.

63. The greatest care should be exercised by the department in selecting ship keepers for Naval Militia vessels, and men should be selected who have good-conduct records, and whose qualifications fit them for assi[illegible] the instruction of the enlisted personnel of the Naval Mili[illegible]d the ship to which they are assigned and in the [illegible]

[illegible]ing in rating enlisted men of the Navy [illegible]ising vessels (which includes Naval

Militia vessels) it is thought works to the detriment of the Naval Militia. Many good men who might otherwise desire duty on Naval Militia vessels object to such duty on account of the impossibility of advancement in rating, and it is recommended that especially qualified ship keepers be advanced, provided they are recommended and pass satisfactory examinations held by inspector-instructors.

Radio Outfits.

65. The Bureau of Steam Engineering has agreed to furnish 10 field radio sets for Naval Militia each year, so that in the course of time the Naval Militia will be fully equipped with the necessary instruments for proper instruction of radio operators. At the present time all ships loaned to the Naval Militia having generating sets with power enough to warrant radio installation have a radio outfit.

Typhoid Prophylactic.

66. The report of inspection of Naval Militia organizations, as required by section 11 of the Naval Militia act, has shown in many instances that officers and men have failed to take advantage of the opportunity offered to take the typhoid prophylactic. This division has again urged that all organizations take advantage of this opportunity.

Meeting of the National Naval Militia Association.

67. The National Naval Militia Association met in Washington, D. C., for its annual convention January 28–29, 1916. The annual dinner of the association was held at the New Willard Hotel on January 29, 1916. The Secretary of the Navy and many prominent naval officers were guests of the association at this dinner.

The Territory of Hawaii and the States of Louisiana, Maine, North Carolina, Oregon, Rhode Island, South Carolina, Texas, and Wisconsin were not represented at the convention. The division again renews its recommendation contained in its annual report for last year that an effort should be made in future conventions of the Naval Militia Association to have representatives present from every State having a Naval Militia.

At this convention it was worthy of comment that the States of California and Washington were both represented, while some States much closer to Washington, D. C., and more easily accessible were not represented at this convention. During the convention many of the faults and various obstacles encountered by the Naval Militia were discussed.

68. The following are the principal points brought up at this convention:

(*a*) How obtain better attendance at drills and general discussion of the methods of increasing the attendance at drills, and various plans which are carried out by different Naval Militia organizations to attain this end.

(*b*) The question of assignment of the *Amphitrite* to the State of Connecticut.

(*c*) Proposed changes in Naval Militia gunnery instructions and discussion as to whether or not engineer divisions should be permitted to fire. A vote was taken and the convention went on record that it should be optional with the Naval Militia themselves whether or not the engineer divisions should fire at target practice.

(*d*) General discussion of summer cruises. The consensus of opinion was that ships should not be overcrowded, and especially that if possible several organizations should not be sent on the same ship.

(*e*) The question of a Naval Militia organization obligating Federal funds without authority; for example, the firing of tugs without first obtaining permission of the Navy Department to do so.

(*f*) Delay in submitting reports, etc., required by the Naval Militia. The division has, during the year, been seriously handicapped by the neglect in submitting reports promptly. This not only causes a vast increase of clerical work, but increases the expenses to the Federal Government.

(*g*) The recommendations which were made at the meeting of the National Naval Militia Board in Washington, D. C., during December, 1915, were informally discussed.

(*h*) The question of assigning yeomen to the headquarters of various Naval Militia organizations to assist in the preparation of returns, records, etc., required by the Navy Department.

(*i*) Failure of many Naval Militia officers to take the professional examinations required by General Order 153, after application to do so had been received and questions forwarded to the supervisory examiners. At the first examinations in October, 1915, many instances of this kind arose, causing much embarrassment to this division.

(*j*) General Order No. 153 and scope of examination contained therein. Lieut. R. R. Riggs, First Battalion, New York Naval Militia, recommended that the Naval Militia be allowed to specialize in various branches. This recommendation is contrary to the policy of this division, and not considered advisable at the present time.

(*k*) Granting leave with pay, in addition to regular annual leave, to employees who are members of the Organized Militia or the Naval Militia.

(*l*) Commodore Parker, Massachusetts Naval Militia, retired, explained, at the request of the convention, the plan followed by his organization, and also the object of maintaining the Massachusetts Naval Militia Cadet School.

(*m*) How material is obtained, results, etc.

(*n*) Rear Admiral Blue, Chief of the Bureau of Navigation, explained in detail the provisions of the proposed naval-reserve bill which has since been introduced into Congress.

(*o*) Nomination and election of officers of the Naval Militia Association.

(*p*) The convention went on record as being in favor of the pay bill for the Naval Militia.

(*q*) Introduction of a bill to obtain the franking privilege for the Naval Militia.

(*r*) On the afternoon of January 29, and through the courtesy of the commandant, navy yard [illegible] D. C., members of the convention inspected [illegible] A guide was provided and a very in[illegible]

PRINCIPAL DEFECTS OF THE NAVAL MILITIA.

69. The division renews its report on the defects in the Naval Militia as shown in its annual report for the fiscal year 1915. Many of these defects have been partly remedied, but there is still a great deal of room for improvement.

(*a*) All official correspondence should be forwarded via the adjutant general. This is often violated.

(*b*) Too much time is devoted to Infantry drill. It muct be remembered that the primary duty of a Naval Militia organization is to prepare both officers and enlisted men for the duties they will perform in time of war in the Navy. These duties will be on board ship, and this fact should influence the drills held.

(*c*) Correspondence is often addressed to the chief of the division by name. This often results in delay, and should be corrected.

(*d*) Failure of the Naval Militia to answer correspondence. It is manifestly impossible to carry on business with an organization unless the correspondence is promptly acted on. This has been frequently called to the attention of all organizations, but in many cases without effect. Letters and forms sent are frequently lost, necessitating additional letters and telegrams to obtain answers to routine correspondence.

(*e*) Failure of the Naval Militia to read correspondence. It is quite apparent from some letters that are received that much of the correspondence, although perhaps received, is never read.

(*f*) General lack of instruction. This defect will be greatly offset by the assignment of inspector-instructors. All divisions have now been furnished with complete sets of textbooks, and with these books systematic instruction can be carried on.

