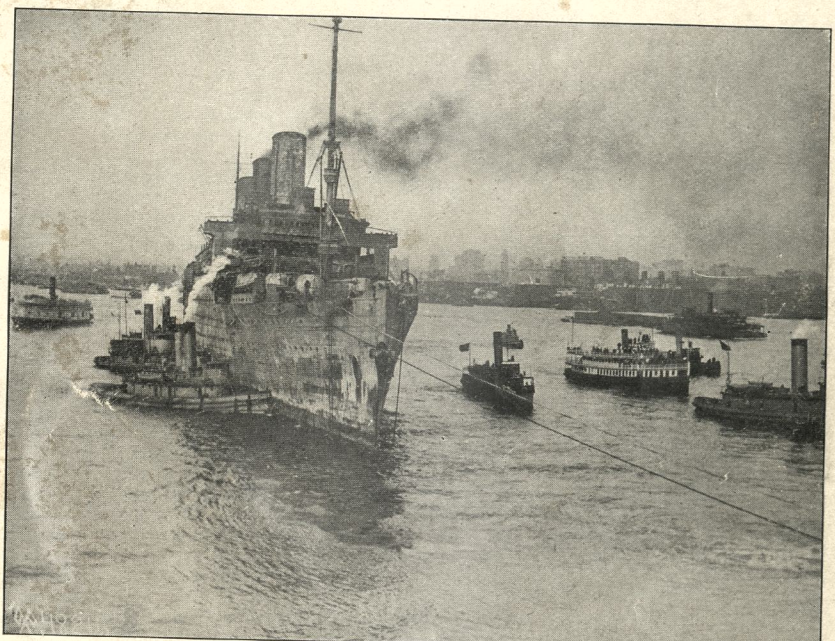

VIEW OF THE LEVIATHAN DOCKING, WITH TROOPS ON DECK WAVING.

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SUMMARY OF IMPORTANT MATTERS CONNECTED WITH THE OPERATION OF THE TRANSPORTATION SERVICE DURING THE FISCAL YEAR JULY 1, 1918, TO JUNE 30, 1919.

1. By organizing and placing in operation a system of traffic control, the Embarkation Service and Inland Traffic Service were able to clear up the congestion at the seaboard which threatened to block all Atlantic ports and paralyze the overseas movements of troops and supplies.

2. With the establishment of the "release system" for the control of cargo shipments, the Embarkation Service was able to control shipments to seaboard and thence overseas in such a manner as fully to establish priorities in the movement, permitting supplies urgently needed to be given first priority. This, in connection with a follow-up system, resulted in efficient movement of cargo overseas.

3. From May 1, 1917 to June 30, 1919, the Transportation Service routed 13,890,691 men to camps and ports over the several railroad lines in the United States.

4. Within a period of 18 months a transport fleet of over 616 vessels was built up from the small beginning of 7 permanent transports, in the service at the commencement of our overseas operations. The fleet, on November 11, 1918, when it reached its height, had a total dead weight of 3,557,000 tons.

5. Within 18 months after the declaration of war 2,086,000 men were transported to France. The greatest number of men transported in any one month to France was 306,000 (including all classes of personnel, 313,000) during the month of July, 1918.

6. Of the total American forces in France on November 11, 1918, 2,086,000, there were embarked from France for the United States between November 11, 1918, and June 30, 1919, 1,606,074 men. Of this number, 1,338,620 men, or 84 per cent of the total, were returned in American flag ships; 134,445, or 8 per cent of the total, in British or British controlled tonnage; 40,418, or 2 per cent, in French flag ships; 46,466, or 3 per cent, in Italian flag ships; and 46,125 in ships of other countries, including Dutch and Spanish.

7. German tonnage taken over at the outbreak of the war transported to France an army of over a half million men, and up to June 30, 1919, had returned 409,516 of that number to the United States. In all, they transported safely, both ways, 931,619 American troops, and of this number the transport *Leviathan* alone carried 175,571.

8. With the issuing of Supply Circular No. 28, (Purchase, Storage and Traffic Division) all transportation activities of the War Department, except those pertaining to the Motor Transport Corps, were placed in one operating service. This resulted, on April 9, 1919, in the organization of the present Transportation Service, War Department. On April 21, 1919, General Orders, No. 54, War Department, 1919, was issued. This general order organized the Transportation Service throughout the United States and its territorial possessions.

9. On July 19, 1918, Office Order No. 38, Purchase, Storage and Traffic Division, General Staff, directed that the Inland Traffic Service

take over all those duties formerly performed by the Director of Inland Transportation. This order established branch and district offices at numerous points throughout the United States which supervised the War Department traffic in designated territory and provided representatives at the various larger stations, depots, warehouses, camps, etc.

10. Unquestionably the successful movement of men and war materials throughout the United States and overseas was made possible only by reason of a centrally controlled transportation system. Centralized transportation control also enabled the War Department to maintain a secrecy, in regard to movements of personnel and supplies, so essential in war times. This secrecy would have been difficult if the several bureaus had been handling transportation matters.

11. By the readjustment of transportation rates with the British Government, there was saved to the United States Government $67,753,698.79.

12. Approximately $66,000,000 was saved by returning to the United States 300,000 men two months, and an additional 300,000 men one month, sooner than the original schedule contemplated.

13. Rail transportation for 8,500,000 men was provided from July 1, 1918, to June 30, 1919. Approximately 40,000,000 tons of freight were moved and 11,225,000 tons of this freight were handled by transportation orders.

14. During the year 1918-1919, 1,512 consolidation locomotives of the 100-ton type were shipped from New York to France; of these, 497 were shipped set up on their own wheels so they could be unloaded on the tracks in France, thus greatly relieving the French assembling plants. It took 24 hours to bring a locomotive from the shop where it was built to the New Jersey terminals; it took 6 hours to transfer the locomotive from the rails to the car float; 6 hours later the locomotive had reached the ship's side; in 1 hour it had been swung into the ship's hold; 9 days later and the locomotive had been carried from New York to France. When the armistice was signed the Army was prepared to ship set-up locomotives at the rate of 200 a month.

15. Between July 1, 1918 and June 30, 1919, 5,185,000 tons of Army cargo were shipped to the American Expeditionary Forces, including shipments to the French. The cargo returned to the United States from the American Expeditionary Forces during the fiscal year 1919 totaled 533,797 short tons.

16. When the armistice was signed the total troop capacity of American flag transports, under the control of the United States, was 111,783 men. It was quite evident that the War Department could not expect from the Allied Governments the same assistance in the return of American forces that we had received in transporting them overseas, so it was necessary to devise other means of promptly bringing the American Army home. With all the shipping that the Allies could muster during the emergency in the Spring and Summer of 1918, it was possible to transport only a little over 306,000 American troops in any one month. In spite of the fact that at the signing of the armistice on November 11, 1918, the American flag transports of all kinds had a capacity of barely 110,000 troops per month, operated at maximum efficiency, yet it will be noted that during the month of April, 1919, there were transported on American flag ships alone 246,209, and by June of the same year United States tonnage returned 327,654 American troops.

17. Up to June 30, 1919, the War Department had redelivered to the United States Shipping Board, since the signing of the armistice, 372 vessels, with a total deadweight of 2,569,692 tons. These vessels have been returned to their owners after careful survey by a joint board consisting of a representative of the owners, the Shipping Board, and the Navy and War Departments. In very few cases has the matter of redelivery been disputed by the owners, the policy of the War Department being to deal fairly with the owners in returning their vessels in as near as possible the same condition as when received, fair wear and tear excepted.

18. Out of a total of over 616 vessels in Army service between the declaration of war and the present, only 33 vessels have been lost. Many vessels have experienced accident, but the injuries, in the overwhelming majority, have been reparable.

19. An Army transport reserve has been established and there has been recommended to the Secretary of War for his approval a policy which will insure to the United States a nucleus of a transport fleet and, at the same time, result in building up and training a transport reserve force, stimulate the extension of our commerce by assigning to such service every available vessel under the American flag not needed strictly for military or naval needs, and in no way hamper or interfere with commercial operation of these vessels, the only requirement being that the vessels are properly maintained.

REPORT OF THE CHIEF OF TRANSPORTATION SERVICE.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF TRANSPORTATION SERVICE,
Washington, September 10, 1919.

The SECRETARY OF WAR:

SIR: I have the honor to submit herewith the annual report covering the operations of the Transportation Service for the fiscal year ending June 30, 1919.

ORGANIZATION.

PRESENT ORGANIZATION.

The Transportation Service, as now constituted, controls, under emergency legislation, all of the transportation activities of the War Department, except the Motor Transport Corps and transportation matters directly connected with the river and harbor work under the Corps of Engineers. It also controls overseas shipments of men and supplies. It is not charged with any transportation duty pertaining to the operation of military railroads in a given theater of operations.

CONDITIONS LEADING UP TO PRESENT ORGANIZATION.

As late as August, 1917, all matters relating to the transportation of troops and supplies overseas, as well as the movement of troops and supplies to ports and stations within the United States, were controlled primarily by the Quartermaster Corps, although at that time practically every bureau of the War Department had within its organization some subdivision charged with the transportation of supplies, and, in some cases, the actual arrangements relative to the transportation of personnel and supplies were handled directly with the railroads.

This condition early resulted in competition on the part of the bureaus, not only in the purchase of their supplies, but in the shipment of such supplies. They were acting independently without regard to the activities of the other bureaus or other Government agencies and the keen competition of these bureaus, which was a natural result of the existing system, soon brought about a condition which threatened completely to block the entire war machine. To have their supplies be the first to reach the seaports and be sent overseas was the ambition of all the bureaus; this resulted, early in the fall of 1917, in the congestion of the railroad facilities and port terminals at the Atlantic seaboard to such an extent as to require the most radical action.

Not only were shipments being made by the several bureaus practically independent of each other, but there was no coordinating agency then in existence to regulate the traffic of United States Government agencies with that of the Allies. It was this condition

of affairs which brought about, in the first part of August, 1917, the establishment of the Embarkation Service as a section of the General Staff. This new section, in its organization, was directed to take over and act for the Chief of Staff in exercising his supervisory and coordinating powers with reference to the movements of troops and supplies overseas. The establishment of this new agency of supervision and coordination brought together the several War Department agencies then in keen competition in the shipment of their supplies. The only organization with sufficient power to bring about the necessary coordination was the General Staff, and, regardless of opinions to the contrary, if the General Staff had not exercised its coordinating and supervisory powers in this matter, the results would have been disastrous, not only to our cause, but to that of the Allies. This staff control of supervision and coordination, in my opinion, was not only absolutely necessary and essential, but fully in accord with the existing law.

The Embarkation Service undertook to control the movement of troops and supplies destined for overseas, and did effectively control this movement under the authority given it in the original order, but this control of only the movement of troops and supplies destined for overseas was not sufficient to meet the situation. It soon became apparent that this control had to be extended fully to meet the conditions and that some agency must be established to control not only movements of troops and supplies going overseas, but all movements of troops and supplies from the point of origin to no matter what other point, either in the United States or overseas. It also became self-evident that the movement of supplies from the United States must be coordinated with that of the Allies if both agencies were to function without interference or completely blocking each other.

An attempt was first made to accomplish this by several agencies getting together in what was known as the Coordination Committee. This action was purely voluntary on their part. Meetings were held weekly and an endeavor made to handle shipments in such a manner that those necessitating first priority would move first and the facilities at the several ports be utilized to their capacity but not be overtaxed by more than one agency attempting to use the same facilities. The labors of this committee accomplished much, but being voluntary in character and without executive power the committee showed from the start that it could not accomplish the imperatively needed results.

This condition of affairs brought into being a larger staff control organization, known as the Division of Purchase, Storage and Traffic. This division was given, among other functions, in the initial order creating it, "the power to supervise and direct * * * the transportation of troops and supplies overseas; embarkation and overseas service relating to the Army program, including the employment of all Army transports, harbor floating equipment and new construction in connection therewith, except the construction and control of floating equipment operated by the Corps of Engineers for river, harbor, and fortification work, and the control of the Army mine-planter service; such commercial shipping as may be used to supplement that service, including all arrangements with the Navy Department for convoy service; all primary ports of embarkation, expeditionary ports and concentration camps connected therewith; courier service between the War Department and General Headquarters, American Expeditionary Forces."

The Purchase, Storage, and Traffic Division of the General Staff, with the coordinating and supervisory powers given it, was established to correct a condition which soon would not only have paralyzed transportation movements of troops and supplies, but in a comparatively short time would have interfered fatally with the shipment of supplies for the Allies. The establishment of this division thus was brought about not by desire but by necessity: It was the only sure cure for the keen competition and independent action on the part of the bureaus, and the only sure means of establishing proper priority in the procurement and shipment of supplies overseas. Without such an agency, there could be no assurance that large quantities of supplies badly needed by our forces then in France, would not remain on cars or on piers while space was being utilized by those not so urgently needed, and, in some cases, not needed at all.

RELEASE SYSTEM.

To overcome our shipping difficulties, which at that time seemed almost insurmountable, shipments of supplies from point of origin were stopped and the two services (Embarkation and Inland Traffic) took up forwarding overseas all supplies which had accumulated in the congested districts. When these shipments had been accomplished, the system of release was put into effect by which no shipment of supplies was permitted from a point of origin in the United States until it was definitely known that the railroads could handle expeditiously the movement to the seaport, and that there would be shipping facilities available at the port to continue the movement of commodities overseas.

The release specified, in every case, to what port in the United States the shipment would be made, thus permitting the following out of shipping priorities established by the War Department. This relieved the railroad congestion and started an uninterrupted movement of supplies to Europe; this was effected, happily, before the tremendous flow of men and materials to the ports and thence overseas, began in the spring of 1918.

The development and changes in organization will be taken up in detail under the section of this report outlining the activities of the Administrative Division of this office.

RESULTS OBTAINED BY EMBARKATION AND INLAND TRAFFIC SERVICES.

Just what the War Department gained by setting up a single agency to represent it in transportation matters can best be made clear by a review of the movements of military personnel effected by the railroads and growth of the transport and cargo fleets.

From May 1, 1917, to June 30, 1919, over 13,890,691 men were transported by the railroads within the United States. To what extent the carrying of these men to camps and to ports of embarkation interfered with commercial traffic is best known to the public generally; but it is safe to say that, except where special trains were operated or something unusual has happened to attract public attention,

this tremendous movement has taken place without even causing a ripple of public excitement. The coordination necessary to carry out this operation satisfactorily will stand out as one of the great transportation movements in our history. Some idea may be gained of its magnitude when it is realized that, for the number of miles this force has been transported, 5,503,000,000 passengers could be transported 1 mile. Such a movement of troops would have been out of the question if the railroads had been compelled to deal with more than one War Department transportation agency.

TRANSPORT FLEET.

At the outbreak of the war our transport service consisted of few vessels; as a matter of fact, there were seven actually under the control of the War Department. Most of these were then operating in the Pacific. A start was made by chartering a few of the American merchant steamers immediately at hand, and by the end of June, 1917, there were in the service seven troop ships with a dead weight of 46,000 tons and six cargo ships with a dead weight of 48,000 tons. From this small beginning there was developed the trans-Atlantic fleet which, on November 1, aggregated 512 vessels with a total dead weight of 3,251,000 tons. In addition to this a cross-channel fleet was built up numbering 104 vessels with an aggregate tonnage of 311,000, making a total fleet of 616 vessels.

In building up this fleet, the first great increment in the matter of troop transports came by the seizure and taking over of German interned vessels, which entered the service during the fall of 1917, aggregating 460,000 dead-weight tons. In the spring of 1918, the taking over of the Dutch vessels gave to the Army an additional 300,000 dead-weight tons.

TROOP MOVEMENT.

On June 30, 1918, as the result of the speeding up of our troop movement overseas, there had been landed in France 897,000 officers and men. The man power of Great Britain and France had already been put into the line. Every ship that could be secured from any part of the world was pressed into service until 180 British and allied vessels were finally engaged in the transportation of the great American Army overseas.

On July 9, 1918, there were 75 transports carrying 171,670 troops en route overseas from the United States. This was the greatest number of troops on the water between the United States and France at any one time during the eastward movement.

The embarkations for July exceeded all expectations, for 306,000 troops sailed from Atlantic ports.

In a letter to the President, dated July 1,1918, the Secretary of War wrote: "*Between May 8, 1917, and June 30, 1918, over a million men had either been landed in France or were en route thereto.*"

President Wilson wrote the answer to Germany after a conference with the Cabinet yesterday, and with General March, Chief of Staff, and Mr. Daniels, Secretary of the Navy, to-day. He also had been continuously in touch with Mr. Lansing, Secretary of State.

Definite word that the President had sent an answer to the German note came at the close of a day surcharged with anxiety and uncertainty. There was no official intimation—nothing even which might serve as a basis of speculation—from the White House until almost 6 o'clock in the evening.

Then, when the conferences were closed, the Executive offices took on an air of hustle and bustle again. Joseph P. Tumulty, Secretary to the President, hurried to the house of Mr. Lansing, in an automobile, to arrange the details of having the communication dispatched. There were intimations, but nothing definite, that late in the evening some word might be forthcoming as to what action had been taken.

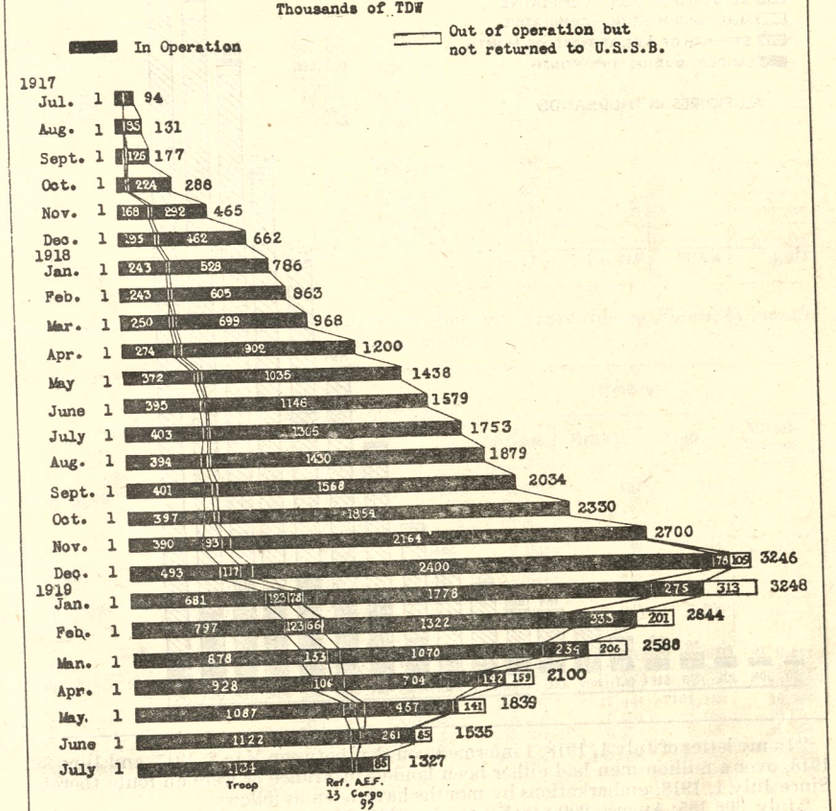
2,000,000 SOLDIERS IN FRANCE.

President Wilson then went for a walk, the first time he had left the White House during the day. Mrs. Wilson accompanied him as he strode down the White House walk, across Pennsylvania Avenue, and up Connecticut Avenue. The President

TRANSATLANTIC TONNAGE UNDER ARMY CONTROL, BY MONTH AND TYPE.

TOTAL TONNAGE UNDER ARMY CONTROL EXCLUSIVE OF CROSS-CHANNEL SERVICE AND BRITISH LOAN.