(*g*) Needs are not anticipated, and requisitions for coal, clothing, etc., are submitted at the last minute, often by telegraph. This division has been greatly embarrassed by repeatedly requesting other bureaus in the Navy Department to furnish emergency clothing, emergency ammunition, and emergency supplies of all kinds. Many organizations apparently believe that when they want clothing or supplies they can wait until a day of two before it is to be used, and then telegraph to this division, requesting immediate shipment by express. This is manifestly impossible, and if the practice continues, it will be necessary for this division to adopt an absolute policy to honor no requisitions for supplies except for delivery not less than one month from the date of receipt of the requisition.

(*h*) Carelessness in care of Government property. An improvement in this is noticeable, but there is room for further improvement. (See "Property responsibility.")

(*i*) Carelessness in uniforms. Uniform regulations have been issued for both officers and enlisted men by the Navy Department. There is no excuse for either officers or enlisted men wearing other than regulation uniforms.

(*j*) Failure to report defects of ships and of other property. On many occasions no effort is made to inform this division of defects which should be reported immediately.

(*k*) Lack of sufficient engineer divisions in the Naval Militia is apparent. It is desirable to enlist engineers in the Naval Militia, so that it will not be necessary to hire them to make cruises.

Reports Required by Naval Militia Organizations.

70. For the convenience of the Naval Militia organizations, and to insure that the required reports are forwarded to the Division of Naval Militia Affairs, Form NNM No. 48 has been prepared (see Appendix F).

Principal Needs of Naval Militia.

71. The principal needs of the Naval Militia are as follows:

(*a*) Inspector-instructors for all organizations. Where possible, these officers should have no other duty and their time should be devoted exclusively to training of the Naval Militia. There should be detailed as assistants to these officers such enlisted men as may be necessary for the proper carrying on of schools of instruction and such other instruction as may be necessary. The officers and enlisted men of the Naval Militia are required to pass certain examinations laid down by the Navy Department in General Order No. 153, and it is manifestly impossible for them to do so without proper instruction and preparation. This instruction can not be obtained except by the aid of inspector-instructors, and it is hoped that the Navy Department will be able to provide these officers.

(*b*) Suitable vessels for loan to Naval Militia organizations.

(*c*) Increase in the complement of ship keepers on vessels loaned to the Naval Militia. It is impossible to keep the ships in proper condition unless the number of naval ship keepers is increased.

(*d*) Yeomen for all organizations.

(*e*) Policy of the Navy Department as to duties which the Naval Militia organizations are to perform should they be called out in time of war. This should be determined and the organizations definitely assigned to such duty and exercised in time of peace in this assignment when opportunity offers.

(*f*) Many of the organizations are not recruited up to full strength, and an effort should be made to recruit all organizations up to the number allowed by the State laws, and where this number is manifestly too small the legislatures should be requested to increase the authorized number.

(*g*) Adoption by each State at the earliest date practicable of the provisions of Navy Department General Order No. 153, as a standard for the Naval Militia organization in that State. This must be done in order that the Naval Militia of the State may be called forth without further professional examinations in time of war.

Object of the Naval Militia.

80. The object of maintaining a Naval Militia is that a dependable force may be available for the use of the Federal Government in case of actual or threatened war.

81. By the Naval Militia act, the Naval Militia, qualified in accordance with the act, and any existing naval reserve now or hereafter organized, shall be called into the service of the United States in advance of any volunteer naval force which it may be then determined to raise. It should, therefore, be the aim of the Navy Department to

train the Naval Militia in time of peace so that the officers and enlisted men will be able to render the most efficient service in time of war. To accomplish these ends they should be trained as much as possible in time of peace on the ships or on the class of ships on which they will serve in time of war. The Naval Militia should know what their assignment will be in time of war and this incentive will, it is believed, make the Naval Militia realize that they are a part of the national defense, and cause them to exert every effort to become efficient in their prospective war billets.

82. Specializations of Naval Militia is not recommended at this time, as it is thought that the best results can be obtained if every officer and enlisted man is trained in time of peace to become efficient for general naval service. The officers and enlisted men of the Regular Navy are better fitted than the Naval Militia for special work, such as on torpedo boats, mine-sweeping vessels, mine-laying vessels, submarines, etc., although it might be necessary in time of war to augment the crews of such vessels by a limited number of Naval Militia officers and enlisted men.

83. These recommendations were contained in the annual report of this division for 1915, and are again renewed. It has been the endeavor of this division during the past year to increase the efficiency of the Naval Militia so that in the near future it may reach the point where it can be mobilized with the shortest possible notice and be available for Federal service.

New Legislation Recommended.

84. This division renews its recommendation that the privileges of free transmission through the mails enjoyed by Federal officials be extended to the Naval Militia under such restrictions as will prevent its abuse. The passage of the Naval Militia act has greatly increased the correspondence to be handled by the adjutants general of the States and by the officers of the Naval Militia. The provision of the postal regulations that allows Government officers when requesting an answer to an official letter to inclose a penalty envelope, addressed to himself, does not satisfy. There is a large amount of correspondence between the adjutants general and the commanding officers of Naval Militia divisions and from the commanding officers of Naval Militia divisions to adjutants general and others not Government officers. This business is considered as Government business as it is instituted by the Navy Department. The use of stamps is becoming irksome to the State authorities, and legislation is recommended to remedy this condition. The passage of the Army bill, federalizing the National Guard, and the expected passage of a bill to federalize the Naval Militia, make it more than ever necessary that the franking privilege be extended to the Naval Militia.

Leave for Naval Militia with Pay.

85. Several large business corporations, banks, etc., have directed that their employees who are members of the Organized Militia, of which the Naval Militia is a component part, be allowed leave with full pay to attend to their military duties. This leave does not count against their regular annual leave, which is still given them with full

pay. It seems but proper that the Federal Government should allow its employees to participate in any ordered annual military duty under the same conditions. At the present time the only Naval Militia organization that is entitled to military leave under these conditions is the Naval Militia of the District of Columbia. Legislation is recommended to make it possible for all Federal employees to participate in their annual military tours of duty without detriment to their private interests, the loss of any pay, or the loss of any of their regular annual leave.

86. Legislation is recommended to enable the commanding officers of Naval Militia divisions and battalions while cruising on vessels of the Navy to try by court martial, under the State laws, such members of the Naval Militia of their State as may commit offenses warranting court martial, and to punish their men for minor offenses committed while they are on board vessels of the Regular Navy in an official capacity, subject to the approval of the commanding officer of the ship. Officers of the Regular Navy can not by law inflict punishment on Naval Militia officers or enlisted men while such officers and enlisted men are on board the vessel under command, and, unless their own State officers can punish such offenders, they may go unpunished.

Mobilization of the Naval Militia.

87. During the year complete plans covering the mobilization of the Naval Militia in case they are called forth by the President, in accordance with the provisions of the Naval Militia act, have been prepared. These instruct the officers and enlisted men to proceed to the Federal rendezvous which are designated by the Navy Department and there complete their professional examinations, and take the physical examination prior to being mustered into the service of the United States.

After being mustered into the service of the United States, enlisted men are detailed to duty by the commanding officer of the Federal rendezvous, and the officers are detailed to duty by the Navy Department.

In working up the details of this mobilization plan, an effort has been made to make all preliminary arrangements so that should the Naval Militia be called forth, it will simply be necessary to inform the governor of the State by telegram, and steps in connection with the mobilization will be automatically taken up.

Death of Member of Naval Militia.

88. On August 23, 1915, Edward J. Managan, State of Connecticut Naval Militia, was lost overboard from the U. S. S. *Kentucky* at Tangier Sound, Va. It was impossible to recover the body.

Special Duties Performed by the Naval Militia.

89. The Illinois Naval Militia rendered valuable assistance in the recovering of bodies and rescuing passengers from the steamer *Eastland* when that vessel overturned in the Chicago River in August, 1915.

APPENDIX A.

NAVY DEPARTMENT,
DIVISION OF NAVAL MILITIA AFFAIRS,
Washington, D. C., March 21, 1916.

To: Adjutants General, Commanding Officers, Inspector Instructors.
Subject: Report of National Naval Militia Board, meeting December 6 to 10, 1915.

1. The National Naval Militia Board met in Washington, D. C., from December 6 to 10, 1915, and made certain recommedations. The recommendations of the board and the action of the Navy Department on these recommendations are published for the information of the Naval Militia service.

1. TARGET PRACTICE.

(*a*) Less time will be devoted to target practice on the annual cruises.

(*b*) After July 1, 1916, engineer divisions will not be required to fire, but they will be allowed to fire and, if firing, their scores will be counted as a division, but no organizations will be penalized if the engineer divisions do not fire.

(*c*) After July 1, 1916, target practice will not be held on annual cruises, except where it is impossible for an organization to hold target practice at any other time.

(*d*) After July 1, 1916, each division will be required to fire only one gun's crew and will not be allowed to fire more than two gun's crews. If firing two gun's crews one of the gun's crews shall be trained at and fire from a secondary battery gun. The number of guns installed on any vessel on which the Naval Militia fires will not be considered in computing scores, or in relation to the number of gun's crews. A "Change in Gunnery Instructions for the Naval Militia" will be issued on this subject.

2. INSTRUCTION IN RADIO.

After July 1, 1916, keys and headpieces for the use of the Naval Militia organizations for instruction in radio will be furnished if their issue is approved by the inspector instructor.

3. REPORTS OF FITNESS OF OFFICERS.

Hereafter only the following officers of the Navy will make "reports on fitness" of Naval Militia officers.

(*a*) Commanding officers of vessels of the Navy on which Naval Militia officers are serving.

(*b*) An officer of the Navy detailed as observer on a vessel loaned to the Naval Militia.

(*c*) Inspector instructors of the Naval Militia after they have been with an organization a reasonable length of time.

SPECIAL REPORTS.

Letters of commendation, etc., whether made by naval officers or by others, will be made a part of the record of Naval Militia officers in the Division of Naval Militia Affairs. Past records of Naval Militia officers will be appended to their records if forwarded to this division.

Forms for the "Report of fitness of Naval Militia officers" will be furnished as necessary.

4. ADOPTION OF STANDARDS FOR PHYSICAL EXAMINATIONS.

(*a*) "Health records," similar to those used in the Navy, with distinctive [illegible] for officers and enlisted men of the Naval Militia, will be furnished by

the Division of Naval Militia Affairs. These health records will be kept in the files of the State and should not accompany the officers or men when taking tours of duty. In the case of the sickness of an officer or enlisted man on a cruise or tour of duty, the medical officer of the ship or encampment concerned will fill out a loose-leaf sheet "Medical history" and forward it to the adjutant general for insertion in the health record.

(*b*) As far as the Navy Department is concerned, the health record is the only medical record required for officers and enlisted men of the Naval Militia, and this health record will accompany the man when mustered into the actual service of the United States. A "Form of waiver," similar to N-Nav 54 for the Navy, will be issued by the Division of Naval Militia Affairs, and this waiver should be attached to the health record. These waivers must be approved by the governor, and no action by the Navy Department on such waivers will be taken.

(*c*) When a man reenlists in the Naval Militia a new health record descriptive list should be made.

(*d*) Health records for officers and enlisted men of the Naval Militia will be continuous, new health record descriptive lists being attached to the health records for each examination.

5. Physical Qualifications as Prescribed by Navy Department General Order 150.

Minor physical defects will be held to include any defects which do not incapacitate officers or enlisted men who are already in the Naval Militia service from the proper fulfillment of their duties of their positions, and in determining the ability to perform duty, Naval Militia officers of age and long service, especially those of high rank, should have that service and experience taken into consideration.

6. Facilitating Administrative Work in the Naval Militia.

(*a*) The Bureau of Navigation will detail such yeomen for duty with the Naval Militia as it may consider necessary and as may be possible with the personnel available.

(*b*) It is recommended that each adjutant general assign at least one clerk from his office force for Naval Militia work, exclusively, in order to permit such clerk to become expert in matters pertaining to the Naval Militia, the details of which are constantly increasing.