Cargo ships authorized for release are regarded as out of operation upon arrival in home ports. Similarly, cargo ships for conversion to troop ships are classified as troop ships upon arrival in home ports.



TRANSPORTS IN OPERATION, BY MONTHS.

held his head with an air of defiance, and walked briskly with his wife, getting the full enjoyment in the crisp autumn atmosphere. The President wore a light black overcoat, a brown hat, and carried a cane. Mrs. Wilson was in a dark suit and had a large yellow chrysanthemum at her waist.

As a fitting accompaniment to Mr.Wilson's defiant answer to Germany, Mr. Tumulty, Secretary to the President, to-night made public at the White House correspondence

between the President and Mr. Baker, Secretary of War, showing that 2,000,000 soldiers have been sent to France to date. Here are the letters:

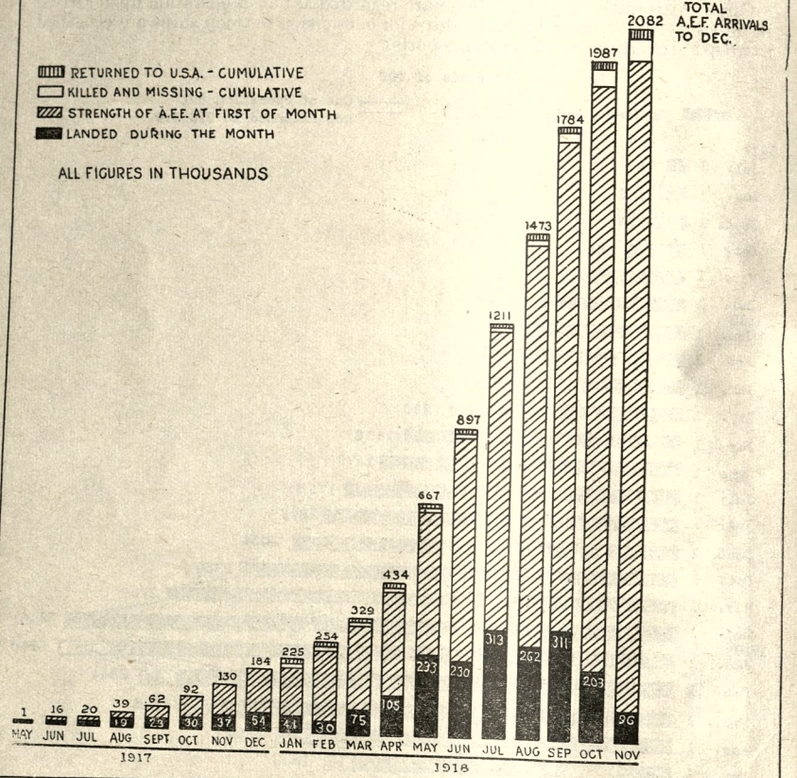
"WAR DEPARTMENT,
Washington, October 22, 1918.

"MY DEAR MR. PRESIDENT: More than 2,000,000 American soldiers have sailed from the ports in this country to participate in the war overseas. In reporting this fact to you I feel sure that you will be interested in the following data, showing the progress of our military efforts:

TROOPS AND MARINES LANDED OVERSEAS, MAY, 1917, THROUGH NOVEMBER, 1918, BY MONTHS.

The total length of each column represents the total number of men landed to end of month.

Figures include officers, enlisted men, Army nurses, and marines.



"In my letter of July 1, 1918, I informed you that between May 8, 1917, and June 30, 1918, over a million men had either been landed in France or were en route thereto. Since July 1, 1918, embarkations by months have been as follows:

"July, 306,185; August, 290,818; September, 261,415; October, 1 to 21, 131,398. Total, 986,816. Embarked to July 1, 1918, 1,019,115. Grand total, 2,008,931.

"In our overseas operations, I feel that we have good reason to be proud and thankful of the results obtained. Our losses have been exceedingly small, considering the size of the force transported, and this is due to the efficient protection given American convoys by the naval forces. We also have been greatly assisted in the dispatch of troops abroad by the allocation of certain vessels from our allies, principally those of Great Britain.

"Cordially yours, "NEWTON D. BAKER, *Secretary of War.*"

"THE WHITE HOUSE,
"*Washington, 22 October, 1918.*

"MY DEAR MR. SECRETARY: I am very glad to have your letter of this morning reporting that more than 2,000,000 American soldiers have sailed from the ports of this country to participate in the war overseas. I am sure that this will be a matter of deep gratification and reassurance to the country and that every one will join me in congratulating the War and Navy Departments upon the steady accomplishments in this all-important application of force to the liberation of the world.

"Cordially and sincerely yours,

"WOODROW WILSON."

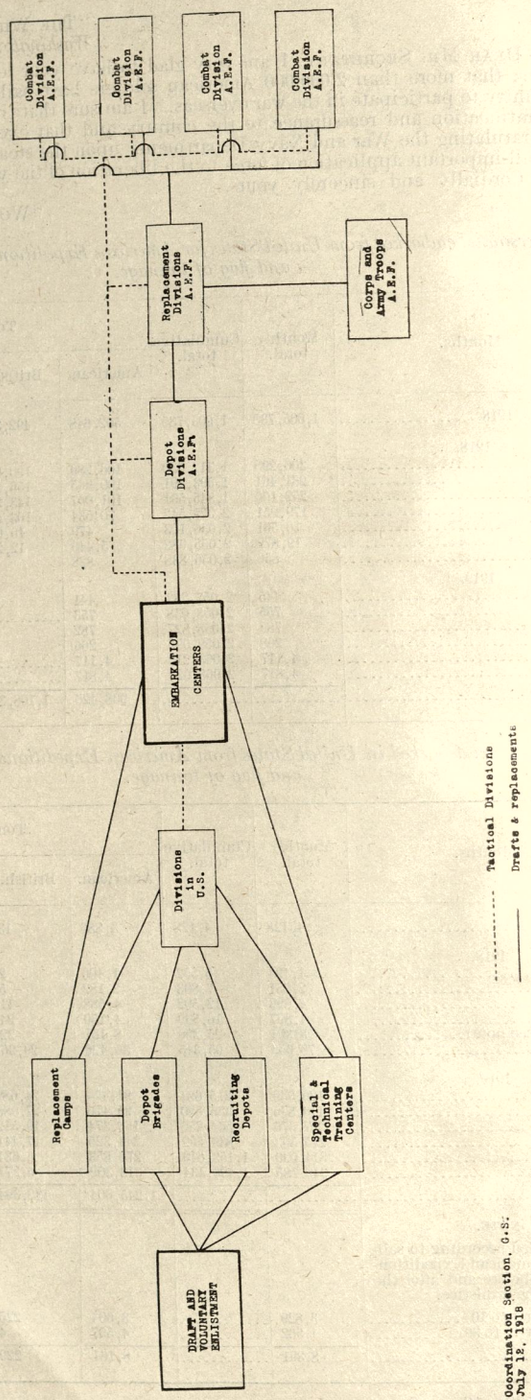
Army personnel embarked from United States for American Expeditionary Forces, by month and flag of tonnage.

Months.	Monthly total.	Cumulative total.	Tonnage.			
			American.	British.	French.	Miscellaneous.
To June 30, 1918	1,005,735	1,005,735	502,648	492,304	9,130	1,653
1918.						
July	306,295	1,312,030	106,289	190,090	7,236	2,680
August	281,461	1,593,491	109,965	156,864	14,293	339
September	252,100	1,845,591	101,067	143,258	7,775	.....
October	179,951	2,025,542	70,534	103,424	5,993	.....
November 10	10,561	2,036,103	479	10,082	.....	.....
November 30	19,879	2,055,982	5,440	12,283	2,154	2
December	856	2,056,838	828	28	.....	.....
1919.						
January	445	2,057,283	441	3	1	.....
February	755	2,058,038	753	.....	2	.....
March	789	2,058,827	782	7	.....	.....
April	268	2,059,095	266	2	.....	.....
May	4,117	2,063,212	4,117	.....	.....	.....
June	4,817	2,068,029	4,817	.....	.....	.....
Totals	.....	.....	908,426	1,108,345	46,584	4,674

Army personnel debarked in United States from American Expeditionary Forces, by month and flag of tonnage.

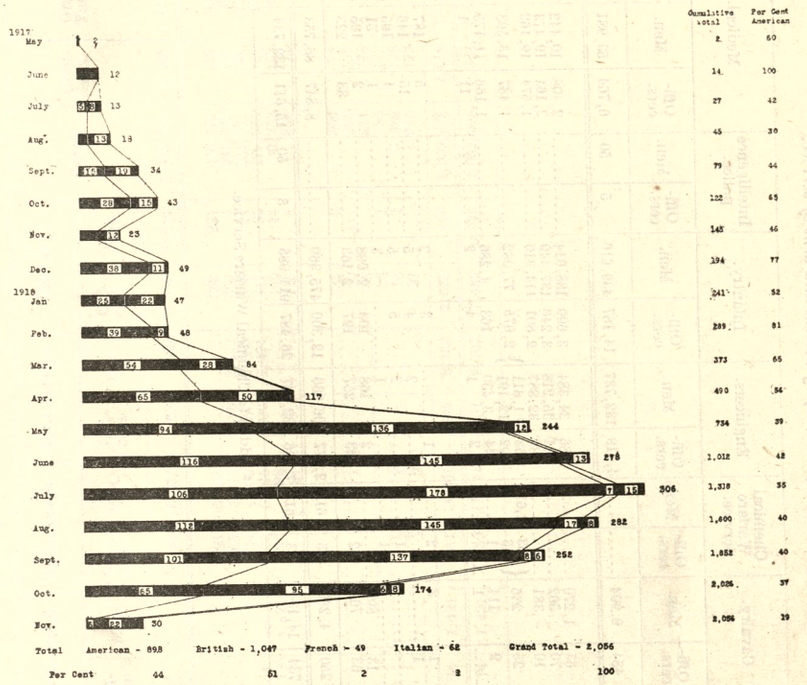
Months.	Monthly total.	Cumulative total.	Tonnage.			
			American.	British.	French.	Miscellaneous.
To June 30, 1918	4,128	4,128	3,886	135	107	.....
1918.						
July	1,424	5,552	1,400	24	.....	.....
August	2,251	7,803	2,182	57	12	.....
September	4,699	12,502	4,588	111	.....	.....
October	4,397	16,899	4,150	243	4	.....
November (see note)	8,391	25,290	8,161	229	1	.....
December	70,055	95,345	36,426	29,963	3,666	.....
1919.						
January	120,339	215,684	91,474	24,689	2,065	2,111
February	140,896	356,580	95,476	27,088	6,993	11,339
March	207,676	564,256	163,374	19,512	9,657	15,133
April	275,303	839,559	244,325	17,441	3,153	10,384
May	314,090	1,153,649	276,853	6,631	5,055	25,551
June	342,785	1,496,434	313,309	6,271	7,929	15,276
Totals	.....	.....	1,245,604	132,394	38,642	79,794
NOTE.						
Figures divided according to sailings from American Expeditionary Forces before and after the signing of the armistice.						
November 1 to 10	3,829	.....	3,604	225	.....	.....
November 11 to 30	4,562	.....	4,557	4	1	.....
Totals	8,391	.....	8,161	229	1	.....

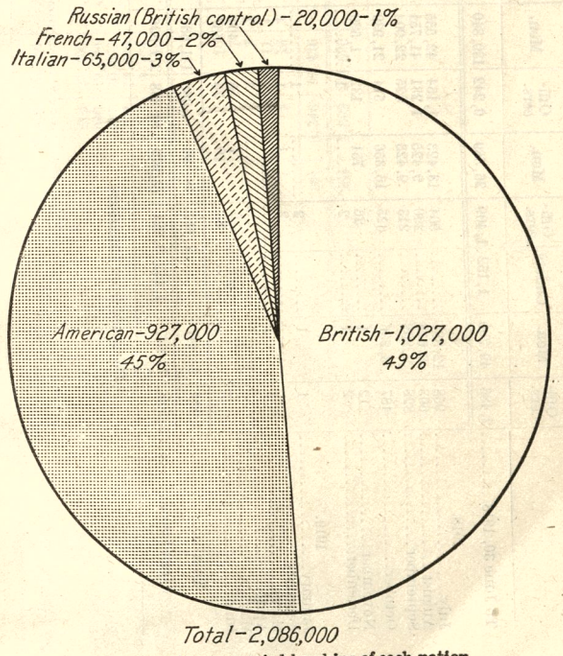
MOVEMENT OF DIVISIONS AND REPLACEMENTS OVERSEAS



Coordination Section, G.S.
July 12, 1918

TROOPS EMBARKED AND TRANSPORTED OVERSEAS - BY FLAG OF TONNAGE EMPLOYED





American troops carried by ships of each nation.

Army personnel embarked in United States for American Expeditionary Forces, by month and arm of service.

Month.	Air Service.			Artillery (Coast).		Artillery (Field).		Cavalry.		Chemical Warfare Service.		Engineers.		Infantry.		Intelligence police.		Medical.		
	Officers.	Men.	Cadets.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Nurses.
To June 30, 1918	2,486	49,200	1,152	1,409	26,589	6,242	139,840	484	9,904	.....	.....	4,419	132,737	14,187	439,616	5	50	6,764	53,981	4,225
1918.																				
July	958	12,381	.....	564	13,423	1,164	42,555	65	1,270	.....	.....	886	34,384	3,699	138,014	.....	.....	2,408	19,442	1,182
August	603	6,618	.....	290	9,425	1,231	41,754	70	562	.....	.....	641	25,218	3,246	137,449	.....	.....	2,161	19,473	1,145
September	828	2,208	.....	213	9,423	825	22,904	10	381	.....	.....	839	32,887	2,801	114,310	.....	.....	1,574	19,162	1,909
October	487	3,236	.....	625	16,356	574	21,939	25	236	[1] 53 / 13	[1] 1,611 / 2	[2] 53 / 192	[2] 1,611 / 12,191	2,075	77,032	.....	.....	1,467	15,593	144
November	12	1	.....	26	751	132	1,539	2	114	1	.....	44	3,430	163	4,286	.....	.....	1,166	11,175	1,194
December	2	1	.....	2	.....	1	.....	.....	1	.....	.....	2	1	4	2	.....	.....	11	1	401
1919.																				
January	4	1	.....	2	.....	1	.....	1	2	2	.....	1	.....	3	2	.....	.....	5	187	2
February	.....	.....	.....	2	1	1	4	1	.....	.....	.....	.....	2	4	5	.....	.....	15	146	.....
March	2	1	.....	.....	.....	2	1	.....	.....	1	.....	.....	2	5	5	.....	.....	4	105	.....
April	.....	.....	.....	.....	.....	3	2	.....	.....	1	.....	.....	1	.....	3	.....	.....	1	51	.....
May	1	.....	.....	5	1	56	401	13	898	.....	.....	2	168	103	2,098	.....	.....	2	195	.....
June	7	.....	.....	83	10	76	567	63	766	2	.....	123	257	197	2,163	.....	.....	33	223	.....
Total	2,904	24,447	.....	1,812	49,390	4,066	131,666	250	4,230	73	1,613	2,677	106,930	12,300	475,369	.....	.....	8,847	85,753	5,977
Grand total	5,390	73,647	1,152	3,221	75,979	10,308	271,506	734	14,134	73	1,613	7,096	239,667	26,487	914,985	5	50	15,611	139,734	10,202

[1] Deducted from Engineers.

[2] Added to Chemical Warfare Service.

Month.	Ordnance.		Postal Express Service.		Quartermaster Corps.		Service Corps.		Signal Corps.		Tank Service.		Casuals.		Total.	Civilians.	Grand Total.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.			
To June 30, 1918	838	9,016	.....	.....	2,346	62,184	.....	.....	928	18,572	62	659	5,430	9,944	1,003,250	2,466	1,005,735
1918.																	
July	197	4,637	.....	.....	612	21,390	.....	.....	193	6,068	.....	.....	390	291	306,173	122	306,295
August	145	3,509	.....	.....	840	19,044	.....	.....	165	5,073	125	2,132	386	4	281,309	152	281,461
September	192	2,400	.....	.....	927	30,699	.....	.....	124	4,039	157	2,580	365	14	251,771	329	252,100
October	212	2,924	.....	.....	702	16,330	1	.....	102	3,195	209	3,421	417	89	179,789	162	179,951
November	19	22	.....	292	212	3,724	12	1,421	23	398	.....	.....	109	14	30,282	158	30,440
December	3	.....	.....	1	15	188	.....	.....	.....	84	.....	.....	115	4	839	17	856
1919.																	
January	.....	.....	.....	.....	3	7	.....	.....	.....	.....	.....	.....	135	8	366	79	445
February	1	.....	.....	.....	3	10	.....	.....	.....	1	.....	.....	20	.....	216	539	755
March	4	.....	.....	.....	7	7	.....	.....	.....	.....	.....	.....	65	.....	211	578	789
April	4	.....	.....	.....	2	7	.....	.....	.....	.....	.....	.....	10	1	86	182	268
May	4	.....	.....	.....	9	11	1	.....	2	1	1	.....	16	1	3,989	128	4,117
June	9	1	.....	1	14	19	.....	.....	2	2	.....	.....	27	.....	4,645	172	4,817
Total	790	13,493	.....	294	3,346	91,436	14	1,421	611	18,861	492	8,133	2,055	426	1,059,676	2,618	1,062,294
Grand total	1,628	22,509	.....	294	5,692	153,620	14	1,421	1,539	37,433	554	8,792	7,485	10,370	2,062,926	5,084	2,068,029

Army personnel embarked from the United States for the American Expeditionary Forces, by months and flag of tonnage.

ANALYSIS.

Month.	American tonnage.				British tonnage.					French tonnage.			
	Army and Naval transports.	Cargo and animal transports.	American line steamers.	Total.	Commercial liners.	Assigned to United States.	Italian liners.	Russian liners.	Total.	Commercial liners.	Assigned to United States.	Italian liners.	Total.
To June 30, 1918	486,891	7,127	8,630	502,648	391,002	66,466	23,857	10,979	492,304	7,035	2,095	1,653	1,005,735
1918.													
July	105,402	887	.....	106,289	159,158	17,658	11,860	1,414	190,090	737	6,499	2,680	306,295
August	108,881	1,084	.....	109,965	126,161	17,528	10,428	2,747	156,864	2,474	11,819	339	281,461
September	100,164	903	.....	101,067	122,659	12,137	5,758	2,704	143,258	1,099	6,676	.....	252,100
October	68,853	1,681	.....	70,534	81,952	11,358	8,073	2,041	103,424	4,036	1,957	.....	179,951
November 1	59	420	.....	479	176	9,906	.....	.....	10,082	.....	.....	.....	10,561
November 30	4,505	935	.....	5,440	11,919	364	.....	.....	12,283	2	2,152	2	19,879
December	828	.....	.....	828	28	.....	.....	.....	28	.....	.....	.....	856
1919.													
January	441	.....	[1] 2	753	.....	.....	.....	.....	.....	7	.....	.....	789
February	751	.....	[1] 7	782	7	.....	.....	.....	7	.....	.....	.....	268
March	775	.....	.....	266	2	.....	.....	.....	2	.....	.....	.....	4,117
April	266	.....	[1] 20	4,117	.....	.....	.....	.....	.....	.....	.....	.....	4,817
May	4,097	.....	.....	4,817	.....	.....	.....	.....	.....	.....	.....	.....	
June	4,817	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	
Total	886,730	13,037	8,659	908,426	893,067	135,417	59,976	19,885	1,108,345	15,385	31,199	4,674	2,068,029

[1] Battleships and cruisers.

Army personnel debarked in United States from American Expeditionary Forces, by month and flag of tonnage.

ANALYSIS.