7. Additional Appropriation for Arms, Uniforms, and Equipment of the Naval Militia.

The department can not recommend at this session of Congress a further increase in the appropriation "Arming and Equipping Naval Militia" for arms, uniforms, and equipment.

8. Punishments on Naval Militia Cruises.

(*a*) A change in the "Articles for the Government of the Navy" is being considered, which will remove the restriction that Naval Militia officers, while serving on board vessels of the Navy, can not punish their own officers and enlisted men.

(*b*) The department is now considering a change in United States Navy Regulations and Naval Instructions which will give the power to hold deck courts to certain officers who will be authorized to order inspector-instructors of the Naval Militia to hold such courts.

9. Extension of Franking Privilege to the Naval Militia.

A bill has been introduced in [illegible]ongress to [illegible] the franking privilege to the Naval Militia.

10. Contracts for L[illegible] [illegible]alue.

Vessels of material fighti[illegible] affect the preparedness of [illegible]

ment Form NNM 47, the general features of which are that the ship never passes out of the hands of the Navy and that officers and men of the Naval Militia perform duty on such ships in accordance with section 12 of the Naval Militia act.

11. Recognition of Naval Militia Officers, who are fully Qualified Under Navy Department General Order 153.

A list of Naval Militia officers who have fully qualified to date, professionally, in accordance with General Order, No. 153, has been published in the Navy and Marine Corps List and Directory for the month of March, 1916, and this list will appear subsequently in this monthly publication, and also in the Annual Navy and Marine Corps Register.

12. Causes of Failure of Naval Militia to Increase in Numbers.

The department realizes that vessels are necessary for training the Naval Militia and that it is essential that vessels be loaned to Naval Militia organizations and vessels will be loaned when possible.

The department also realizes that the Naval Militia is now passing through a period of reorganization, due to the effect of the adoption of the standards set by the Navy Department in accordance with the provisions of the Naval Militia act. It is hoped that when Naval Militia organizations have reorganized that a material increase in the strength and efficiency of the Naval Militia will result.

It is of course evident that the amount of administrative work, paper work, and accounting work will constantly increase, and efforts should be made to meet these conditions.

13. Return of Personnel.

New forms for reports of personnel, which will enable the divisions to report the number of enlisted men qualified by examinations of their own officers in accordance with General Order No. 153, will be issued by this division.

The methods of examining enlisted men is left to each State, with the suggestion that as far as possible General Order 163 of the Navy Department be followed as a guide.

14. Certificate of Qualification.

"Certificates of qualification" are now being prepared for issue to the Naval Militia officers who are fully qualified professionally in accordance with General Order 153, but these certificates will not be issued to the Naval Militia officers of any State that has not adopted the provisions of General Orders 153 and 150.

15. Examination of Officers for Rank or Grade Higher Than That Actually Held.

Officers of the Naval Militia will be examined for the rank or grade they actually hold in the State Naval Militia and for no higher rank or grade. Should an officer be promoted, he will be required to take the complete examination for his increased rank or grade.

16. Ship Keepers on Vessels Loaned to the Naval Militia in Status of "Outright Loan."

The department believes that such ships should have a sufficient number of Navy ship keepers on board for the proper care and upkeep of the vessel. Advancement in rating of ship keepers on such vessels will be considered by the Bureau of Navigation in exceptional cases, when such cases arise.

17. Examination of Officers in States Which Have Not Fully Adopted the Form of Organization Prescribed in General Order 153.

Prior to February 16, 1917, officers of the Naval Militia holding active State or Territorial commissions, or commissions in the Naval Militia of the District of Columbia, are eligible for examination for the grade or rank they hold in the Naval Militia.

18. Additional Inspector Instructors.

The department realizes the necessity for increasing the number of officers detailed for duty as inspector instructors of the Naval Militia divisions and will detail additional officers when they become available.

19. Prizes for Small-Arms Practice.

Material prizes in lieu of money prizes for small-arms target practice for the fiscal year 1916 can not be furnished from Naval Militia funds.

20. Equipment for Marine Organizations.

Full field equipment for marine companies and sections will be issued as funds become available.

21. Authority to Incur Expense for Small Material Repairs.

The question of giving authority to commanding officers of Naval Militia organizations to purchase material and to incur expense for repairs to material in small amounts in cases of emergency without first obtaining the express authority from the Navy Department, with the understanding that the necessary papers, etc., will be forwarded later with full explanation, is now being considered.

22. Exemption of Medical Officers from Professional Examination.

No officers of the Naval Militia will be exempted from taking all parts of examinations as laid down in General Order 153. There will be no exceptions to this rule.

23. Provisions for Obtaining Additional and Future Officers.

The question of training civilians who may be available for officers of the Naval Militia is one on which no departmental action can be taken at this time.

24. Naval Militia Cruises.

(*a*) The department's policy will be to limit the number of officers of the Naval Militia cruising on ships of the Navy to a number that can be properly quartered and who can be given appropriate opportunities for instruction, and an effort will be made to give to the other officers of the organizations an opportunity to perform tours of duty at other times.

(*b*) It will be the policy of the department, when possible, to give officers and enlisted men of the Naval Militia opportunities to perform individual cruises at times other than annual cruises.

25. Modification of General Order 153 to Include the Examinations Under Section 21 of Naval Militia Act.

The application of section 21 of the Naval Militia act to Naval Militia officers will be made the subject of future correspondence.

Paragraph 11 of General Order 153 will be amended to allow certain desirable enlisted men of the artificer branch (engineer force) to be enrolled in any headquarters, deck division, engineer division, aeronautic section or division, or marine section or company, until such time as there is a sufficient number of them to form a separate engineer division, when such engineer division shall be formed.

26. Mobilization of the Naval Militia.

Details covering the necessary instructions for the mobilization of the Naval Militia will be published when practicable.

F. B. Bassett, Jr.

	n.		Total enlisted men.		Grand total.		Present strength allowed (latest report).	State
	Marine Corps branch.	Total.	Staff and battalion.	State.	Staff and battalion.	State.		
California	33	709	882	882	950	950	1,260	California.
Connecticut	.....	278	343	343	367	367	340	Connecticut.
District of	.....	121	200	200	212	212	263	District of Columbia.
Florida	.....	.....	.....	378	170	404	425	Florida.
First	.....	115	156	.....	.....	.....	.....	First Battalion.
Second	.....	181	222	.....	234	.....	.....	Second Battalion.
Hawaii	.....	80	100	100	107	107	.....	Hawaii.
Illinois	40	473	628	628	667	667	1,217	Illinois.
Louisiana	45	233	315	315	337	337	800	Louisiana.
Maine	.....	113	148	148	165	165	.....	Maine.
Maryland	.....	162	198	198	221	221	364	Maryland.
Massachu	56	617	836	836	896	896	.....	Massachusetts.
Michigan	.....	.....	.....	581	.....	.....	.....	Michigan.
First	.....	279	349	.....	374	620	.....	First Battalion.
Second	.....	197	232	.....	246	.....	.....	Second Battalion.
Minnesota	.....	366	446	446	474	474	.....	Minnesota.
Missouri	.....	196	234	234	250	250	348	Missouri.
New Jersey	.....	.....	.....	479	.....	507	554	New Jersey.
First	.....	242	278	.....	294	.....	.....	First Battalion.
Second	.....	159	201	.....	213	.....	.....	Second Battalion.
New York	.....	.....	.....	1,712	.....	1,805	2,000	New York.
Staff	.....	.....	.....	.....	7	.....	.....	Staff.
First	.....	539	626	.....	659	.....	.....	First Battalion.
Second	46	426	535	.....	560	.....	.....	Second Battalion.
Third	.....	508	551	.....	579	.....	.....	Third Battalion.
North Ca	.....	99	132	132	151	151	501	North Carolina.
Ohio	.....	.....	.....	302	.....	323	.....	Ohio.
First	.....	81	150	.....	162	.....	.....	First Battalion.
Second	24	121	152	.....	161	.....	.....	Second Battalion.
Oregon	26	179	233	233	248	248	1,000	Oregon.
Pennsylv	.....	116	151	151	166	166	775	Pennsylvania.
Rhode Isl	.....	158	196	196	211	211	260	Rhode Island.
South Ca	.....	129	176	176	197	197	.....	South Carolina.
Texas	.....	130	136	136	146	146	.....	Texas.
Washingt	.....	283	364	364	384	384	500	Washington.
Tot	270	7,290	9,170	9,170	9,808	9,808	.....	Total.

APPENDIX [illegible]

[illegible] Value—[illegible] to June [illegible]

[illegible]

[illegible] North [illegible]

[illegible] and [illegible]

[illegible] and Second [illegible]

[illegible] and Connecticut

---

[1] Not reported.

APPENDIX E.

...ENTS BY COMMANDING OFFICERS OF NAVAL MILITIA ORGANIZATIONS.

CALIFORNIA.

...nual report received from the California Naval Militia.

CONNECTICUT.

...nnual report received from the Connecticut Naval Militia.

DISTRICT OF COLUMBIA.

...orts of division officers were forwarded without comment.

FLORIDA.

...*ird Division.*—This division was organized too late to receive any equip- ... during the fiscal year ending June 30, 1916. The equipment has now been ...ved.

... is urgently suggested that this division be ordered to cruise on a destroyer ...oon as the necessary arrangements can be made. Green men will study the ...e Jacket's Manual with great zeal at first but if given no opportunity to see ... practical working of a ship and the use of those parts of which they are ...dying they are apt to receive false ideas and also lose interest. With the ...ortunity to study and practice at the same time the lessons are better ...orbed and retained.

ILLINOIS.

No annual report received from the Illinois Naval Militia.

LOUISIANA.

No annual report received from the Louisiana Naval Militia.

MAINE.

No annual report received from the Maine Naval Militia.

MARYLAND.

Records are such that it is difficult to make an accurate report.
Would recommend that third suit of white work clothes be issued.

MASSACHUSETTS.

No annual report received from the Massachusetts Naval Militia.

MICHIGAN.

First Battalion.—Reports of division officers were forwarded without comment.

Second Battalion.—Reports of division officers were forwarded without comment.

MINNESOTA.

No annual report received from the Minnesota Naval Militia.

MISSOURI.

Reports of division officers were forwarded without comment

NEW JERSEY.

First Battalion.—No annual report received from the Firs... Jersey Naval Militia.

Second Battalion.—Reports of division officers were forw... ment.

NEW YORK.

First Battalion.—No annual report received from the First Battalion of New York Naval Militia.

Second Battalion.—1. The indoor season began early in November. The usual schedule of indoor drills for the deck divisions consisting of infantry, light artillery, signal work, rifle practice, etc., was carried out during the fall and winter months.

2. The engineer divisions were also instructed in steam engineering, electricity in its various branches, firing, etc., in the Armory and on board the U. S. S. *Gloucester.*

3. Small-arms practice was carried on more extensively during the past year than heretofore, due in a large measure to the plentiful supply of indoor ammunition received from the department, and with very satisfactory results, as was shown by the number of qualifications on general practice day, when approximately 65 per cent more men qualified than in 1915.

This I consider is due to the large amount of indoor practice during the year, and it is earnestly hoped that the department can see its way clear to allow us the same amount of this ammunition for the coming year.

4. The U. S. S. *Gloucester* was put in commission on June 25, 1916, which is the latest date on which this has been done since the vessel has been in our possession, and accounts for the relative small amount of cruising for the year ending June 30, 1916. This was due to the extensive repairs made to the vessel at the New York yard this spring, and to the delay in finishing same on account of the fleet being at the yard at the same time.

5. In accordance with General Order No. 153, Navy Department, a marine company, Lieut. J. F. Rorke, commanding, was mustered in on May 1, 1916; and an aeronautic section, Ensign Vincent Astor, commanding, on May 15.

6. Recruiting has increased to a great extent during the past six months, the semiannual return for the period ending June 30 showing a net gain of 116 over January 1, 1916. This is due in a great measure to the fact that the Naval Militia is becoming better known to the young men of Brooklyn; and also in the opinion of the writer that it is more interesting and diversified to the average young man than the other branches of the service.

Third Battalion.—No annual report received from the Third Battalion New York Naval Militia.

NORTH CAROLINA.