Month.	American tonnage.					British tonnage.				French tonnage.		Italian liners.	Miscellaneous liners.	Total.
	Army and Naval transports.	Cargo and animal transports.	American line steamers.	Battleships and cruisers.	Total.	Commerical liners.	Assigned to United States.	Russian liners.	Total.	Commercial liners.	Assigned to United States.			
To June 30, 1918	3,653	147	86	.....	3,886	129	6	.....	135	107	.....	.....	.....	4,128
1918.														
July	1,278	122	.....	.....	1,400	17	5	2	24	.....	.....	.....	.....	1,424
August	2,138	44	.....	.....	2,182	40	17	.....	57	12	.....	.....	.....	2,251
September	4,564	24	.....	.....	4,588	104	6	1	111	.....	.....	.....	.....	4,699
October	4,148	2	.....	.....	4,150	231	12	.....	243	4	.....	.....	.....	4,397
November (see note)	8,117	44	.....	.....	8,161	225	4	.....	229	1	.....	.....	.....	8,391
December	34,832	1,591	.....	3	36,426	22,324	7,639	.....	29,963	1	3,665	.....	.....	70,055
1919.														
January	71,459	1,534	.....	18,481	91,474	24,689	.....	.....	24,689	2,065	.....	.....	2,111	120,339
February	75,703	1,451	.....	18,322	95,476	27,088	.....	.....	27,088	6,993	.....	6,604	4,735	140,896
March	138,214	1,897	.....	23,263	163,374	19,512	.....	.....	19,512	9,657	.....	5,577	9,556	207,676
April	222,260	1,766	.....	20,299	244,325	17,441	.....	.....	17,441	3,153	.....	6,478	3,906	275,303
May	251,495	515	.....	24,843	276,853	6,631	.....	.....	6,631	5,055	.....	12,160	13,391	314,090
June	293,166	391	.....	19,752	313,309	6,271	.....	.....	6,271	7,929	.....	9,130	6,146	342,785
Total July, 1918, to July, 1919	1,107,374	9,381	.....	124,963	1,241,718	124,573	7,683	3	132,259	34,870	3,665	39,949	39,845	1,492,306
Grand total	1,111,027	9,528	86	124,963	1,245,604	124,702	7,689	3	132,394	34,977	3,665	39,949	39,845	1,496,434
NOTE.														
Figures divided according to the sailings from American Expeditionary Forces before and after the signing of the armistice:														
Nov. 1 to 10	3,566	38	.....	.....	3,604	221	4	.....	225	.....	.....	.....	.....	3,829
Nov. 11 to 30	4,551	6	.....	.....	4,557	4	.....	.....	4	1	.....	.....	.....	4,562
Total	8,117	44	.....	.....	8,161	225	4	.....	229	1	.....	.....	.....	8,391

Army personnel debarked in United States from American Expeditionary Forces, by month and arm of service.

Month.	Air Service.			Artillery (Coast).		Artillery (Field).		Cavalry.		Chemical Warfare Service.		Engineers.		Infantry.		Intelligence police.		Medical.		
	Officers.	Men.	Cadets.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Nurses.
To June 30, 1918	35	94	5	62	26	183	186	14	32	.....	.....	140	315	285	843	.....	1	108	137	47
1918.																				
July	20	21	3	13	22	50	105	3	16	.....	.....	25	148	134	405	.....	.....	29	58	10
August	18	26	4	4	17	130	178	2	11	.....	.....	159	162	295	842	.....	.....	26	57	14
September	22	51	5	11	33	490	249	3	8	.....	.....	200	275	488	2,276	.....	.....	39	104	8
October	35	67	1	11	45	39	246	4	11	.....	.....	39	298	276	2,673	.....	.....	63	162	17
November	65	90	1	218	86	69	514	.....	19	26	4	49	442	350	5,388	.....	.....	73	183	26
December	1,023	17,629	.....	136	3.380	509	10,700	10	254	81	139	121	1,825	1,012	26,071	.....	.....	334	1,665	108
1919.																				
January	988	2,274	.....	769	18,895	1,228	26,563	10	180	70	453	305	4,769	1,513	49,976	.....	.....	733	3,472	137
February	1,554	2,243	.....	762	27,145	866	15,847	27	86	124	1,661	351	8,859	2,271	62,980	.....	.....	1,186	6,098	506
March	905	8,490	.....	473	16,983	1,176	35,622	40	528	15	137	504	16,920	2,078	92,780	.....	.....	1,306	8,970	1,660
April	579	6,500	.....	127	3,077	1,515	39,631	48	1,511	33	77	892	28,051	3,925	140,081	.....	.....	2,659	24,344	2,063
May	450	10,761	.....	182	2,281	1,952	62,486	50	1,284	22	244	911	31,367	4,549	141,456	.....	.....	2,344	22,036	1,073
June	391	16,866	.....	169	407	1,268	32,517	228	6,606	30	127	1,747	71,819	4,083	111,718	.....	.....	2,743	33,689	1,572
Total	6,050	65,018	14	2,875	72,371	9,292	224,658	425	10,514	401	2,842	5,303	164,935	20,974	636,646	.....	.....	11,535	100,838	7,194
Grand total	6,085	65,112	19	2,937	72,397	9,475	224,844	439	10,546	401	2,842	5,443	165,250	21,259	637,489	.....	1	11,643	100,975	7,241

Month.	Ordnance.		Postal Express Service.		Quartermaster Corps.		Service Corps.		Signal Corps.		Tank Service.		Casuals.		Total.	Civilians.	Grand Total.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.	Men.	Officers.				
To June 30, 1918	31	12	.....	.....	46	603	.....	.....	41	40	.....	.....	125	228	3,639	489	4,128
1918.																	
July	10	4	.....	.....	8	74	.....	.....	6	4	1	.....	11	25	1,205	219	1,424
August	9	3	.....	.....	12	58	.....	.....	10	7	.....	.....	26	18	2,088	163	2,251
September	15	9	.....	.....	58	118	.....	.....	20	22	.....	.....	38	36	4,578	121	4,699
October	13	14	.....	.....	24	125	.....	.....	30	35	1	1	43	81	4,354	43	4,397
November	5	16	.....	1	46	240	.....	4	37	48	1	11	53	165	8,230	161	8,391
December	66	249	.....	39	100	1,273	1	10	30	307	14	184	150	1,807	69,227	828	70,055
1919.																	
January	211	1,925	.....	17	217	1,395	3	184	88	1,461	25	144	202	1,558	119,765	574	120,339
February	293	941	3	28	287	3,179	14	111	135	1,359	35	239	236	897	140,323	573	140,896
March	167	2,389	.....	92	285	5,161	3	265	169	3,181	267	4,921	249	1,122	206,858	818	207,676
April	142	1,974	1	139	480	7,898	11	202	249	6,144	45	566	446	852	274,262	1,041	275,303
May	159	4,755	3	164	471	11,038	15	1,102	269	7,969	110	1,762	535	989	312,789	1,301	314,090
June	97	1,981	15	165	955	37,061	29	5,132	246	6,276	12	57	611	1,738	340,355	2,430	342,785
Total	1,187	14,260	22	645	2,943	67,620	76	7,010	1,289	26,813	511	7,885	2,600	9,288	1,484,034	8,272	1,492,306
Grand total	1,218	14,272	22	645	2,989	68,223	76	7,010	1,330	26,853	511	7,885	2,725	9,516	1,487,673	8,761	1,496,434

Troops embarked for American Expeditionary Forces, Siberia.

Month.	Army troops.	Allied troops.	Monthly total.	Cumulative total.
1918.				
August	4,941		4,941	4,941
September	4,030		4,030	8,971
October	60		60	9,031
November	3	45	48	9,079
December	2		2	9,081
1919.				
January	16	343	359	9,440
February	175	175	350	9,790
March	3	10	13	9,803
April	6		6	9,809
May	7		7	9,816
June	37		37	9,853

Estimated strength of Army personnel in American Expeditionary Forces, Siberia, by months.

Month.	Number embarked for American Expeditionary Forces, Siberia.	Number debarked from American Expeditionary Forces, Siberia.	Net strength in Vladivostok or en route.
1918.			
August	4,941		4,941
September	4,030		8,971
October	60		9,031
November	3	2	9,032
December	2	53	8,981
1919.			
January	16	32	8,965
February	175	4	9,136
March	3	85	9,054
April	6		9,060
May	7	247	8,820
June	37	90	8,767

Troops debarked in United States from American Expeditionary Forces, Siberia.

Month.	Army troops.	Allied troops.	Navy.	Monthly total.	Cumulative total.
1918.					
November	2			2	2
December	53			53	55
1919.					
January	32			32	87
February	4			4	91
March	85	4		89	180
May	247	124	36	407	587
June	90	5	3	98	685

Monthly statement of animals shipped overseas from Atlantic ports.

Month.	Horses.	Mules.	Monthly total.	Grand total.
Total shipments to June 30, 1918	18,066	13,014		31,080
No shipments during July, 1918				
Shipments during August, 1918	460	1,379	1,839	
Shipments during September, 1918	145	440	585	
Shipments during October, 1918	8,318	7,830	16,148	
Shipments during November, 1918	11,895	7,138	19,033	
Total shipments, July 1 to Nov. 30, 1918	20,818	16,787		37,605
Grand totals	38,884	29,801		68,685

Deaths, Army personnel, aboard transports en route to France and returning, September, 1918, to June, 1919.

Month.	Number of ships.	Total Army personnel.	Cumulative total, Army personnel.
1918.			
September	1	2	2
October	24	694	696
November	35	226	922
December	18	21	943
1919.			
January	22	33	976
February	24	55	1,031
March	24	44	1,075
April	15	21	1,096
May	17	23	1,119
June	6	11	1,130

Army personnel lost at sea, October, 1917, to October, 1918.

Month.	En route to France and England.		En route returning to United States.		Total.	Remarks.
	Transport.	Army personnel.	Transport.	Army personnel.		
1917.						
October			Antilles	[1] 18	18	Sunk.
			Finland	1	1	Torpedoed; not sunk.
1918.						
February	Tuscania	210			210	Torpedoed and sunk.
May	Moldavia	53			53	Torpedoed.
September			Missanabie	2	2	Torpedoed and sunk.
	Ticonderoga	100			100	Torpedoed.
October	Otranto	358			358	Sunk in collision.
Total		721		21	742	

[1] This figure includes 2 civilians.

Army passengers on transports put back to port—Engine trouble.

Month.	Total Army passengers.	Cumulative total, Army passengers.	Month.	Total Army passengers.	Cumulative total, Army passengers.
1917.			1918.		
September	1,112	1,112	April	2,274	8,230
October	4,844	5,956	August	4,685	12,915

Army passengers removed—Sickness.

AT HALIFAX.

Month.	Total.	Cumulative total.	Month.	Total.	Cumulative total.
1917.			1918—Continued.		
December	12	12	April	7	102
1918.			May	109	211
January	43	55	June	54	265
February	27	82	July	132	397
March	13	95	August	70	467
			September	[1] 2,795	3,262

AT HOBOKEN.

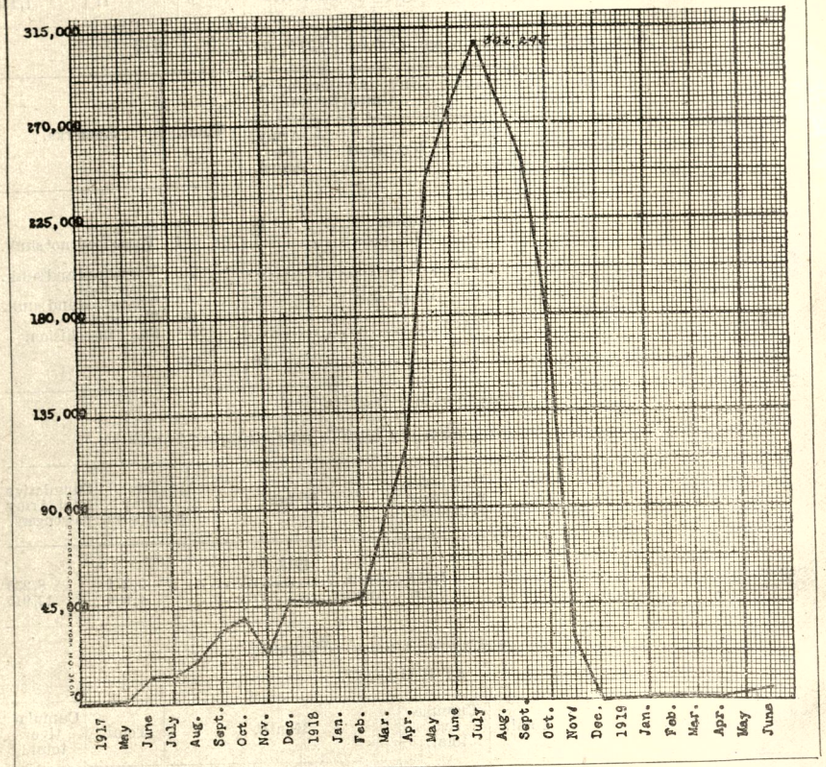
1918.			1918—Continued.		
January	10	10	May	2	22
March	10	20	June	8	30

[1] 1,975 of the 2,795 actually sailed overseas

During the three months June, July, and August, 1918, 875,700 men were embarked, and, if May be added, the total for the four months exceeds 1,121,000. So the department on October 22, 1918, was able to advise the President and the American people that more than 2,000,000 men had sailed from our shores to participate in the World War.

When the armistice was signed the total embarkations amounted to approximately 2,082,000 men. Credit for this movement of troops must be shared with the Allies, the British in particular, as approximately one-half of the troops sent to France were carried in British vessels or British-controlled vessels. At the same time, it must be recognized that under the pressure of the critical situation

ARMY PERSONNEL TRANSPORTED OVERSEAS, BY MONTH—MAY, 1917, TO JUNE 30, 1919.



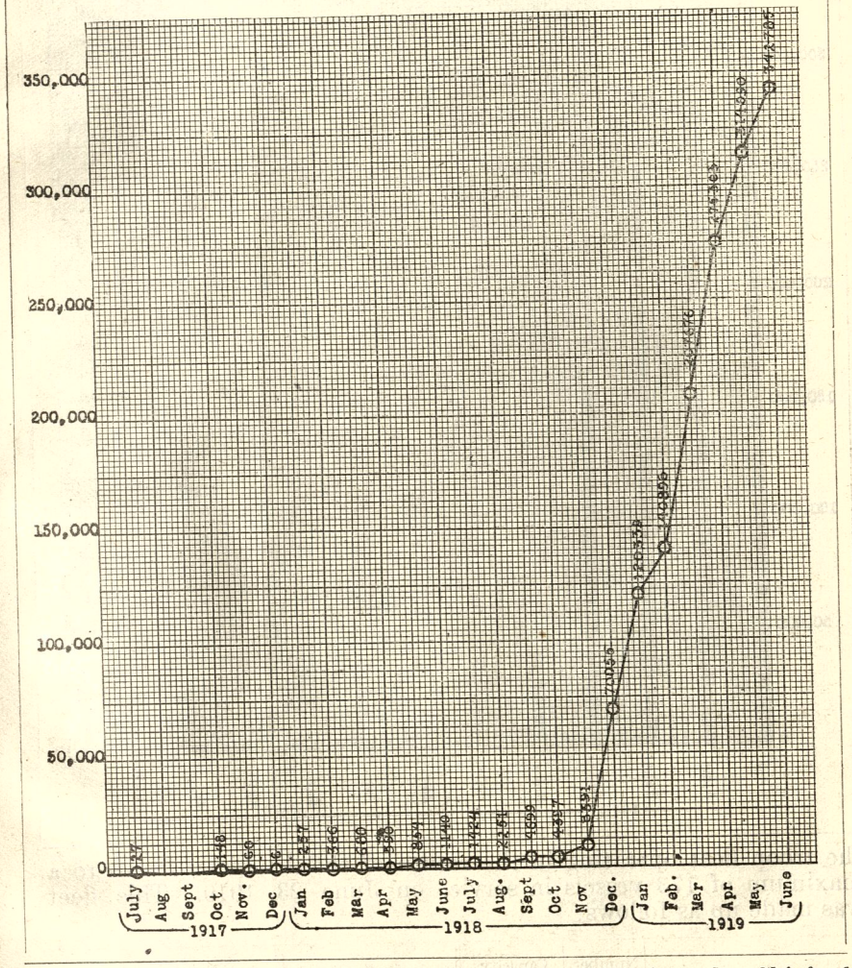
on the western front ways were found to increase the normal loading of our own transports by almost 40 per cent, and the further fact that our transports exceeded those of the Allies both in the extent to which they were loaded and the speed of their turn-around. So far as it is known, the transportation of troops on such a scale has never before been contemplated. No such number of persons has ever been carried by water with such dispatch or at a time when enemy submarines were operating on the lines of communication.

This transportation of our men overseas stands unique in the world's history, and it wrought, it is believed, a decisive effect on the world's history at one of its great, critical junctures.

RETURN TROOP MOVEMENT.

When the armistice was signed the total troop capacity of American-flag transports, under the control of the United States, was 111,783 men. It was quite evident that the War Department could not expect from the Allied Governments the same assistance in the return of American forces that we had received in transporting them overseas, so it was necessary to devise other means of promptly bringing the American Army home.

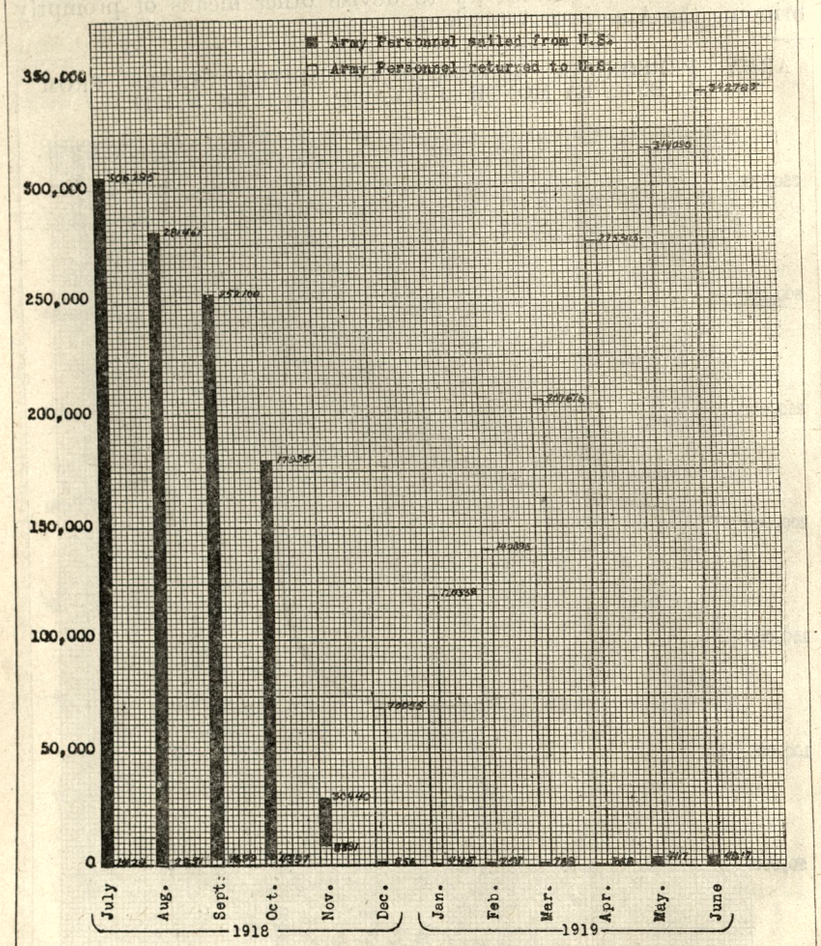
ARMY PERSONNEL DEBARKED IN UNITED STATES FROM A. E. F., BY MONTH—JULY, 1917, TO JUNE 30, 1919.