No annual report received from the North Carolina Naval Militia.

OHIO.

First Battalion.—No annual report received from the Ohio Naval Militia.

Second Battalion.—The commanding officer has no comments or suggestions to make at this time.

OREGON.

Uniforms and equipment furnished the Naval Militia of Oregon have been satisfactory in all respects. Additional lockers have been supplied by the State for the care of uniforms and equipment issued to the enlisted men. Storerooms have been rented for care of ordnance equipment, paymaster stores, supplies, etc., during the absence of the ship assigned for duty with the organization and request will be made for the erection of a Naval Militia armory at the next session of the legislature.

An effort has been made during the past year to carry out fully all drills and instruction, but the conditions have not been entirely satisfactory. Owing to the variety of ratings in a division it is considered advisable to hold a number of drills in which the ship's entire company will participate and on other drill nights have regular courses in each branch of the service given simultaneously. During the latter part of the past year this plan of giving instruction to each branch of the service was tried, and it is believed that it will result in the men acquiring a knowledge of their rates much quicker and more thoroughly. The most serious obstacle to proper training of officers and men is the lack of facilities for giving practical training. Owing to the lack of sea space a torpedo boat is the only class of vessel which can be handled freely, and it is hoped that such a vessel may be available for use of the organization in the near future.

PENNSYLVANIA.

No annual report received from the Pennsylvania Naval Militia.

RHODE ISLAND.

No annual report received from the Rhode Island Naval Militia.

SOUTH CAROLINA.

No annual report received from the South Carolina Naval Militia.

WASHINGTON.

Suggest Division of Naval Militia Affairs send out some simple form something along the line of NNM 31 for division officers to turn in after each drill, so same can be used as a basis for this report.

The pay bill should be rushed, and when it is in force the Naval Militia should be divorced from the land forces of a State and put under its own head of some sort as soon as possible. The way it works out now is not encouraging and is out of harmony with the objects of the Naval Militia. The Navy and only the Navy should control such force, and to do so it is suggested Navy officers should be detailed to Naval Militia duty and be required to keep up an organization for a year, then go to Division of Naval Militia Affairs duty.

Property troubles cause a great deal of friction and use up nearly all the energies we should try to expend on our men. These can be obviated to a degree if the Division of Naval Militia Affairs will get us an enlisted man of the Navy to do duty at each Naval Militia station, avowedly sent there to check up on equipment and to help Naval Militia officers and men keep track of the property. The idea of keeping rifles in the armory on board ship but having individual men keep them on shore in Naval Militia armories, for instance, does not work out. The swapping around of clothing, letting Bill use it this time and Jack the next time, is a source of never ending trouble, but it must be done. Unfortunately we are here not rich enough to hire caretakers we need and the State has other uses for its money. Entire Federal control seems to be the only solution, but that will not work under the scheme in vogue now, for none of our men are compelled to join, and after the first ones had related their experiences no more could well be gotten from that locality for a Federal force unless and until facilities are radically altered.

As it stands now there is a very reasonable ground, it seems to me, for the Naval Militia to say the department is doing better for us than ever, which is the fact, but there is no thought of ever using us, so what is the use of spending time in study we can spend having fun or liberty, or on something worse.

We can have week-end cruises here on Puget Sound, where 85 per cent of our force is located the year around, and it has seemed to me unfortunate we can not have the *Princeton* repaired at small expense and use her in connection with *Vicksburg*, at least have *Princeton's* masts changed to pole masts, a gun put on and some loading machines, and we would have a better ship than was given us in 1911 when we got the *Concord*, for, as I understand it, the *Princeton's* engines will run.

The week-end cruise training seems to be very desirable and to produce good results if the ship is not too large and too slow to get anywhere. Our experience has been we can get more drill and information into a man's head steaming to a ball game or a boat race than steaming just to be steaming for a drill. Vessels of the *Vicksburg* size and general type on topsides seem exceedingly well adapted for Naval Militia training purposes, but they should have at least 20-knot speed and oil fires.

The attention of the Division of Naval Militia Affairs is invited to the commonly so-called business men's cruise, now scheduled to take one of the armored cruisers from Puget Sound to Mexico, etc., and to the fact the department refused us a vessel of that size, but compelled us to split up our cruise at nearly the last minute. My own feeling is there is too much sentiment lost on a lot of men who never would and never will join unless they are commissioned admirals of some sort, while the Naval Militia, that meets every week for some sort of instruction, and in the State of Washington has to-day (July 18, 1916) 19 officers and 389 enlisted men, must be relegated to two trips on two little ships. The proportions do not seem to be right, some wa[illegible] our officers and men we can get 85 per cent for service in 48 hours. [illegible] never get any of the "business men," I believe.

APPENDIX F.

REPORTS REQUIRED OF STATE NAVAL MILITIA ORGANIZATIONS.

NOTE.—All reports are to be submitted through official channels to the Division of Naval Militia Affairs, Navy Department.
The dates given hereon for submitting reports do not coincide in many instances with the dates observed by the Regular Naval Service, but it is believed the dates here indicated will better suit the convenience of the Naval Militia Service.

[(*) Indicates by whom the reports are to be prepared for transmission through official channels.]

Period.	Items.	To be prepared by— Adjutant General.	Commanding officer.	Engineer officer.	Ordnance officer.	Disbursing officer.	Submit reports immediately following the dates given below.	Numbers of the forms to be used (principal forms in roman type; substantiating forms in *italic* type).	Titles of forms; references relative to use of forms, etc.
		And sent to Division of Naval Militia Affairs.							
		xx	Via Adjutant General.	Via Adjutant General.	Via Adjutant General.	xx			
	1	(*)					December 31	N. N. M. No. 12 N. N. M. No. 12a N. N. M. No. 12b	Inventory of Navy equipment issued to Naval Militia. See D. N. M. A. Cir. Letter No. 92.
	2				(*)		do	N. Ord. No. 5	Report of property loaned. See D. N. M. A. Type Letter 7829-060, 3-27-15 and 7829-060, 6-1-15.
	3				(*)		do	N. Ord. No. 39	Gun card. See N. Instns. I 5222 (3) (c).
	4				(*)		do	N. Ord. No. 40	Gun-mount card. See N. Instns. I 5222 (3) (c).
	5				(*)		do	N. Ord. No. 41	Powder card. See N. Instns. I 5222 (3) (b).
	1				(*)		do	N. Ord. No. 42	Projectile-ammunition card. See N. Instns. I 5222 (3) (b).
					(*)		do	N. Ord. No. 70a	Report of ammunition expended during year.
			(*)				do	N. Nav. No. 9	Inventory of the compasses. See N. Instns. I 5222 (2) (c).
			(*)				do	N. N. M. No. 24	Report on small boats in hands of Naval Militia. See D. N. M. A. Cir. Letter No. 55.
			(*)				do	N. N. M. No. 36	Report on typewriters. See D. N. M. A. Letter No. 7439-20, 4-30-15.
			(*)				June 30	N. N. M. No. 18	Report of training of Naval Militia during the year.