Immediately following the signing of the armistice, the Chief of Staff gave instruction that steps be taken to increase the American transport fleet as rapidly as possible. The work of converting some 58 cargo transports was promptly undertaken; the Navy assigned battleships and cruisers for transport service; 10 German passenger ships were obtained and equipped for carrying American troops;

and the War Department negotiated successfully with the Italian, French, Spanish, and Dutch for the utilization of suitable passenger vessels for the return of the American forces. These steps increased

ARMY PERSONNEL EMBARKED FROM UNITED STATES FOR A. E. F. vs. ARMY PERSONNEL DEBARKED IN UNITED STATES FROM A. E. F.—JULY 1, 1918, TO JULY 1, 1919.



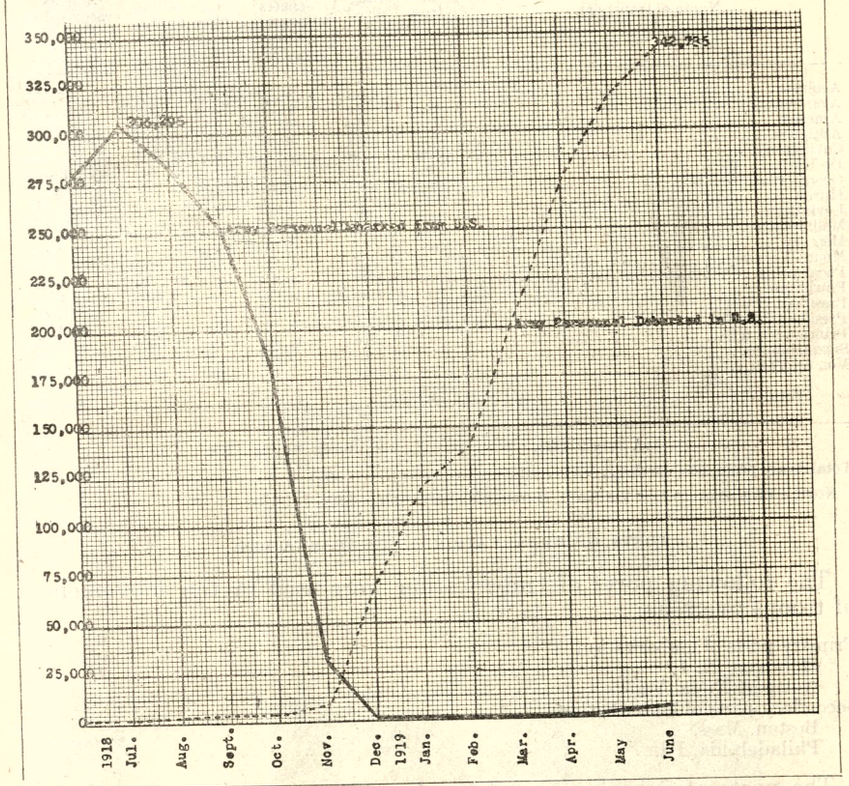
the troop fleet operating in the return of the American forces to a maximum of 173 vessels in service on June 23, 1919. This fleet was made up as follows:

	Number.	Capacity.		Number.	Capacity.
		Number.			*Number.*
American-flag transports....	141	364,069	Spanish-flag transports.....	4	4,185
British-flag transports.....	4	5,621	Dutch-flag transports.....	3	6,850
Italian-flag transports.....	13	27,572			
French-flag transports.....	8	10,954	Total.....	173	419,251

The return movement reached its maximum during the month of June, when all records heretofore established were broken by the embarkation in French ports of 364,166 and the landing in American ports of 343,786.

With all the shipping that the Allies could muster during the emergency in the spring and summer of 1918 it was possible to transport only a little over 306,000 American troops in any one month. In spite of the fact that at the signing of the armistice on November 11, 1918, the American-flag transports of all kinds had a capacity of barely 110,000 troops per month, operated at maximum

ARMY PERSONNEL EMBARKED FROM UNITED STATES FOR A. E. F. vs. ARMY PERSONNEL DEBARKED IN UNITED STATES FROM A. E. F.—JULY 1, 1918, TO JULY 1, 1919.



efficiency, yet it will be noted that during the month of April, 1919, there were transported on American-flag ships alone 246,209, and by June of the same year United States tonnage returned 327,654 American troops.

When this fact becomes fully realized in military and shipping circles, the real magnitude of our overseas transportation operations will be more fully appreciated. From November 11, 1918, to June 30, 1919, 1,608,873 of the American forces embarked from France, and during the same period 1,476,707 landed in the United States. On May 21, 1919, there were 180,681 troops on the water between

France and the United States. This was the greatest number of troops on the water at any one time during the overseas operations. The part played by the original 19 German vessels taken over in the United States ports upon the declaration of war is shown in the accompanying table, from which it will be seen that they alone transported to France an army of over half a million men, and up to June 30, 1919, had returned 409,516 of that number to the United States. In all, they transported safely, both ways, 931,619 of the American forces, and of this number the transport *Leviathan* carried 175,571.

Report of troops carried on the original 19 German interned ships.

Name of transport.	Last sailing from United States.	Army passengers transported to France.	Last sailing from France.	Army passengers returned to United States.
Aeolus	Feb. 7, 1919	24,729	June 17, 1919	17,263
Agamemnon	June 25, 1919	36,570	June 10, 1919	33,147
America	May 5, 1919	39,747	June 9, 1919	35,885
Antigone	Mar. 31, 1919	16,482	June 18, 1919	18,194
Covington	June 15, 1918	21,755	May 27, 1918	[1] 60
De Kalb	June 28, 1919	4,822	June 12, 1919	6,076
George Washington	May 10, 1919	46,659	June 29, 1919	24,777
Huron	Mar. 7, 1919	21,113	....do....	19,240
Leviathan	June 20, 1919	94,965	....do....	80,606
Madawaska	June 16, 1919	17,937	June 28, 1919	16,236
Mercury	Feb. 28, 1919	18,314	June 25, 1919	16,927
Mount Vernon	June 17, 1919	33,814	June 28, 1919	34,346
Pocahontas	Dec. 8, 1918	20,619	June 22, 1919	17,778
Powhatan	Oct. 28, 1918	14,547	June 18, 1919	12,751
President Grant	May 13, 1919	39,553	May 28, 1919	25,865
President Lincoln	May 10, 1918	23,439	Mar. 6, 1918	[2] 122
Princess Matoika	Oct. 28, 1918	21,428	June 12, 1919	20,633
Susquehanna	Nov. 12, 1918	18,417	June 29, 1919	14,721
Von Steuben	June 11, 1919	7,193	June 22, 1919	14,889
Total		522,103		409,516

[1] Sunk July 2, 1918. [2] Sunk May 31, 1918.

Total Army passengers carried 931,619

NOTE.—First ships to sail: De Kalb, Huron, and Pocahontas, Sept. 7, 1917.

PORTS OF EMBARKATION AND DEBARKATION.

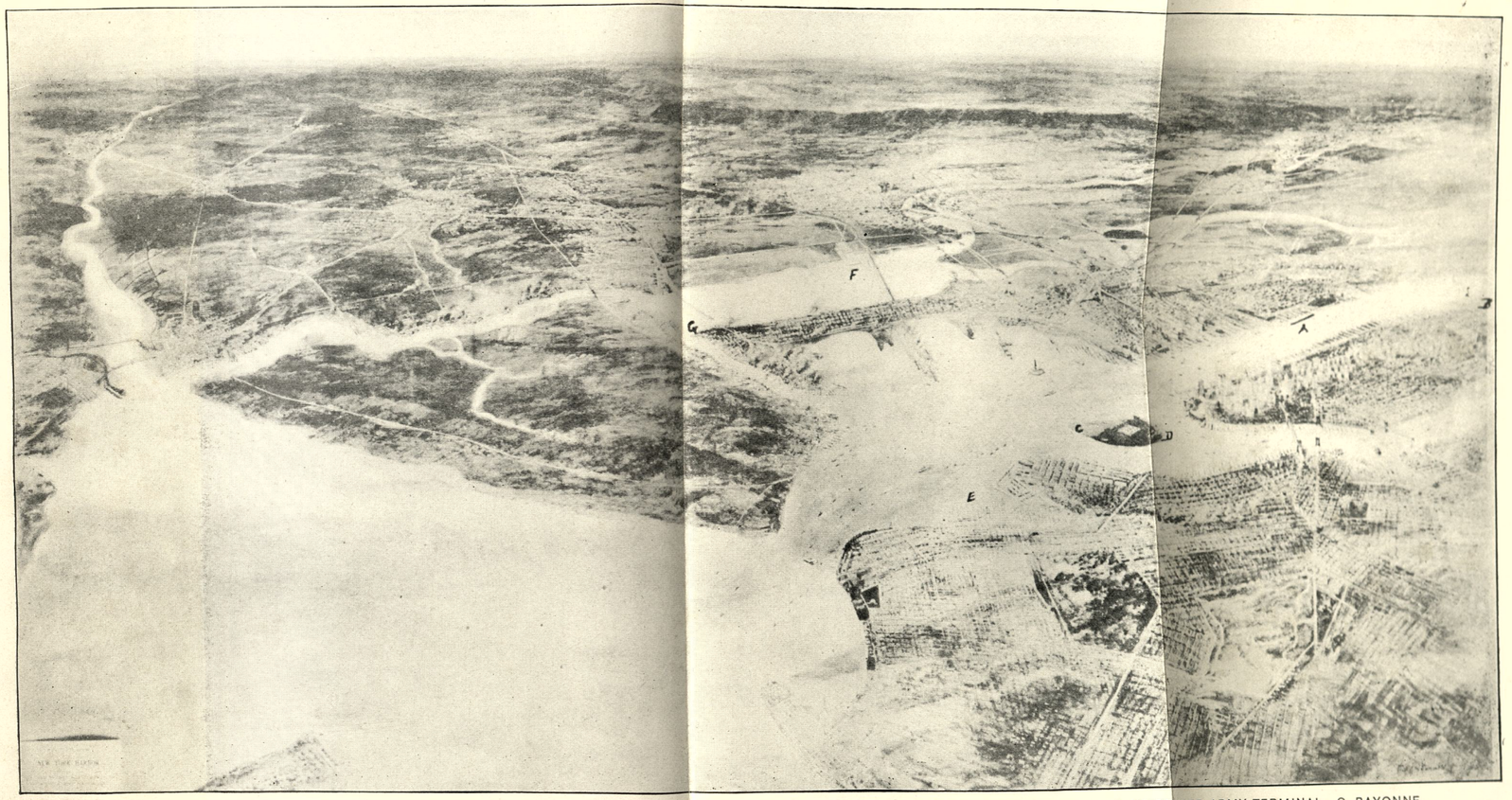
The following ports of embarkation were used in the movement of troops overseas:

Primary ports of embarkation:
Hoboken, N. J.
Newport News, Va.
Secondary ports of embarkation:
Boston, Mass.
Philadelphia, Pa.

The ports of debarkation used in handling the return movement of troops were as follows:

Ports of debarkation:
Hoboken, N. J.
Newport News, Va.
Boston, Mass.
Charleston, S. C.

Port of embarkation and debarkation at Hoboken, N. J.—The port of embarkation and debarkation at Hoboken, N. J., was established



A. HOBOKEN. B. NEW PIERS, ENGINEERS DEPARTMENT, C. DEPOT QUARTERMASTER. E. BUSH TERMINAL, NAVY DEPOT. F. PROPOSED ARMY TERMINAL. G. BAYONNE.

32–1

July 27, 1917. During our overseas movement of troops and supplies it handled 79 per cent of all troops and 51 per cent of all supplies shipped overseas. Of all the ports in operation the activities of this port have been the most effective and its operation has been satisfactory from the start. The port was commanded by the following commanding generals:

Maj. Gen. D. C. Shanks, from August 1, 1917, to September 3, 1918.

Brig. Gen. William V. Judson, from September 3, 1918, to November 26, 1918.

Brig. Gen. George H. McManus, from November 26, 1918, to December 5, 1918.

Maj. Gen. D. C. Shanks, December 5, 1918, to date.

Brig. Gen. Peter W. Davison, temporarily, during absence of Gen. Shanks, May 25, 1919 to July 6, 1919.

The activities of the port of embarkation at Hoboken included the concentration camps at Camp Merritt, Camp Mills and a part of Camp Upton, and from time to time space was made available at Camp Dix. The commanding general of the port has exclusive jurisdiction over Camps Merritt and Mills, and concurrent jurisdiction over part of Camp Upton.

In the return movement of troops the port of debarkation at Hoboken has handled up to June 30, 1919, 1,225,663 men, or 68 per cent of all troops returned to the United States.

Port of embarkation and debarkation at Newport News, Va.—The port of embarkation and debarkation at Newport News, Va., was established July 27, 1917. Its activities include Camps Stuart, Hill, Langley Field and also Army supply bases at Lambert's Point and Bush Bluff, Va.

The operations of this port have been very satisfactory during the entire overseas operations. The port was commanded by the following commanding generals:

Maj. Gen. Grote Hutcheson, from July 6, 1917, to November 12, 1918.

Brig. Gen. Harley B. Ferguson, from November 12, 1918, to May 26, 1919.

Maj. Gen. Adelbert Cronkhite, from May 26, 1919, to date.

Approximately 384,000 men have been handled through the port of debarkation, Newport News, during the operation of the returning of the American army from abroad. This is 21 per cent of all troops returned to the United States.

Port of debarkation at Boston, Mass.—The port of debarkation at Boston was established February 10, 1919, in connection with demobilization camp at Devens, Mass. This port has handled approximately 97,000 men returning from overseas, which is 5 per cent of the total of all troops returned to the United States. It was discontinued as a port of debarkation July 15, 1919.

Port of debarkation at Charleston, S. C.—The port of debarkation at Charleston was established at the Army supply base at that point February 10, 1919. It was used for the debarkation of troops returning to the southern section of the United States, and in conjunction with the demobilization camp at Jackson, S. C., has handled approximately 49,600 men. It was discontinued as a port of debarkation July 15, 1919.

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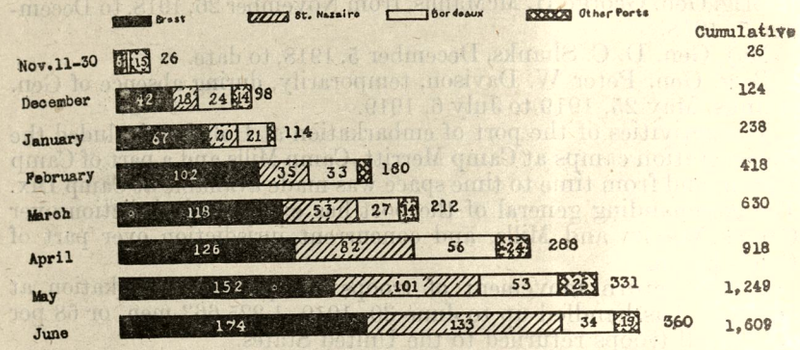
Other ports.—Of the other ports used for the debarkation of troops, the port of Philadelphia has handled approximately 3 per cent of all men returned from overseas. All other ports, except those named above, have handled less than 1,000 men.

TROOPS EMBARKED FROM AMERICAN EXPEDITIONARY FORCES, BY MONTH AND PORT.

Thousands of troops embarked since November 11, 1918, including officers, enlisted men, nurses, and civilians.



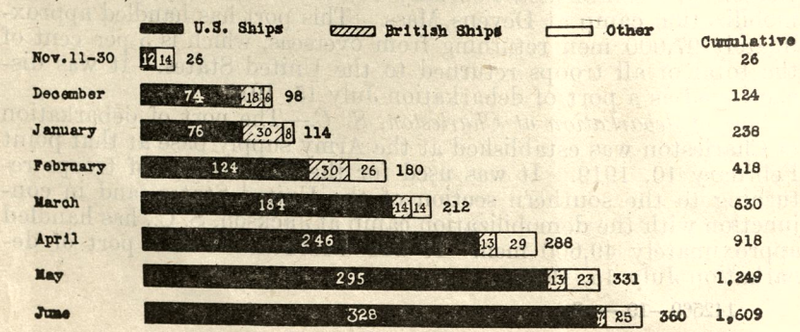
Troops embarked from American Expeditionary Forces, by month and port.

	Brest.	St. Nazaire.	Bordeaux.	Other French ports.	Total, France.	Other ports.	Grand total.
Nov. 11-30	6,179	3,428	1,500	1,481	12,588	13,602	26,190
December	42,579	17,663	23,602	115	83,959	13,671	97,630
January	67,204	19,743	21,214	5,482	113,643	41	113,684
February	102,095	34,790	33,447	9,657	179,989	.....	179,989
March	118,138	52,941	26,522	12,386	209,987	1,750	211,737
April	126,098	82,442	56,025	24,153	288,718	.....	288,718
May	151,478	100,853	53,446	24,994	330,771	15	330,786
June	173,881	132,862	34,140	19,227	360,110	29	360,139
Total	787,652	444,722	249,896	97,495	1,579,765	[1] 29,108	1,608,873
Per cent of total	49	27	16	6	98	2	.....

[1] Represents 27,344 troops embarked from England; 1,749 from Genoa; and 15 from Antwerp.

TROOPS EMBARKED FROM AMERICAN EXPEDITIONARY FORCES, BY MONTH, AND FLAG OF TONNAGE.

Thousands of troops embarked since November 11, 1918, including officers, enlisted men, nurses, and civilians.



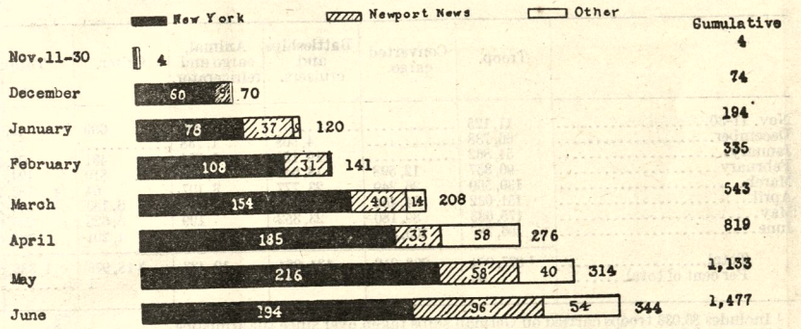
Troops embarked from American Expeditionary Forces, by month and flag.

	United States.	British.	French.	Italian.	Other.	Total.
Nov. 11-30	12,190	14,000	.....	.....	.....	26,190
December	73,384	18,384	3,732	.....	2,130	97,630
January	76,306	29,907	2,469	5,002	.....	113,684
February	124,093	30,048	11,629	5,439	8,780	179,989
March	183,757	13,558	5,784	3,586	5,052	211,737
April	246,209	12,682	5,232	13,207	11,388	288,718
May	294,992	12,863	6,384	6,731	9,816	330,786
June	327,654	7,003	5,188	12,501	7,793	360,139
Total	[1] 1,338,585	138,445	40,418	46,466	[2] 44,959	1,608,873
Per cent of total	83	9	2	3	3	.....

[1] Includes 86,033 troops carried on German ships taken over since the armistice.
[2] Represents 21,802 troops carried on Dutch ships, 12,392 on Austrian, 2,082 on Swedish, and 8,683 on Spanish.

TROOPS LANDED FROM OVERSEAS, BY MONTH, AND PORT.

Thousands of troops landed in the United States that were embarked since November 11, 1918, including officers, enlisted men, nurses, and civilians.



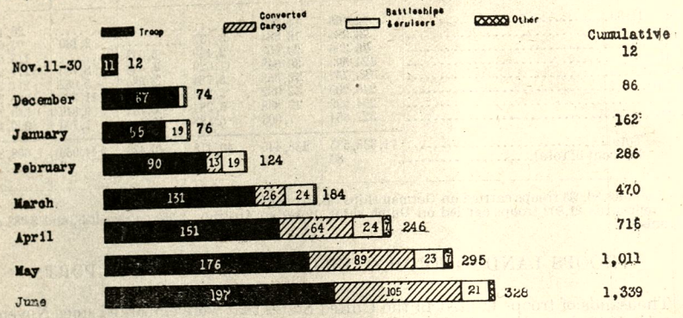
Troops landed, by month and port.

	New York.	Newport News.	Boston.	Philadelphia.	Other.	Total.
Nov. 11-30	3,047	1,515	.....	.....	.....	4,562
December	59,542	9,393	1,120	.....	.....	70,055
January	78,189	36,987	3,086	2,076	2	120,340
February	108,464	30,818	.....	1,614	.....	140,896
March	154,288	39,682	3,295	2,125	8,286	207,676
April	184,504	33,162	37,709	6,542	13,386	275,303
May	216,510	57,781	12,142	24,533	3,123	314,089
June	193,571	96,125	24,048	12,386	17,656	343,786
Total	998,115	305,463	81,400	49,276	[1] 42,453	1,476,707
Per cent of total	68	21	5	3	3	.....

[1] Represents 42,429 troops landed at Charleston, 21 at Baltimore, and 3 at Newport, R. I.

TROOPS EMBARKED ON UNITED STATES FLAG SHIPS, BY MONTH, AND TYPE OF SHIP.

Thousands of troops embarked on United States flag ships since November 11, 1918, including officers, enlisted men, nurses, and civilians.



Troops embarked on United States flag ships, by month and type of ship.

	Troop.	Converted cargo.	Battleships and cruisers.	Animal, cargo and refrigerator.	Other.	Total.
Nov. 11-30	11,125	.....	.....	366	699	12,190
December	66,738	.....	4,908	1,738	.....	73,384
January	54,862	.....	19,159	1,854	431	76,306
February	90,357	12,598	18,644	1,684	810	124,093
March	130,560	26,249	23,777	3,107	64	183,757
April	151,032	64,454	23,657	923	6,143	246,209
May	175,633	89,180	23,352	199	6,628	294,992
June	196,787	105,537	20,557	562	4,201	327,654
Total	[1] 877,094	298,018	134,064	10,433	[2] 18,976	1,338,585
Per cent of total	66	22	10	1	1	.....

[1] Includes 86,033 troops carried on German ships taken over since the armistice.
[2] Represents converted mine planters carrying 15,136 troops, hospital ships carrying 2,684, Navy ships carrying 489, cross-channel troopers carrying 458, tankers carrying 121, lakers carrying 30, submarine chasers carrying 1, destroyers carrying 56, and unclassified 1.

THE WORK OF THE NAVY.

At the outset of our overseas operations it was contemplated to man cargo ships and certain troopships obtained from the Shipping Board with Army transport crews. In the proclamation issued by the President, the German interned vessels were designated to be manned by the Navy and operated for the Army. In view of this action and the fact that the Navy had certain personnel trained and ready for the operation of vessels then being assigned, it seemed desirable, in order to avoid a divided responsibility and obtain the maximum efficiency of operation, to have all vessels, both cargo and troop, manned by the Navy.

It was necessary, in combating the submarine menace, to arm all vessels. This required gun crews.

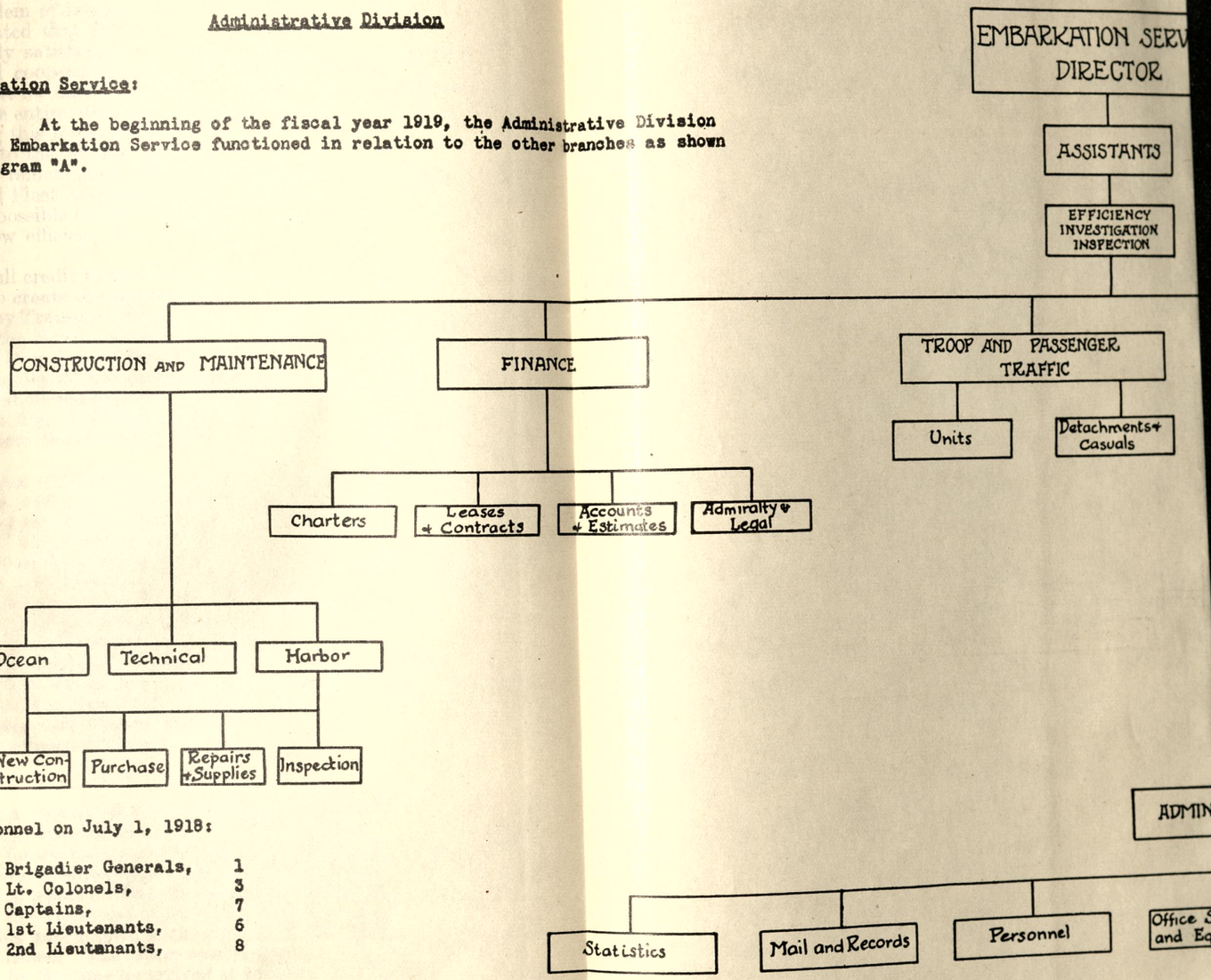
The first efforts were directed to the manning of troop transports, and as rapidly as the Navy was able to assemble crews cargo vessels were gradually taken over.

The close cooperation which has existed between the Army and Navy during the overseas operations of the transport service stands

Administrative Division

Embarkation Service:

At the beginning of the fiscal year 1919, the Administrative Division of the Embarkation Service functioned in relation to the other branches as shown in Diagram "A".

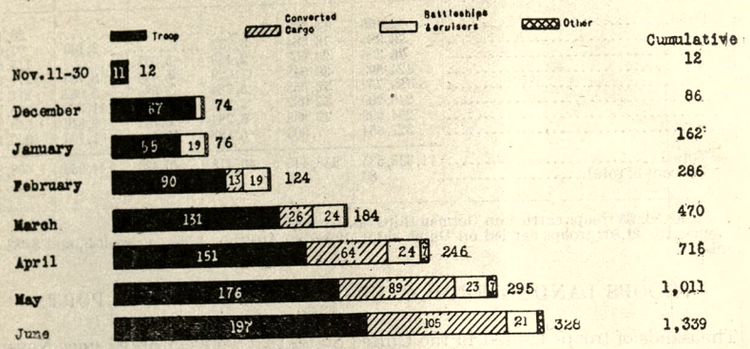


Personnel on July 1, 1918:

Brigadier Generals,	1
Lt. Colonels,	3
Captains,	7
1st Lieutenants,	6
2nd Lieutenants,	8

TROOPS EMBARKED ON UNITED STATES FLAG SHIPS, BY MONTH, AND TYPE OF SHIP.

Thousands of troops embarked on United States flag ships since November 11, 1918, including officers, enlisted men, nurses, and civilians.



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	Troop.	Converted cargo.	Battleships and cruisers.	Animal, cargo and refrigerator.	Other.	Total.
Nov. 11-30	11,125	.....	.....	366	699	12,190
December	66,738	.....	4,908	1,738	.....	73,384
January	54,862	.....	19,159	1,854	431	76,306
February	90,357	12,598	18,644	1,684	810	124,093
March	130,560	26,249	23,777	3,107	64	183,757
April	151,032	64,454	23,657	923	6,143	246,209
May	175,633	89,180	23,352	199	6,628	294,992
June	196,787	105,537	20,567	562	4,201	327,654
Total	[1] 877,094	298,018	134,064	10,433	[2] 18,976	1,338,585
Per cent of total	66	22	10	1	1	.....

[1] Includes 86,033 troops carried on German ships taken over since the armistice.
[2] Represents converted mine planters carrying 15,136 troops, hospital ships carrying 2,684, Navy ships carrying 489, cross-channel troopers carrying 458, tankers carrying 121, lakers carrying 30, submarine chasers carrying 1, destroyers carrying 56, and unclassified 1.

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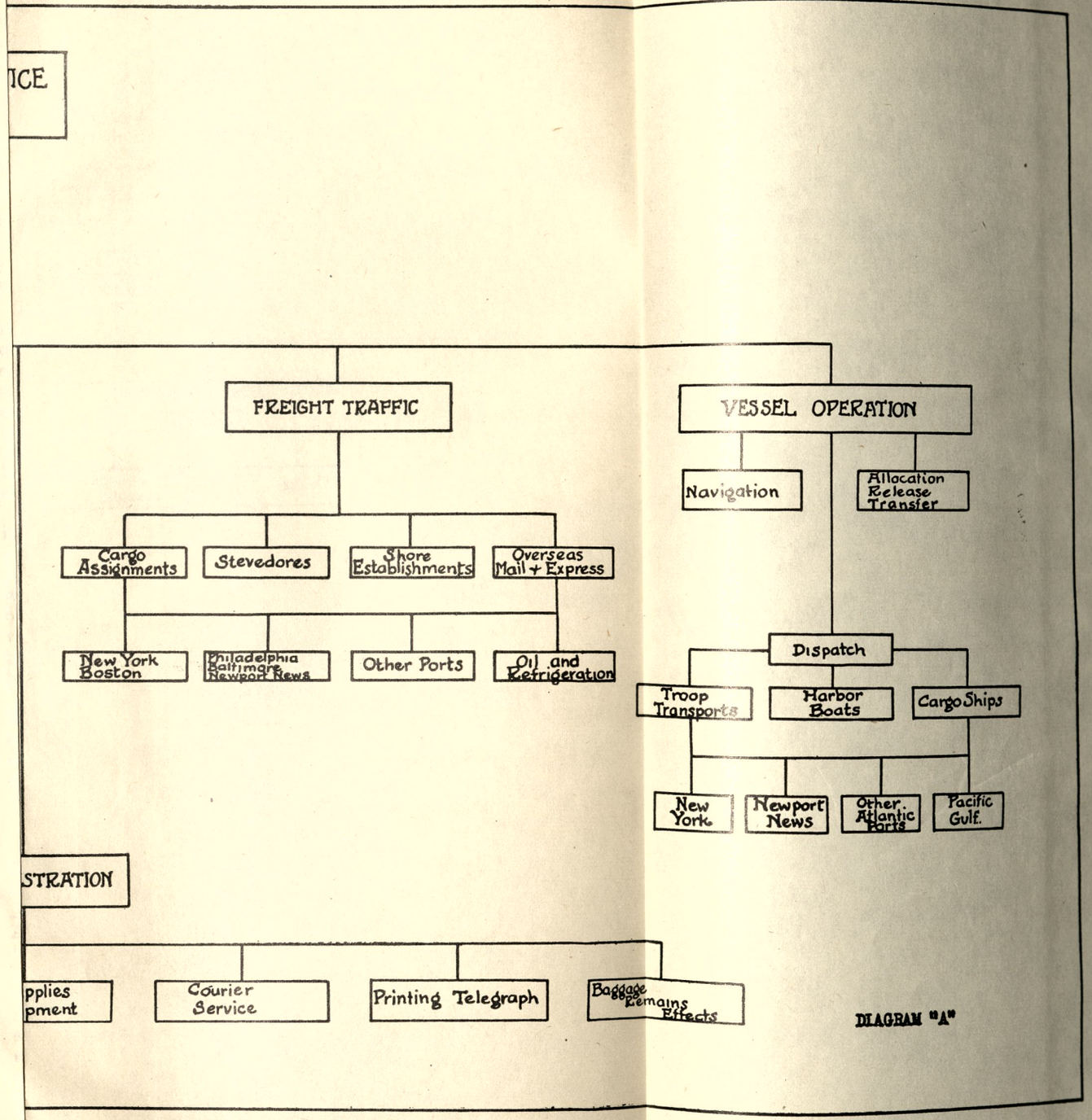
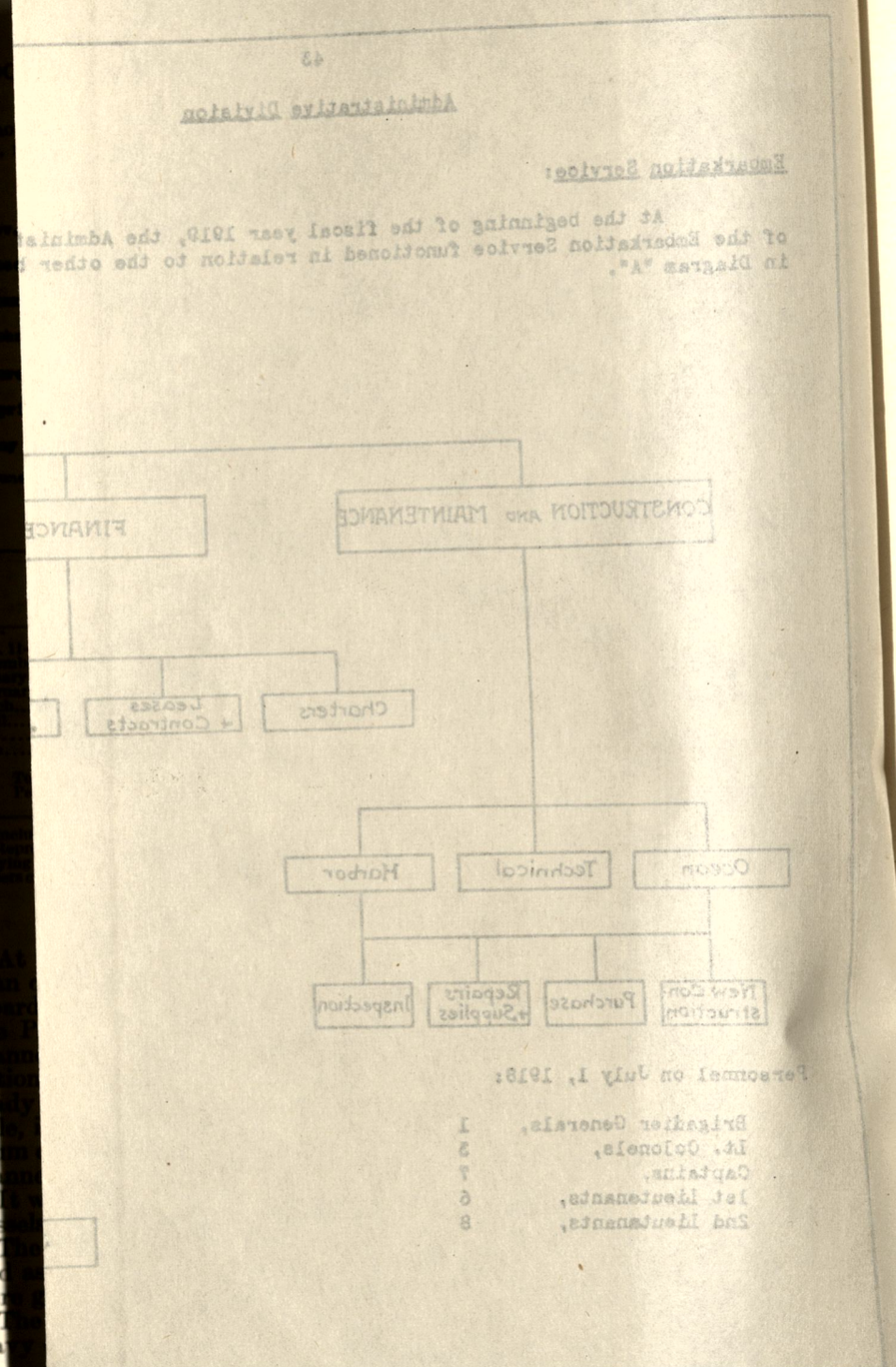


DIAGRAM "A"



out probably more prominent than any other one factor connected with the problem of transporting our Army and its supplies abroad. It may be stated that the manning of transports by the Navy has proven entirely satisfactory. Too high praise can not be given for their splendid cooperation and their untiring efforts. When it is considered that no American troop transport loaded with troops was lost during the entire operation of placing over 2,000,000 men abroad and returning this force to the United States, no higher testimonial can be given to the efficiency of the Navy convoy system.

It must be remembered also that without the protection of the British Grand Fleet and the efficiency of the Navy convoy it would have been impossible to have carried out our overseas troop program, no matter how efficient the rest of our military preparation might have been.

In giving full credit to the Navy for the service it has rendered it is not desired to create the impression that in our future policy of handling the Army Transport Service these vessels should be manned and operated by the Navy. Conditions during the past emergency were unusual, and it is hardly possible that we can expect to engage in another war under the same conditions and at a time when our Navy is not required to perform its regular rôle and functions connected with the first line of defense and in carrying on naval operations having in view the seeking out and destroying of any possible adversary.

Under normal conditions it is believed that the Army should man its transports, and the approved policy of the department contemplates building up an Army transport reserve not only of ships but of personnel. If this policy is followed to its ultimate conclusion, there will be no necessity to call upon the Navy to man Army transports, but wherever a convoy system is necessary it is to be expected that vessels when once loaded will join such convoy and from that time on be controlled in their movements under such rules as may be established by the naval convoy commander.

To place the additional burden of manning troop transports on the Navy at a time when their personnel is engaged upon the more important duties of manning and operating capital ships and all the many and necessary supernumerary vessels of a fleet would be to endanger the efficiency of both forces.

INDIVIDUAL RELEASE SYSTEM.

At this time casual officers' transportation overseas was arranged for by the Administrative Division. The request from each bureau of the Army for overseas orders for a casual officer passed through the Administrative Division before going to The Adjutant General of the Army for final action. This procedure guaranteed the obtaining of the name of the officer and other pertinent information and the transmission of this information to the port before the officer's orders were actually published. The officer was assigned to a ship and all arrangements made by the time he arrived at the port of embarkation. This system also proved of advantage in that item numbers were checked and where necessary corrected, thus minimizing misunderstandings when the officer arrived in France. The average daily number of casual officers sent overseas was 50.

COORDINATION WITH PORTS AND OTHER AGENCIES.