		.....	.....	.....	.....	June 30.....		Dec. 31.....		N. S & A. No. 58.	Balance sheet of equipage (Title "B"), accompanied by forms as follows (See N. Instns. I 5224 (10) and D. N. M. A. Cir. Letters Nos. 95 and 97):
										S. & A. No. 147a.	*Abstract of receipt vouchers.*
										S. & A. No. 51a.	*Public bill.*
										S. & A. No. 127.	*Store invoice.*
										S. & A. No. 177.	*Summary of store invoices.*
										S. & A. No. 174a.	*Abstract of expenditure vouchers.*
										S. & A. No. 64.	*Survey expenditure voucher.*
										S. & A. No. 71.	*Expenditure invoice.*
		.....	(*)	.....	.....	.....	do.....		do.....	N. N. M. No. 16...	Strength of Naval Militia personnel, officers.
										N. N. M. No. 16a.	*Strength of Naval Militia personnel, enlisted men.*
	14	.....	(*)	.....	.....	.....	do.....		do.....	N. Eq. No. 36.....	Deck log (torpedo boat). See N. Instns. I 1606 and Cir. Letter No. 93.
Quarterly.	15	.....	.....	(*)	.....	.....	Mar. 31	June 30	Sept. 30	Dec. 31	N. S. E. No. 69a ..	Steam log. See N. Instns. I 5222 (4) (c) and D. N. M. A. Cir. Letter No. 93.
	16	.....	(*)	.....	.....	.....	do.....	do.....	do.....	do.....	Forms supplied by Navy Recvg. Ships.	Efficiency markings of Navy enlisted men serving as as ship keepers on vessels loaned to States. See N. Regns. R 3544 (3) and (8). (NOTE.—This report is to be sent direct to the receiving ships making request for same.)
Monthly.	17	.....	(*)	.....	.....	.....	End of each month.....				N. N. M. No. 6....	Subsistence os ship keepers assigned to vessels loaned to States. See D. N. M. A. Cir. Letter No. 62. (NOTE.—This report is to be sent direct to receiving ships.)
When occurring.	18	.....	(*)	.....	.....	.....	When occurring.....				Letter report.....	Report of important service performed by any portion of a Naval Militia orgn.
	19	.....	(*)	.....	.....	.....	do.....				N. N. M. No. 2....	Survey reports (Equipage, Title "B"). (NOTE.—Generally, surveys must be submitted annually in order to balance books.) See N. Instns. I 2231.
	20	.....	(*)	.....	.....	.....	do.....				N. N. M. No. 19...	Transfer of ship keepers. Submit when ship keepers rive at or leave vessel. (See D. N. M. A. Cir. Letter No. 2557-161, 12-14-12.)
	21	.....	(*)	.....	.....	.....	do.....				N. N. M. Nos. 26, 27, 28, 29.	Target practice reports (great guns). See Chap. X, Pps. 89-97, N. M. Gunnery Instns.
	22	.....	(*)	.....	.....	.....	do.....				Loose leaf.....	Target practice reports (small arms). See Firing Regns. for Small Arms, U. S. N. (Chap. 5, Landing Force and Small Arms Instructions, U. S. Navy.)

REPORTS REQUIRED OF STATE NAVAL MILITIA ORGANIZATIONS—Continued.

Period.	Items.	To be prepared by— Adjutant General.	Commanding officer.	Engineer officer.	Ordnance officer.	Disbursing officer.	Submit reports immediately following the dates given below.	Numbers of the forms to be used (principal forms in roman type; substantiating forms in *italic* type).	Titles of forms; references relative to use of forms, etc.
		And sent to Division of Naval Militia Affairs.							
		xx	Via Adjutant General.	Via Adjutant General.	Via Adjutant General.	xx			
When occurring.	23	.....	(*)	.....	.....	.....	When occurring.....	N. N. M. No. 1.... *N. N. M. No. 1a.*	Requisitions for equipage and supplies. (Submit 1 original and 5 memo. copies.) *Memorandum copy of requisition.*
	24	.....	(*)	.....	.....	.....	do.....	N. N. M. No. 39...	Changes and promotions, etc., of officers of Naval Militia. See D. N. M. A. Letter No. 10-1225, of Aug. 2, 1915.
	25	.....	(*)	.....	.....	.....	do.....	N. N. M. No. 34...	Radio operators joining organization, report of. See D. N. M. A. Cir. Letter No. 67.
	26	.....	.....	.....	(*)	.....	do.... Submit when changes occur in guns or mounts, or when ammunition is received or expended.	N. Ord. No. 39....	Gun card. See N. Instns. I 1522 (3) (c).
	27	.....	.....	.....	(*)	.....	do....	N. Ord. No. 40....	Gun-mount card. See N. Instns. I 5222 (3) (c).
	28	.....	.....	.....	(*)	.....	do....	N. Ord. No. 41....	Powder card. See N. Instns. I 5222 (3) (t).
	29	.....	.....	.....	(*)	.....	do....	N. Ord. No. 42....	Projectile-ammunition card. See N. Instns. I 5222 (3) (b).
	30	.....	(*)	.....	.....	.....	do.....	Letter report.....	Repairs to vessels. (Submit after close annual cruising season; not later than December 1st of each year.)

DISBURSING OFFICER RETURNS.