The personnel on duty at the ports of embarkation was then handled by the Administrative Division as a whole, there being no separate personnel branch. The Operations Division of the General Staff and The Adjutant General's Office cooperated to the fullest extent at all times. The instructions issued by The Adjutant General of the Army that personnel at ports of embarkation would not be removed except with the approval of the commanding general of each port greatly contributed to the successful operation of the ports. These instructions remain of tremendous value to the Embarkation Service, inasmuch as they have made possible the permanent retention of personnel trained in the work.

PORT REGULATIONS.

Regulations for troops going overseas, reports and surveys concerning their equipment, leases of land and construction of buildings at concentration camps, inspection reports of ships, rental of buildings in adjacent cities, and preparation and circulation of a constantly changing system of confidential code words and code numbers for each ship used at any time for carrying Army troops or supplies were the principal functions of the Administrative Division in connection with the ports. It is interesting to note in connection with the confidential codes that there were over 900 ships listed.

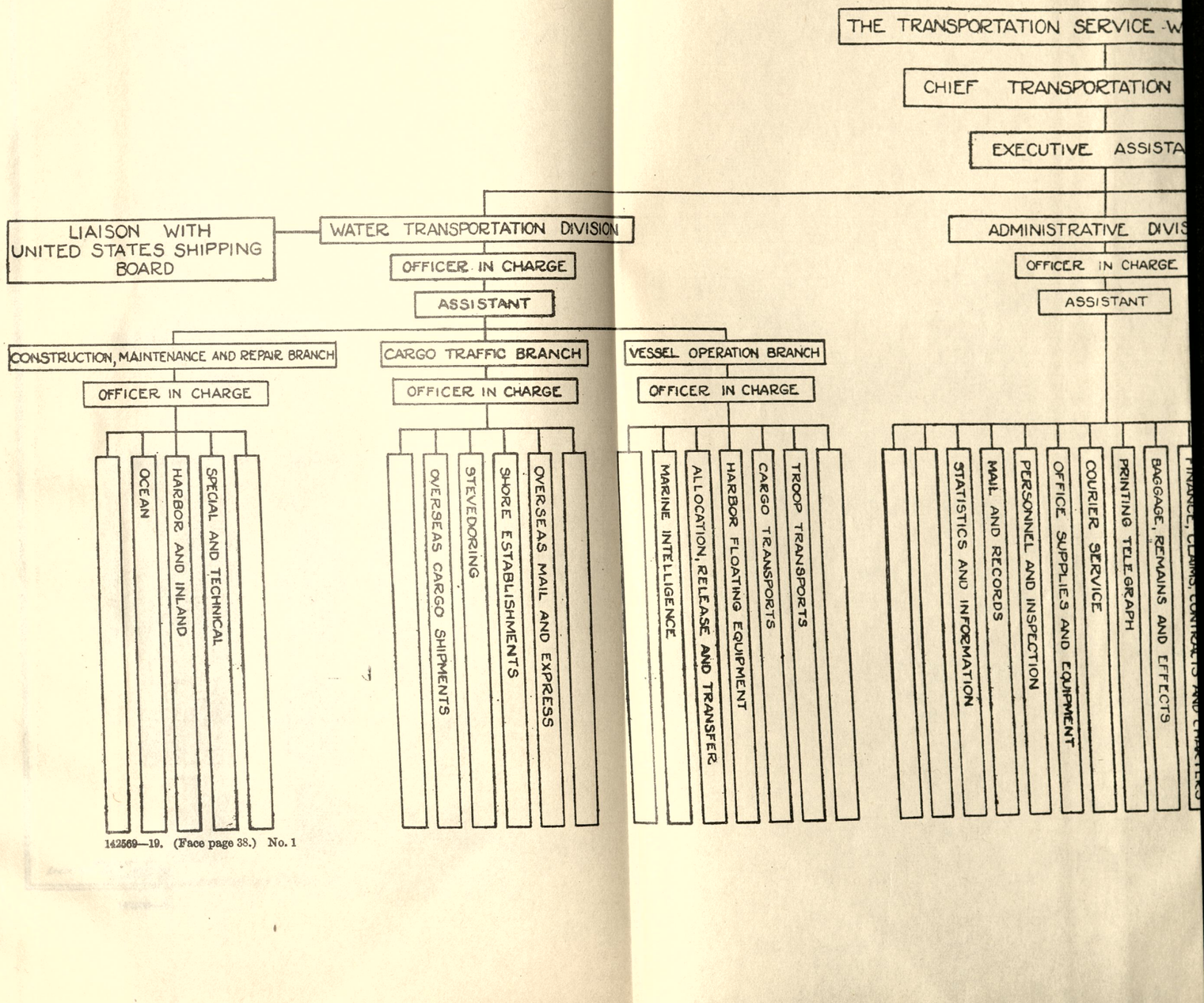
CABLES.

The confidential cable advice of cargo and troop ships destined for overseas was prepared in the Administrative Division. This information consisted of furnishing authorities at the ports in France with necessary information concerning the time of arrival, speed, draft, heaviest load, and other pertinent information, together with a summary of the troops and cargo en route. These cables were dispatched through The Adjutant General of the Army to the communication Office, Navy Department, which office transmitted them, through Admiral Sims, to the Commanding General, Service of Supply, France.

Until the signing of the armistice there was great need for secrecy in practically every move made by the Embarkation Service. Great care was exercised by all in preserving necessary secrecy. So well guarded were the movements of our troop convoys that the announcement by the President that 1,000,000 men were overseas on July 1, 1918, came as a complete surprise to the American people. It was also possible by the confidential system of handling the business of the Embarkation Service, to stop entirely the dispatching of our troops overseas 11 days before the armistice was actually signed, with out the fact coming to the attention of the public or press.

DEBARKATION REGULATIONS.

During the few months following the signing of the armistice, necessary instructions were worked out for the returning troop movements. In this interval, the "Debarkation Regulations" were written, and 3,000 copies of this phamphlet published, constituting a guidebook for all returning troops.



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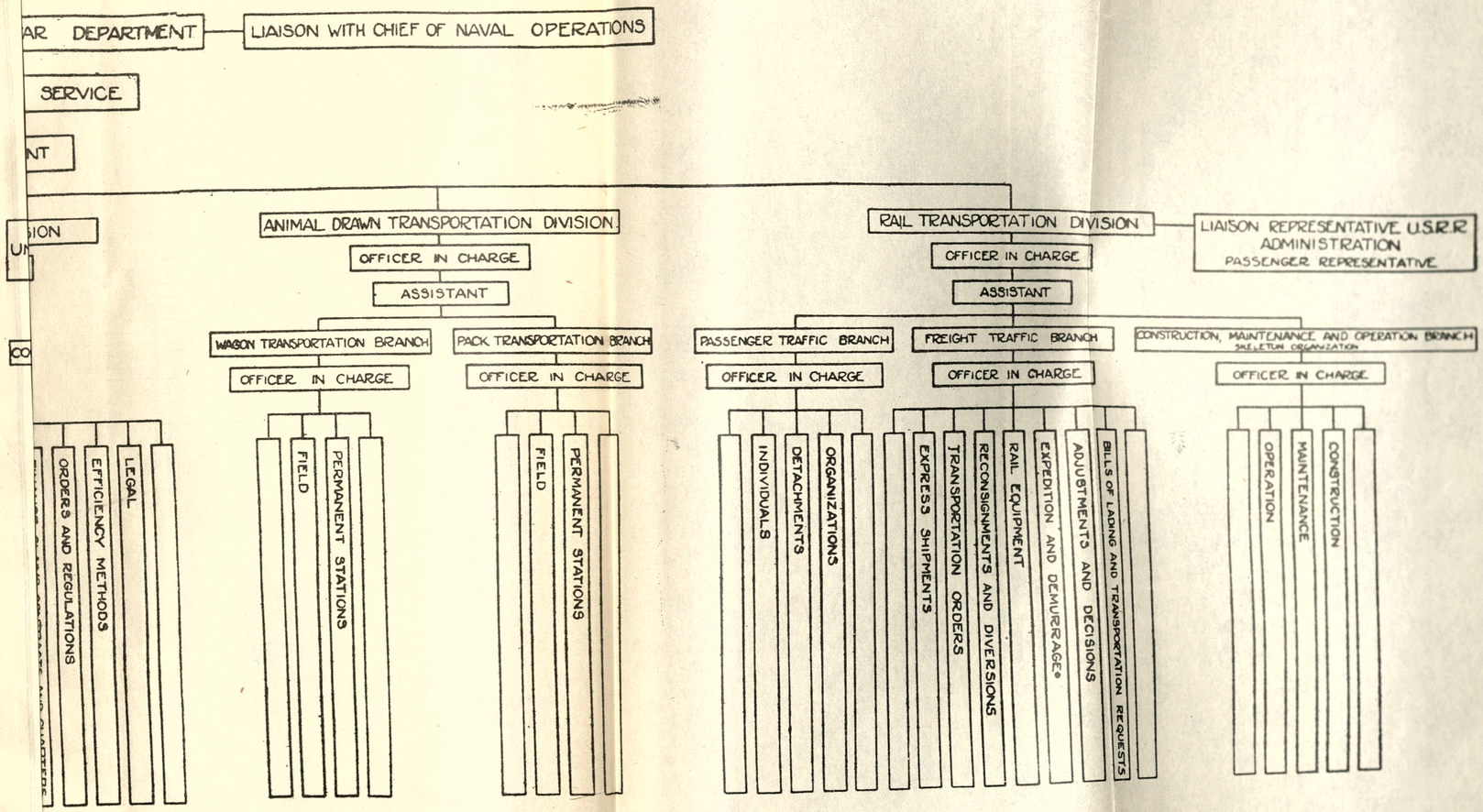

TRANSPORTATION SERVICE

PORT AND ZONE TRANSPORTATION OFFICE

45 BROADWAY
NEW YORK CITY

1 Port and Zone Transportation Officer
2 Executive Officer

Water Transportation Division
11 Supt. Water Transportation
12 Assistant
- 14 Vessel Operation Branch
  - 15 Freight Allocation
  - 16 Stevedoring
  - 17 Docking
  - 18 Wharfage
  - 19 Harbor and Coastwise
  - 20 Ocean
  - 21 Mail and Record
  - Hoboken
  - Brooklyn
- 13 Administrative Branch
- 22 Vessel Redelivery Branch
  - 23 Ship Data
  - 24 Property Inventory
  - 25 Redelivery
  - 26 Survey, Inspection
  - 27 Mail and Record
- 28 Maintenance & Repair Branch
  - 29 Inspection
  - 30 Marine Supplies
  - 31 Marine Repair Shop
  - 32 Drafting
  - 33 Mail and Record
  - Ocean
  - Harbor

Liaison
Joint Board of Review
Navy 3rd Naval District
Shipping Board
U.S. Maritime Affairs
Army Board (Q.M. Purchase)
Naval N.O.T.S.

Administration Division
3 Officer in Charge
- 4 Personnel Branch
- 5 Contract Branch
- 7 Information and Equipment Branch
- 8 Office Supplies and Equipment Branch
- 9 Supt. of Bldg. Branch
- 10 Printing Telegraph Branch
- Mail and Record Branch

Rail Transportation Division
34 Supt. Rail Transportation
35 Assistant
- 41 Passenger Branch
  - 42 Lost Baggage
  - 43 Baggage
  - 44 Sick and Wounded
  - 45 Car and Ferry Tickets
  - 46 Rail Passengers
  - 47 Troop Embarkation and Debarkation
  - 48 Mail and Record
  - Port Jurgsen (Bayonne) Hoboken
  - 44th-45th Ave. N.Y.
  - Hoboken
- 36 Adminstrative Branch
  - 37 Rates and Tariffs
  - 38 Expedition and Demurrage
  - 39 Traffic Control
  - 40 Mail and Record
- 49 Freight Branch
  - 50 Trucking
  - 51 Miscellaneous Accounts
  - 52 Lighterage
  - 53 Outbound Freight
  - 54 Inbound Freight
  - 55 Mail and Record
  - South Brooklyn
  - Hoboken
  - Gov. Island
  - Pt. Newark
  - L.I. City
  - 44th-45th Ave. N.Y.
  - So. Kearny
- 56 Terminal Railroads Branch
  - 57 Maintenance
  - 59 Operation
  - 59 Mail and Record
  - Liaison with Railroad
  - South Kearny
  - South Brooklyn
  - Gov. Island R.R.
  - Pt. Newark

Liaison with N.Y. District Acct. Bureau
Liaison with Allied Governments

Animal-Drawn Transportation Division
60 Supt. Animal-Drawn Transportation
- 61 Animal Branch
- 62 Vehicle Branch
- 63 Harness Branch
- 64 Forage Branch
- 65 Mail and Record Branch
- Camp Mills
- Camp Merritt

Liaison with A.E.F.

Summary
Officers 130
Civilians 1837
Enlisted men 14
Total 1981

Approved July 1-1919
F.B. Mitchel
Colonel, I.G.D.

Prepared by
Lieut. Col. Ezra Bellis, S.M. Corps.
Executive Officer.

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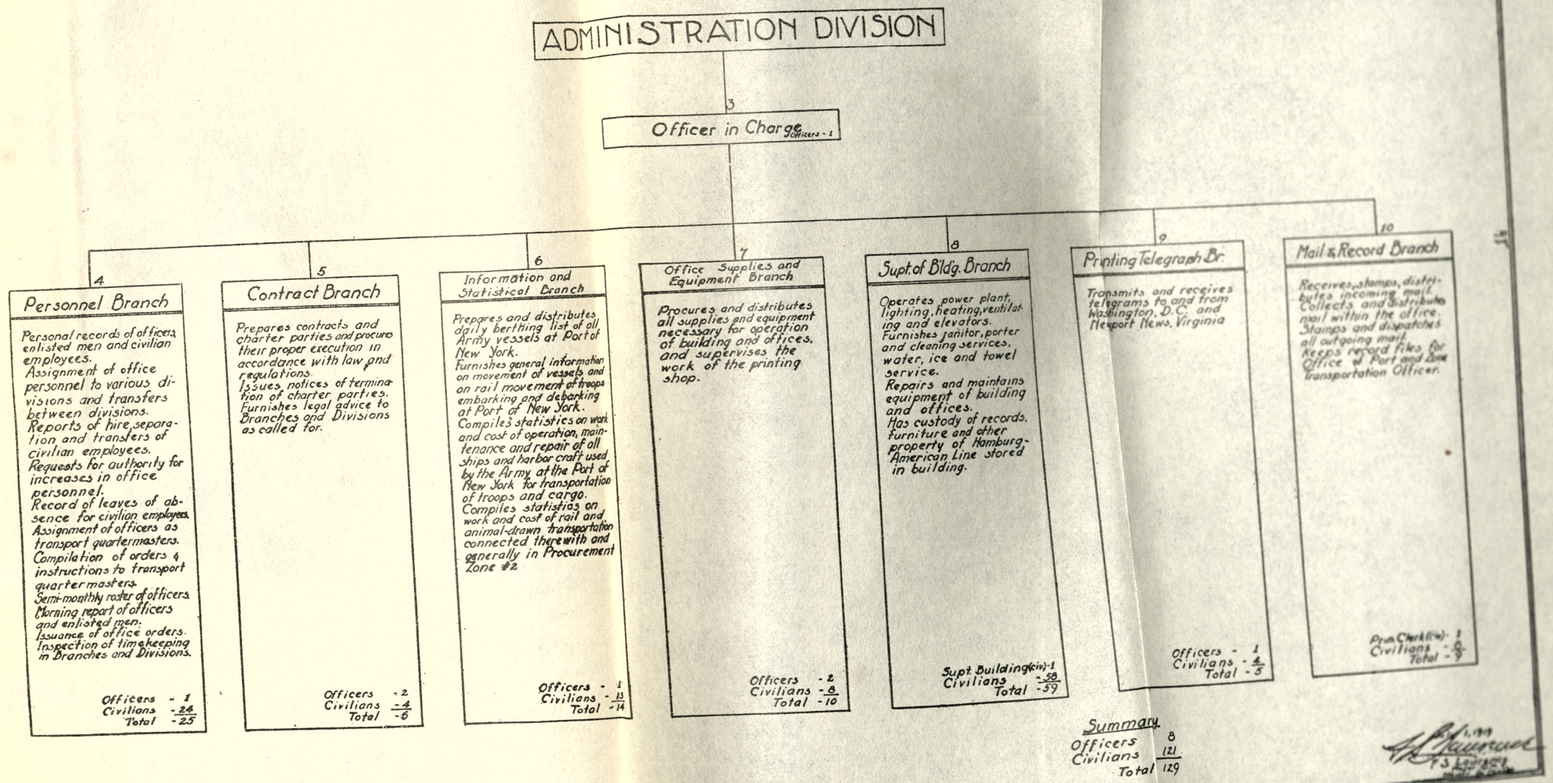
TRANSPORTATION SERVICE

PORT AND ZONE TRANSPORTATION OFFICE

45 BROADWAY
NEW YORK CITY



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TRANSPORTATION SERVICE
PORT AND ZONE TRANSPORTATION OFFICE

45 BROADWAY NEW YORK CITY

RAIL TRANSPORTATION DIVISION

Superintendent of Rail Transportation. Officers 1 — 34

Assistant Officers – 1 Civilians – 3 — 35

41 Passenger Branch Officers 2 Civilians 2

Liaison-United States Railroad Administration. Negotiations with carriers in connection with troop assignment, troop movements, troop schedules. Civilians 3

36 Administrative Branch. Officers 1

Liaison with New York District Accounting Bureau

49 Freight Branch Officers 7

Liaison-Allied Governments. Inter-port ballast transportation. Foreign Customs duties. Officers – 1 Civilians – 1

56 Terminal Railroads Branch. Officers 2

37 Rates and Tariffs. Compiling and maintaining rate and tariff file. Civilians – 1

38 Expedition & Demurrage. Receiving, checking & consolidating daily, weekly and monthly reports of cars arriving at and departing from stations in zone 1. Forwarding reports to chief of Transportation Service. Issuance of instructions, conducting correspondence and checking conditions at carriers stations in zone 1. Distributing & recording Bank B/Ls of lading, and requiring reports as to forwarding and accomplishment of bills of lading, accounts with carriers, etc. Officers – 1 Civilians – 4 Total 5

39 Traffic Control. Issuance of transportation orders for carload shipments originating & terminating in zone 1. Receiving & forwarding to Chief of Transportation Service applications for transportation orders to and from other points. Recording and distributing transportation orders. Inspectors for special work, checking railroad yards, miscellaneous accounts, etc. Civilians 3

40 Mail and Record. Receiving, distributing and recording inbound mail. Filing correspondence and records. Rendering report of changes of personnel. Statistical information. Making requisitions. Routine correspondence referring to rail transportation activities. Civilians – 17

50 Trucking. Preparing delivery receipts. Checking trucks and supervising movement of freight by trucks between railroad and steamship terminals and warehouses. Officers – 1 Civilians – 26 Total 99

51 Miscellaneous Accts. Checking, certifying, and responding all miscellaneous charges presented by railroads not included in road haul tariffs. Auditing bills rendered under arbitrary demurrage agreements. Civilians 7

52 Lighterage. Compiling data on car situation and reporting to Superintendent Rail Transportation. Issuing instructions expediting carload freight movement between rail, road and steamship terminals to their delivery. Agencies maintained at all principal railroad terminals. Officers – 1 Civilians – 14 Total 16

53 Outbound Freight. Preparing, issuing & recording bills of lading on all shipments moving from port of New York. Receiving & recording all inbound carload freight movements on overseas steamships. Securing disposition of cars and checking out of yards for outbound movement. Supervising movement and checking out of cars moving by rail to outbound ships for overseas movement and checking out of loading docks for outbound freight. Supervising inspection & checking of cars. Supervising movement and weighing of cars passing through the port of New York. Officers – 9 Civilians 48 Total 57

54 Inbound Freight. Receiving & accumulating bills of lading for all cars arriving from port of New York. Receiving & recording all inbound shipments. Receiving & recording delivery of freight from overseas steamships. Receiving & recording delivery of freight from railroads. Receiving & recording delivery of cars from railroads. Forwarding temporary receipts for delivery of bills of lading. Checking & recording delivery of cars. Checking transportation documents. Officers – 3 Civilians – 10 Total 13

55 Mail and Record. Receiving, recording and distributing mail. Filing correspondence and records. Rendering semi-annual report of personnel. Statistical data. Making requisitions. Officers – 1 Civilians – 6 Total 7

43 Lost Baggage. Tracing, recording, recording and clearing lost baggage. Issuing bills of lading for baggage unaccompanied by owners, having all effects deceased soldiers and other property upon request, finally report to Chief of Transportation Service. Officers – 5 Enlisted men – 4 Civilians – 88 Total 97

43 Baggage. Arranging transportation overseas express through Port of Embarkation to & from A.E.F. Inspecting receipts, manifests, & other papers. Maintaining record of detention. General supervision in transferring, handling and recording mail, baggage, foreign port of Embarkation. Local transfer service for casual passengers & escorts for soldiers. Officers 14 Enlisted men 41 Civilians 30 Total 85

44 Sick and Wounded. Arranging transportation of sick and wounded arriving from overseas. Supervision over boat transportation assigned short journeys. Officers – 9 Enlisted men – 2 Civilians – 22 Total 33

45 Car & Ferry Tickets. Issuing, recording and redeeming tickets, car, chair and sleeping, tolls, interchange & ferry tickets. Officers – 2 Civilians – 14 Total 16

46 Rail Passenger. Assisting and redeeming casual army and navy officers. Issuing transportation requests & examining transportation & identification papers. Issuing Tariff data & Tariff Rates. Officers – 3 Civilians – 9 Total 12

47 Troop Embarkation and Debarkation. Arranging rail & water transportation for troops debarking & debarking. Listing passengers for Connecticut steamship lines. Assigning passengers to commercial & navy transports. Issuing transportation requests, issuing certificates of identification. Maintaining records of inbound & outbound troops. Assigning troops from overseas to debarkation camps. Issuing travel orders for troop movements. Officers 26 Enlisted men – 2 Civilians – 1 Total 29

48 Mail and Record. Receiving, distributing and recording inbound mail. Rendering reports of changes of personnel. Compilations for Office supplies. Civilians – 15

57 Maintenance. Repairing of tracks & equipment. Reporting & checking condition of facilities and records & inventory.

58 Operation. Receiving & assigning cars for loading. Supervising & checking loading. Supervising & checking unloading. Maintenance of terminal facilities. Supervising operation of terminal railroads. Reports.

59 Mail and Record. Receiving, distributing and recording inbound mail. Filing correspondence and records. Rendering semi-annual report of personnel. Statistical data. Making requisitions.

Army Supply Base

Gov. Island

L.I. City

Hoboken

Pt. Newark

So. Kearney

461-9th Ofts. New York

Fort Jay Governors Island

Fort Jay Governors Island

Fort Jay Governors Island

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TRANSPORTATION SERVICE

PORT AND ZONE TRANSPORTATION OFFICE

45 • BROADWAY
NEW • YORK • CITY

ANIMAL DRAWN TRANSPORTATION DIVISION

60

Superintendent of Animal Drawn Transportation
Officers - 1

61	62	63	64	65
Animal Branch	**Vehicle Branch**	**Harness Branch**	**Forage Branch**	**Mail and Record Branch**
Administrative inspection to determine care, feeding, stabling condition, etc. Administrative inspection of corrals, stables shoeing, etc. Monthly reports of animals on hand. Reports of requirements at Camps Merritt and Mills. Reports of surplus at Camps Merritt and Mills.	Administrative inspection to determine condition, repairs needed and care. Monthly reports of equipment on hand. Reports of requirements at Camps Merritt and Mills. Reports of surplus at Camps Merritt and Mills.	Administrative inspection to determine condition, repairs needed and care. Monthly reports of harness on hand. Reports of requirements at Camps Merritt and Mills. Reports of surplus at Camps Merritt and Mills.	Administrative inspection to determine quality, method of receipt and issue, storage. Reports of requirements at Camp Merritt and Mills.	Correspondence and records pertaining to division

Camp Mills

Camp Merritt

Summary
Officers - 1

July 1, 1919
William J. Haig
Major O.R.C.
Supt of Animal Drawn Transportation

TRANSPORTATION SERVICE
PORT AND ZONE TRANSPORTATION OFFICE

45 BROADWAY • NEW YORK CITY

WATER TRANSPORTATION DIVISION

11 Superintendent of Water Transportation — Officers - 1

12 Assistant — Officers - 1

14 Vessel Operation Branch — Officers 2, Civilians 7

15 Freight Allocation
Record of available tonnage
Allocation of cargo to ships
Supervision of manifesting and other details pertaining thereto.
Daily report of all transports in port, whether loading, unloading or repairing.
Officers - 3
Civilians - 10
Total 13

16 Stevedoring
Loading and discharging all freight ships stores, baggage and mail for stevedores.
Daily reports showing progress of loading and unloading each vessel in port.

17 Docking
Movement and assignment to berths of all cargo and troop transports coming under the jurisdiction of the Port and Zone Transportation Officer, Port of New York.

18 Wharfage
Control of wharfage and lighterage.
Compiling tonnage, damage, demurrage and wharfage reports.
Recording wharfage charges and preparing monthly statement of the same.

19 Harbor & Coastwise
Procuring crews, stores and operation of Harbor and Coastwise tugs and Harbor Floating Equipment.
Makes records and reports on tug boats, lighters, passenger boats.
Inspection of Harbor Equipment.
Officers - 2
Civilians - 30
Total 32

20 Ocean
Procuring crews, stores and operation of ocean going W.D. transports.
Makes records and reports on same.
Inspection of same.
Officers - 1
Civilians - 3
Total - 4

21 Mail & Record
Supervision of clerical work, records & personnel of Branch.
Report sailings of all cargo & troop transports with destination & draft of vessel on arrival.
Reports number of lighters on hand previous day at terminals.
Reports barges, loaded & unloaded during previous week, also number of troop barges vessels unloaded, with tonnage of cargo received.
Time keeping of employees in Branch.
Officers - 4
Civilians - 4
Total - 8

Navy N.O.T.S.
Survey Board (Ed Taylor)
U.S. Maritime Affairs Shipping Board
Navy - 3rd Naval District Joint Board of Review

Liaison

22 Vessel Redelivery Branch — Officers - 1

23 Ship Data
History of all vessels including the following:
(a) Original inventory
(b) Original Survey
(c) Condemnation (also previous)
(d) Previous trades
(e) Record of inspections by Associations or the U.S. Steamboat Inspection Service.
(f) Record of alterations made by the U.S. Government
(g) List of repairs made by U.S. Gov't. which have increased the value of the ship, with date and place made.
(h) Records of all collisions and groundings or stranding that may have occurred or any other information that may possibly affect redelivery and the adjustment of claims against the U.S. Gov't.
Officers - 2
Civilians - 9
Total - 11

24 Property Inventory
Coordinates inventories made by Army, Navy and Owner - and records progress of same.
Requisitions and responsibility for property of Branch.
Officers - 1

25 Redelivery
Redelivery of vessels.
Inventories of fuel and water on vessels.
Obtain receipts for vessels redelivered.
Officers - 1

26 Survey, Inspection
Inspects all vessels.
Makes lists of damages for which Army is responsible.
Estimates cost of repairs.
Prepares owner's list of damages, claims & correspondence same with their list.
Makes arrangements for dry docking vessels.
Holds conference with owners and operators regarding repairs.
Submits survey reports for each vessel.
Officers - 6
Civilians - 16
Total - 22

27 Mail and Record
Coordination of work of the Branch.
Receives and distributes mail.
Makes daily report to all parties concerned with reference to status of ships for redelivery.
Collects, revises and forwards all mail of the Branch.
Time keeping of employees of Branch.
Officers - 3
Civilians - 6
Total - 11

13 Administrative
Coordination of work of division.
Rendering of reports of changes in personnel.
Supervising time-keeping of personnel.
Checking of pay rolls.
Receiving, recording & routing of all correspondence relating to Water Transportation.
Chief Clerk (Civ.) 1
Civilians - 20
Total - 21

20 Maintenance and Repair Branch — Officers 1, Civilians - 1

29 Inspection
Investigations & reports, and advice of contract repairs, alterations, refitting etc.
Making surveys & research.
Preparing specifications for repairs, alterations, refitting etc. for return of vessels to owners.
Making cost analysis of bids, prices & informal proposals & specific reports as required.
Preparation of data regarding alterations etc. for Historical Record prepared by Vessel Redelivery Branch.
Inspection of life saving equipment.
Officers - 1
Civilians - 11
Total - 12

30 Marine Supplies
Checking and filling and approving all bills for repairs, alterations, refitting etc.
Requisitioning for supplies and materials required for vessels undergoing repairs.
Officers - 1
Civilians - 3
Total - 4

31 Marine Repair Shop
Repairs, vessels, lighters, tugs etc.
Maintains record of daily activities.
Daily time reports, cost reports, on each job.
Special reports and surveys as required.
Repairing floating equipment.
Making inspections.
Preparing specifications & estimates of cost, and actual cost reports and work done.
Officers - 4
Civilians - 795
Total 799

32 Drafting
Preparing drawings, blue prints and sketches required in connection with all repairs.
Preparing detail drawings of damages to vessels owned vessels when returned.
Preparing blue prints as required.
Keeping office charts.
Civilians - 6

33 Mail and Record
Supervision of personnel and work of Branch.
Preparation of reports as required.
Preparing shop and job orders covering repair work.
Requesting authority for repair and maintenance expenditures.
Supervising progress reports submitted by inspectors.
Correspondence and records in connection with above.
Civilians - 22

Hoboken
Officers - 5
Civilians - 16
Total 21

Brooklyn
Officers - 3
Civilians - 12
Total 15

Ocean

Harbor

Summary
Officers - 43
Civilians - 975
Total - 1018

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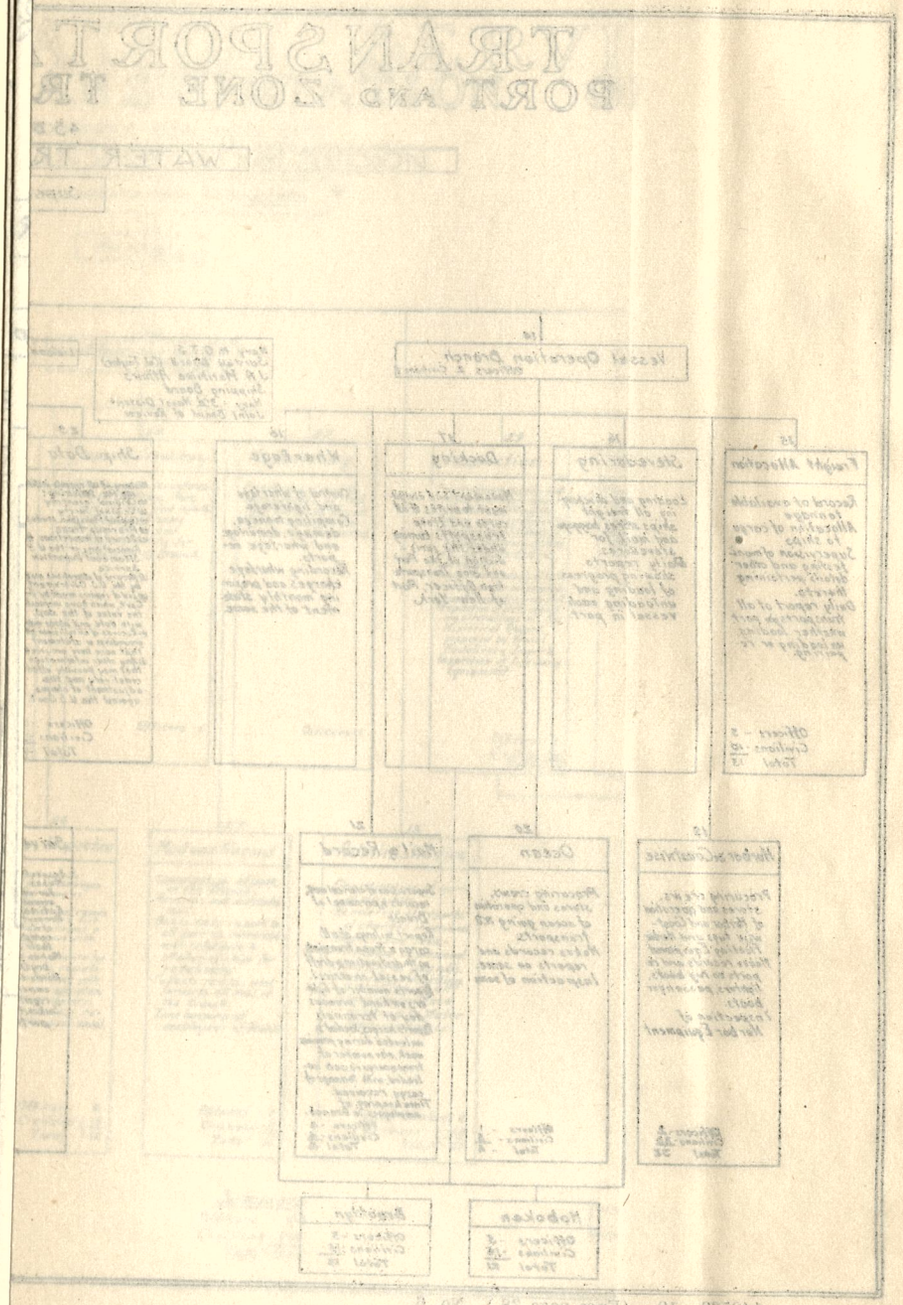


PERSONNEL ADJUTANTS.

Transport personnel adjutants were placed aboard each ship. Officers experienced in Army paper work were detailed for the purpose by The Adjutant General of the Army, schools were founded at Hoboken, N. J., and Newport News, Va., and a phamphlet of instructions was prepared for their guidance. These officers, of whom there were 290, were placed aboard each ship in the status of a staff officer of the commanding officer of troops for the purpose of assisting returning organizations in the preparation of the necessary landing returns. Probably no one class of officers has rendered more highly important service to our returning troops, and in general to the demobilization program, than have these transport personnel adjutants.

When these officers were first placed aboard the ships, the average number of service records among organizations returning to the United States was 2 per cent of the command, and other reports and paper work were, in most cases, entirely absent. The improvement wrought by these officers was such that, upon returning to the United States, they could certify that service records, landing reports, passenger lists, and other reports of all persons aboard the ship were accurately prepared and up to date.

THE ENLARGEMENT OF THE EMBARKATION SERVICE.

The Embarkation Service and Inland Traffic Service were combined on March 11, 1919 (Supply Circular No. 21, Purchase, Storage, and Traffic Division), and the organization known as the Transportation Service, War Department, indicated in Diagram B, was established.

THE TRANSPORTATION SERVICE.

With the issuing of Supply Circular No. 28 (Purchase, Storage, and Traffic Division), all transportation activities of the War Department, except those pertaining to the Motor Transport Corps, were placed in one operating service. This resulted, on April 9, 1919, in the organization of the present Transportation Service, War Department. Its divisions and branches are as indicated in Diagram C.

On April 21, 1919, General Orders, No. 54, War Department, 1919, was issued. This general order organized the Transportation Service throughout the United States and its territorial possessions.

General Order No. 54, War Department, 1919, in part provides as follows:

> In each territorial department, supply zone, post, camp, or other station the personnel records, and equipment of all transportation activities, except those pertaining to the Motor Transport Corps, will be consolidated into one operating service. The personnel of the Inland Traffc Service will be included in the consolidation at points where they are now detailed.
>
> The consolidated personnel will be designated the department (zone, post, camp, or station) transportation section, Transportation Service, War Department, and the officer in charge will be designated the department (zone, post, camp, or station) transportation officer.
>
> The duties of the transportation section will include all transportation activities, except those pertaining to the Motor Transport Corps. It will handle and issue all transportation requests and bills of lading, preparing and accomplishing bills of lading, in accordance with present orders and regulations, upon certification of shipment or receipt of property by the officer responsible for same.
>
> Department and other commanding officers (except commanding officers at ports of embarkation and zone and deputy zone supply officers) will select an officer to act as

transportation officer. The name and rank of the officer so selected will be reported to the Chief of Transportation Service, War Department. The Chief of Transportation Service will select officers for detail as port, zone, or deputy zone transportation officers.

Except in supply zones, the transportation officer will be responsible, under the direction of the department or other commanding officer, for the proper administration of all transportation matters in accordance with the orders and regulations issued by the War Department. In supply zones, the transportation officer will be responsible directly to the Chief of Transportation Service, War Department, for the proper administration of all transportation matters. The transportation officer will have supervision over all transportation equipment, except that pertaining to the Motor Transport Corp; this equipment will include all War Department owned or controlled water transportation (except that pertaining to river and harbor improvements under the Corps of Engineers), rail, animal-drawn, or other equipment used in the transportation of property or personnel.

The necessary steps will be taken by commanding officers and others to furnish such office equipment and office space as will be necessary to properly conduct the activities of the transportation section.

All administrative duties connected with transportation activities, which are not technically animal drawn, water or rail transportation matters, have been assembled in the Administrative Division, where it has been possible better to organize and more economically and efficiently to operate the general transportation activities.

ORDERS AND REGULATIONS BRANCH.

The Orders and Regulations Branch was established on April 22, 1919. The work of this branch is the preparation of transportation bulletins, office orders, forms, etc., having same mimeographed or multigraphed, the checking of the proofs, the distribution and reprinting, when necessary, also the receipt and distribution of War Department, Purchase, Storage and Traffic, Finance and other orders, bulletins, regulations, etc., and the keeping of files thereof for reference and guidance.

The transportation bulletins have been furnished to all posts and stations from a list obtained from the Office of The Adjutant General of the Army, containing approximately 350 stations at which there are Army activities, and in addition to Alaska, the Philippines, and Hawaii, a number of copies have also been mailed to each port, zone, and deputy zone transportation officer and to department transportation officers. The number of cases handled per day has been approximately 50, which includes answers to communications requesting copies of transportation bulletins, as well as verbal requests which are received daily.

Before the date in question 10 transportation bulletins were issued. Since April 22, 23 transportation bulletins have been published and, in addition, 35 office orders.

LEGAL BRANCH.

Among the interesting problems handled by the legal branch, either in whole or in part, have been the following:

Discovery and rejection of straw bondsmen.
Rescue of Government ships from failing contractors.
Adjustments with Shipping Board as to the Japanese and foreign ships.
Harbor strikes in New York.
Disposal of effects of seamen deserting abroad.
Salvage claims of the Navy and private owners.
Handling of alien enemy crews at the ports.

American reservists' difficulties in returning from Britain.
Controversies with foreign Governments over ships, through State Department and foreign embassies.
Settlement of the stevedore disputes at the ports.
Sinking of the *Sixaolo* and *St. Paul* and submarined vessels such as the *Joseph Cudahy* and others.
Taxation problems.
Investigation of thefts on vessels in ports.
Disputes resulting from requisition of ships.

Through the legal branch close liaison has been maintained with many branches of the Government, including the Judge Advocate General's Office, the Navy, Shipping Board, State Department, Department of Justice, Auditor, and Departments of Labor and Immigration. This has meant frequent conferences, personal calls, communications by telephone and letter. This has meant, as well, much valuable information, promptly had, for the benefit of the Transportation Service.