NOTE.—To be submitted as long as Federal funds are in the hands of the disbursing officer. When accounts are closed, not necessary to submit any of these reports.

	31	.....	.....	.....	.....	(*)	Mar. 31	June 30	Sept. 30	Dec. 31	S. & A. No. 21.... *S. & A. No. 21a.* *S. & A. No. 1.. S. & A. No. 1a. S. & A. No. 7.. S. & A. No. 21b.* *S. & A. No. 35a, b, c, e, and f.*	Account current, accompanied by forms as follows: *Schedule of disbursements with all substantiating vouchers as follows:* *Pay roll, accompanied by forms as follows:* *Pay-roll cover.* *Index to pay roll.* *Recapitulation of pay roll.* *Extra compensation orders, etc.*

												Certified copies of orders to officers, showing all indorsements.
												Letter: Order of Comdg. Officer of vessel of orgn. to take up men on rolls.
											S. & A. No. 98.	*Mileage public bills, if mileage involved, with orders and all indorsements copied thereon.*
												If supplies purchased, not under existing Navy contracts.
											S. & A. No. 51.	*Public bills, originals.*
											N. N. M. No. 15.	*Proposals. (Submit originals of all proposals obtained.)*
											N. N. M. No. 14.	*Contract, original, if value of order is over $500.*
											N. N. M. No. 14a.	*Formal acceptance, if value of order is $500 or less.*
											N. N. M. No. 1.	*Requisition (original of each).*
											N. S. A. No. 29.	*Sales of provisions to messes (when sales are made).*
												Original of dealers' bills properly certified to substantiate public bills.
												If supplies purchased under existing Navy contracts:
											S. & A. No. 51.	*Public bills, originals.*
												Original of dealers' bills properly certified.
												If supplies purchased from general storekeeper at a navy yard:
											S. & A. No. 51.	*Public bills, originals.*
												Navy-yard invoices.
												Letter of transmittal for all papers.
												(Make copy of Account Current and Schedule of Disbursements for Bureau of Supplies and Accounts. (See next succeeding entry, Item No. 32.)
												See D. N. M. A. Cir. Letters Nos. 16, 50, 80, 83, and 84. Specimen pay roll; Chap. XII, particularly sec. 1; Chap. XIII, sec. 1, par. 1233; also Chaps. V and VII, Manual for Pay Officers Afloat.
												This return is for the Auditor for the Navy Department, to be sent via Division of Naval Militia Affairs.
Quarterly.	32	.....	.....	.....	.....	(*	...do.....	...do.....	...do.....	...do....	S. & A. No. 21.....	Account current (copy of account current sent to Auditor for Navy. See Item No. 31 above):
											S. & A. No. 21a.	*Schedule of disbursements.*
												Letter of transmittal.
												(See Chap. XIII, sec. 1, par. 1233, Manual for Pay Officers Afloat.)
												This return is for the Bureau of Supplies and Accounts, Navy Department, to be sent via the Division of Naval Militia Affairs.

DISBURSING OFFICER RETURNS—Continued.

Period.	Items.	To be prepared by— Adjutant General.	Commanding officer.	Engineer officer.	Ordnance officer.	Disbursing officer.	Submit reports immediately following the dates given below.	Numbers of the forms to be used (principal forms in roman type; substantiating forms in *italic* type).	Titles of forms; references relative to use of forms, etc.
		And sent to Division of Naval Militia Affairs.							
		xx	Via Adjutant General.	Via Adjutant General.	Via Adjutant General.	xx			
Monthly.	33	.....	.....	.....	.....	(*)	At end of each month.....	S. & A. No. 21...	Account current, accompanied by forms as follows:
								S. & A. No. 21a.	*Schedule of disbursements for month.*
								S. & A. No. 51a.	*Public bill (memorandum copy).*
								S. & A. No. 98a.	*Mileage public bill (memorandum copy), if mileage involved, with orders and all indorsements copied thereon.*
									Dealers' bills (duplicate copy), to substantiate public bills.
									Navy-yard invoices (when provisions are purchased from general storekeeper at navy yards).
								S. & A. No. 61.	*Pay-roll summary.*
									Letter of transmittal.
									See Chap. XIII, sec. 1, Manual for Pay Officers Afloat.
									This return is for the Bureau of Supplies and Accounts, Navy Department, to be sent via Division of Naval Militia Affairs.
	34	.....	.....	.....	.....	(*)	.....do.....	S. & A. No. 45....	Ration record, accompanied by forms as follows:
								S. & A. No. 27.	*Ration memorandum.*
								S. & A. No. 51a.	*Public bill (memorandum copy). (Of each public bill for month).*
								N. N. M. No. 1a.	*Requisition (memorandum copy). (Of each requisition for month).*
								S. & A. No. 71.	*Expenditure vouchers for month.*
								N.S.A. No. 49.	*Sales of provisions to messes, if sales made during month.*

								N. N. M. No. 48.	*Certificate of subsistence furnished Navy enlisted men while cruising with the Naval Militia. See Cir. Letter No. 62, D. N. M. A.* *Letter of transmittal.* *See Chap. XIV, sec. 3, par. 1301 (5), and Chap. VII, sec. 8, pars. 643 and 645 (j), Manual for Pay Officers Afloat; D. N. M. A. Cir. Letter No. 15.* (NOTE.—Prepare monthly, if Federal funds have been utilized in purchase of subsistence supplies for Naval Militia; forward at end of quarter to Bureau of Supplies and Accounts, via Division of Naval Militia Affairs.)
When occurring.	35	.....	.....	.....	.....	(*)	When occurring.....	.....	Closing accounts. At the close of the fiscal year, or when directed, or when desiring to close accounts, or upon relinquishing duties, the disbursing officer will forward by letter to the Treasurer of the United States, via the Division of Naval Militia Affairs, a check covering unobligated balance of Federal funds in his possession. At the same time the account current, etc., referred to above, as for the Auditor for the Navy and the Bureau of Supplies and Accounts, must be sent via Division of Naval Militia Affairs. See Chap. X, sec. 11, pars. 912 and 913, and Chap. XIII, sec. 1, par. 1271, Manual for Pay Officers Afloat.

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