The Shipping Board was the governmental agency for handling ships of private and national owners. This laborious work of keeping clearly defined, at all times, the basis of agreements between the Shipping Board and Army, with the complications which arise through the Navy's operation of many of the Army boats, has fallen upon the Legal Branch.

Possibly the largest undertaking of this branch has been the creation of the Claims Board of the Transportation Service. The necessity for this board was revealed soon after the reorganization of the Transportation Service, when the legal branch was made a separate branch under the Administrative Division and took over, in addition to its other duties, the legal work of the Rail Transportation Division.

Accordingly, the Legal Branch effected, on May 26, 1919, the creation of a claims board, which has jurisdiction over all claims arising out of the operations of the Transportation Service. To handle the large number of claims, approximating ten millions of dollars, which will come before the board for settlement, the Legal Branch has been increased by the addition of three officers from the office of the Judge Advocate General and four additional officers. As organized, the Claims Board consists of a colonel, (Regular Army), a lieutenant colonel (judge advocate), and a civilian (business man), assigned as judges.

The following is a summary of cases handled by the Legal Branch:

General work.

Contracts examined	3,000
Leases	50
Charter parties, ships, tugs, etc	2,500
Licenses examined	40
Survey of ships on redelivery closed	160
Bonds examined	1,250
Amounts involved in contracts reviewed upward of	$100,000,000
Conferences with Shipping Board	32
Conferences with Navy	41
Other conferences	50

Opinions.

Opinions written, formal, more than	2,000
Opinions written, informal, more than	3,500

Routine.

Number of board reports examined, more than	1,800
Memoranda prepared for Chief of Staff	250
Letters for Adjutant General's Office	1,000
Letters prepared for Secretary of War	375
Agreements drawn, correspondence, and copy work impossible to estimate.	

Claims.

Number of claims considered by office	1,850
Amount of claims considered by office, upward of	$25,000,000
Claims now on file in office for adjustment	600
Amount of claims on file in office over	$6,000,000

COURIER SERVICE.

The official War Department Overseas Courier Service was formally established as a function of the Embarkation Service on July 7, 1918. Since that date 63 couriers have been dispatched from Washington to General Headquarters, France, leaving at intervals of approximately six days. During this period, 614 sacks of mail, containing correspondence from the several War Department bureaus authorized by the Secretary of War to use this service, have been successfully transmitted to our expeditionary forces in Europe, and at the same time 1,408 sacks of correspondence have been brought from overseas to the executive departments in this country, all without mishap.

In addition to carrying mail, the courier service originally handled the delivery of heavier packages of ordnance and similar material urgently needed in France, but this was found to hamper quick dispatch of the mails, and arrangements were made to take care of such requirements through a War Department overseas express service.

Prior to the initiation of the courier service, the War Department was obliged, except in a few isolated instances, to depend altogether on the ordinary mails for the forwarding of confidential instructions, data, and the immense amount of correspondence incident to the operation of our forces in Europe. This method was obviously far from satisfactory, owing to the inevitable difficulties under which the overseas postal service was operating; and the keen necessity for a quick, efficient means of communication by letter between the War Department in Washington and Gen. Pershing's headquarters therefore resulted in the inception of this special service. At the present time official mail presented to the courier service, Transportation Service, in Washington, is frequently delivered to the addressee in France or England within 10 days, practically always in less than two weeks—an average saving of from 10 to 30 days over the regular mails.

A commissioned officer, selected for his known intrepidity, and detailed as a War Department official courier, is charged with the delivery of each consignment of mail to France, and returning, is likewise responsible for the similar delivery of mail from Europe to the Transportation Service in Washington. Upon the arrival of the overseas mail it is distributed to the proper officials in the United States by the Courier Section, Transportation Service.

On each trip to and from France the courier in charge of the mail has had the responsibility of caring for an average of 13 sacks of mail, and at times more bulky packages of urgently needed material have been intrusted to him for delivery. The courier is assisted by a noncommissioned officer and every facility is provided, both on this side and abroad, for his quick passage.

When the submarine hazard still existed, the sailings of transports were screened as much as possible and official announcements were sent out to the various bureaus of the War Department of the date set for the departure of the courier from Washington. He was frequently obliged to wait a day or so at Hoboken before sailing in order better to veil the sailing dates of convoys. Under present conditions couriers are held in Washington until the night before the vessel leaves the port, the exact time being arranged by telephone with the port. This makes the issuance of formal notices of departure of the courier unnecessary, and mail is accordingly accepted from day to day. The interval of departures is approximately six days, but definite information is furnished, whenever practicable, by the Courier Section.

The port of debarkation is notified, in advance by cable, of the exact time when the courier will arrive in France; and all possible measures are taken on the other side to expedite his travel to General Headquarters, American Expeditionary Forces. The round trip of every individual courier between Washington and Europe is ordinarily completed within four weeks.

Mail consigned to the forces in England is taken from the courier at Paris and carried by local courier to London with the least possible delay. Mail for other points in Europe is also transmitted through the continental courier service of our Army, a very effective factor in the transmission of military and diplomatic information.

A fair example of the value of transmission by the courier service of information impossible to convey by cable or radio is given in the method followed, by which debarkation authorities overseas were furnished with a record of the freight en route overseas in cargo ships. Invoices showing complete cargo placed aboard each ship by the several supply bureaus at the port of loading were collected and dispatched to Washington, assembled by the Transportation Service, and then forwarded abroad by the first courier. These invoices, traveling as they did on the fast passenger ships, reached France several days before the ships carrying the cargo, and the officer in charge of unloading was thus informed of the exact amount of freight, how loaded, etc., before the vessel carrying it arrived.

Early in December the trans-Atlantic cables, which had been used almost exclusively by the War Department, were ordered opened for the State Department, and their military use was restricted to the most essential messages. The stream of cable communication therefore was largely diverted to the next fastest means at the disposal of the War Department, resulting in a new form of message—the "Courier-cablegram."

Records of casualties and sick and wounded in our overseas forces were transmitted by "courier cablegram" from general headquarters to The Adjutant General of the Army. Official notifications of this nature were somewhat delayed by physical conditions in France, but once prepared, have been speedily transmitted to Washington. Records of allotments and of war-risk insurance, both of general interest to the public, also have been speedily reported to Washington through this service.

The Peace Conference added appreciably to the volume of courier mail. Every outgoing courier carried at least one pouch of mail from the State Department to the American Peace Commission, and the incoming couriers often had as many as six pouches of mail for the State Department. The courier handled also the communications between the White House and the President while he was in France.

The sixty-third eastbound courier left Washington on June 30, and the ninety-fourth westbound courier reached Washington on the same day.

MAIL AND RECORDS BRANCH.

On July 1, 1918, the mail and record sections of the Water Transport Branch and the Embarkation Service were operated in separate buildings, the former on the third floor of the Mills Building, Seventeenth Street and Pennsylvania Avenue NW., and the latter on the third floor of the State, War, and Navy Building. There was only a slight duplication. Records of an administrative character and those requiring immediate action and absolute secrecy in connection with troop movements, instructions to convoys, etc., were filed in the Embarkation Service; and records pertaining to maintenance and operation of the trans-Atlantic service, as well as the regular transport service running to the Canal Zone, Manila, and intermediate ports, and records pertaining to harbor equipment, mine planters, cable ships, and motor mine yawls for the entire service were filed in the Water Transport Service.

As the transport fleet increased to meet the requirements for the prompt dispatch of troops and supplies overseas, necessitating prompt action at all times, many disadvantages were encountered daily through the physical separation of the correspondence in the administrative and operating sections of the transportation organization. Therefore, on the 5th day of October, 1918, the Water Transport Branch and the Embarkation Service were transferred to the third wing of the Munitions Building, where they were operated as one general office, with the records filed separately. About November 24, 1918, following close upon the signing of the armistice, the work of actually combining the records of the two offices was begun, and from that date the correspondence has been filed in one general office.

When the papers of the two offices were thrown together it was found that the large volume of correspondence to be classified and filed tended to confusion and delay in locating any particular paper between the dispatch desk and the files. To obviate the necessity of a search through the entire volume of such papers, often many times during the day, the office was organized into sections to which was assigned the work of review, index, and filing papers pertaining to particular subjects which are divided, according to numbers in the decimal filing system, and the current mail, immediately upon receipt in the record section, divided into groups corresponding to the several sections. To each section is assigned a review clerk, with an assistant, one or more file clerks, and such number of typists as the work of that particular section may require. Under this arrangement, when a search is to be made for a paper, the knowledge of the subject or the number leads directly to the section handling that paper, and as a rule the records are located without serious delay.

It is proper to state in this connection that but for the special efforts put forth by the force engaged in the record section the consolidation with the handling of current work could not have been accomplished, and great credit is due the personnel as a whole for the care with which they performed this work, many working hours overtime to bring about the change.

BAGGAGE, REMAINS, AND EFFECTS BRANCH.

The Baggage, Remains, and Effects Branch was formally initiated on February 1, 1919, for the purpose of complying with duties enjoined by—

(*a*) Circular No. 8, Purchase, Storage, and Traffic Division, General Staff, 1919, which charged the then Embarkation Service with establishing and operating a "Lost Baggage Section" for locating and delivering baggage lost by returning members of the American Expeditionary Forces.

(*b*) Circular No. 136, War Department, 1918, creating an "Effects Bureau," under the direction and control of the then Chief of Embarkation, for delivering to proper heirs all personal effects belonging to deceased members of the American Expeditionary Forces.

LOST BAGGAGE.

Prior to this date no specific provisions were in force covering the disposition of baggage which had become separated from owners traveling in the military service. Baggage lost in France before the beginning of extensive homeward troop movements, was handled by by the American Expeditionary Forces lost-baggage service, so that in general such property was either returned or reimbursement made before the owners reached the United States. But when troops began arriving in large numbers it was found that many officers, enlisted men, and civilian employees of the Army had been obliged to leave abroad personal baggage from which they had become separated due to various exigencies of the service. A lost-baggage section was therefore established in the Transportation Service to facilitate the search for and return of such property.

The physical details in connection with the operation of this section have been handled for the Commanding General, Port of Embarkation, Hoboken, N. J., by the transportation officer at that port. Instructions issued designating Hoboken as the exclusive port from which overseas lost baggage would be handled, all shipments from abroad being accordingly centralized to that point.

The baggage handled by this section becomes lost through many and varied circumstances. Organizations were required to place all surplus baggage in a regimental dump before going into active service on the front lines; officers and men were wounded and evacuated to the rear, or, on account of sudden advances or retreats, became hopelessly separated from their personal property which was frequently not recovered before their departure for home. Baggage misplaced through error incident to unusual traffic over continental railways was frequently turned over to the American Expeditionary Forces lost-baggage service months later, when it was found that the owner had returned to this country. Trunk lockers and bedding rolls at times reached the port of embarkation just after the person to whom it be-

longed had embarked. All such property throughout England, France, and other European countries in which American military personnel had traveled was therefore assembled through the Army baggage service and consigned by transport as available to the baggage officer, Hoboken, for disposition.

The operation of this service has resulted in the arrival at Hoboken, since early in February, of approximately 750 pieces of miscellaneous effects per week. This material is assembled, placed in warehouse space, checked and identified, as far as possible. In many instances, requests are already on file to have baggage forwarded when received to the owner's present station or home address. These cases are disposed of immediately. The remainder is classified for immediate availability on future call. Several War Department memoranda, as well as newspaper, magazine, and ther Publicity, have notified the public at large of the existence of the Lost Baggage Section at Hoboken, as a result of which that office is constantly receiving shipping instructions covering material on hand. Obviously, many packages are received, identification of which is impossible; but despite this fact, there remained on hand at Hoboken at the end of the fiscal year 1919 but 6,063 undelivered pieces.

Returning members of the American Expeditionary Forces desiring to secure reimbursment for baggage lost overseas are required to file claim with a board of officers convened under existing regulations. When the facts stated indicate that there is a possibility of recovering the property through the Lost Baggage Section, the papers are referred by the Transportation Service to Hoboken for search before final action by the board. At times such papers are referred overseas for further search, but, depending of course on the circumstances of the individual case, a statement that the baggage is not on hand at Hoboken is often sufficient to justify the allowance of such claims.

With the disintegration of the American Expeditionary Forces, the Central Lost Baggage Depot at Gievres and minor similar depots in France and England are being closed on June 30, 1919, and baggage still on hand at these points will be shipped to the lost-baggage section at Hoboken. It is estimated that by the middle or latter part of August all stray and unclaimed baggage from overseas will have reached Hoboken. Then a final attempt will be made to dispose of the whole. Where all means of identification have failed, such pieces as remain on hand will be salvaged, so far as is practicable. The remainder will be disposed of to the bests interests of the Government.

DISPOSITION OF REMAINS.

Disposition of remains, reaching this country on incoming transports, is a function of the port utilities officer of the port of embarkation. No definite policy for the immediate return of remains of soldiers dying in France has been adopted; such remains as have reached this country are merely those of soldiers who have died on the high seas.

Where deaths occur on Navy transports, the remains are immediately embalmed by the Navy embalmer attached to the Navy personnel on board the vessel. To insure proper embalming of persons dying aboard commercial transports, a civilian embalmer, provided with the necessary equipment to carry on the work, has been assigned to every vessel of this classification designated to carry troops

Remains reaching ports of debarkation in this country are classified as contagious and noncontagious and, immediately upon arrival, are turned over to undertaking establishments to be prepared for burial. This work is performed with the greatest expedition so that bodies are forwarded to the deceased's relatives, under an armed escort, within 24 hours after the docking of the vessel, if such is possible.

EFFECTS.

At the beginning of the present fiscal year, effects quartermasters of the various ports of embarkation were charged with the duty of delivering to relatives in this country, under the provisions of the 112th Article of War, such shipments of personal effects as from time to time reached the ports.

War Department Circular No. 136, dated December 11, 1918, created a central "Effects Bureau," and detailed a Chief of Effects Bureau with station at Hoboken, N. J., placing the responsibility for the operation of this bureau on the Embarkation Service. Under the provisions of this circular the Chief of Effects Bureau was charged with proper delivery to heirs of all personal effects of deceased persons connected with the American Expeditionary Forces. His duties were later extended to include disposition of effects from debarkation hospitals.

Since the centralization of this work at Hoboken, including the last six months of this fiscal year, 28,768 cases of effects have been received, 13,729 disposed of, leaving a total of 15,039 to be delivered. Every one of these cases includes several packages, usually a considerable amount of personal property which the owner had accumulated prior to his death, all of which must be inventoried, checked, and receipted for upon delivery.

Few phases of War Department activities since the cessation of hostilities have been so much in the public eye as the expeditious and complete return to relatives of the personal belongings of soldiers who have died abroad. The personnel in charge of this work has therefore been very carefully selected, and at all times an appreciation required of the personal loss sustained by the recipients of these effects.

The policy of the bureau in dealing, by correspondence and personally, with relatives of deceased soldiers has always been to act upon the full realization of the personal loss involved and to take into consideration their lack of understanding of war conditions which make delay in delivery and, at times, loss of effects, unavoidable. Hundreds of letters are received weekly, some commendatory and others uncomplimentary, but all are replied to with the greatest possible tact and sympathy.

A shipment of 400 tons of effects is now en route from France. These packages consist of trunks, boxes, bedding rolls, etc. It is believed that by August 30, all personal effects will have been received from abroad and assimilated by the Effects Bureau at Hoboken after which, within a relatively short period, complete disposition may be made of everything on hand, either by delivery to relatives or sale in accordance with provisions of Army Regulations.

PRINTING TELEGRAPH BRANCH.

In the early summer and autumn of 1918, when troops in increasing numbers and supplies in vast quantities were being transported to Europe, secrecy of movement, coincident with speed, accuracy, and secrecy in communication for the direction of same, was paramount.

To meet this demand the Signal Corps, in collaboration with the engineering staff of the Western Electric Co., New York City, developed and perfected the cipher printing telegraph.

During a practical test under the direction and supervision of the Chief of Staff the cipher printer fulfilled all the requirements in speed, accuracy, and secrecy, and, with the approval of the Secretary of War, it was installed with the least practicable delay in the Embarkation Service, Munitions Building, Washington, D. C., and at the Port of Embarkation, Hoboken, N. J., in October, 1918.

The transmission of regular business in cipher was initiated immediately between the Washington and Hoboken stations, which approximated 12 cipher messages daily during the months of October and November, 1918. Throughout the above period an average of six messages in plain English were transmitted daily, this facility-transmission in plain English having been incorporated in the line sets of the cipher printer.

The pronounced success of the Washington to Hoboken line resulted in the installation of the cipher printer set in the offices of the Transportation Service at 45 Broadway, New York City.

In January, 1919, a third station connecting the office of the Chief of Embarkation, Washington, D. C., with the Port of Embarkation, Newport News, Va., was placed in operation. This station was fitted for plain English transmission only, absolute secrecy being no longer required.

The maintenance of all equipment, including the rental for the land-lines between the respective stations is assumed and executed by the Engineering and Research Division, Signal Corps, which has funds and authority provided for this purpose under act of Congress, February 8, 1918.

Cipher apparatus was eliminated in April, 1919, its special feature, secrecy, having become a minor consideration.

The printing telegraph sets for plain English transmission were retained and are in daily operation between all stations, Washington, Hoboken, New York, and Newport News.

The volume of business has steadily increased from an average of 18 messages per business day during October and November, 1918, to 128 messages daily for May, 1919. Indications point to a favorable and appreciable increase in the volume of telegraphic business for the printing telegraph stations during the ensuing months.

Approximately 3,900 messages were handled by the printing telegraph during the month of June, 1919, averaging 90 words each, Government count. Had these messages been transmitted by the Government through a commercial concern at the regular established rate of 1⅓ cents per word, paid commercial concerns by the Government, the cost would have amounted to $4,212. However, this business was handled by the printing telegraph and represents our income.

Rental for the land-lines and printing telegraph apparatus for all stations is $2,488.87 per month. The salaries for the personnel at

annual rating of $1,100 and $1,200 aggregated $1,700 for the month of June. The total expenditure for rentals and salaries for June totaled $4,188.87. Thus, it will be observed that the income of $4,212 shows a gain of $23.13 over the total expense for June, 1919, of $4,188.87.

OFFICE SUPPLIES AND EQUIPMENT BRANCH.

This branch is charged with the procurement and distribution of all office supplies and equipment, including printing, mimeographing, multigraphing, and photostating and all matters pertaining to telephones and dictograph instruments and to the maintenance of the office.

All office supplies and equipment were obtained through the Office of the Quartermaster General from July 1, 1918, to December 19, 1918, when the Building Service Section, Administrative Branch, Purchase, Storage, and Traffic Division was established and all organizations performing duties in connection with building equipment and service, communicating systems, office equipment, duplicating and printing were consolidated with that section.

Previous to March 1, 1919, no difficulty or delay was experienced in procuring all supplies and equipment necessary for the efficient handling of the business of the office, but on that date an order was issued by the Building Service Section that requisitions for articles not listed in War Department Catalogue No. 1 would be considered only when indorsed by a detailed statement as to the necessity for such articles, such requisitions to be submitted to the Standing Committee on Standardization of Office Supplies and Equipment for consideration, which naturally resulted in some delay in the procurement of such articles.

STATISTICAL BRANCH.

The Statistical Branch is required to maintain running records of all important operations of the Transportation Service. It compiles all essential data and statistics regarding operations and furnished much of the basic data used by the Statistical Branch of the General Staff.

In general, these reports include data and graphic representations regarding the following:

France—
- (*a*) Sailings of troops by months.
- (*b*) Arrivals of troops by months.
- (*c*) Sailings of troops by tonnage.
- (*d*) Arrivals of troops by tonnage.

Russia—
- (*e*) Sailings of troops by months.
- (*f*) Arrivals of troops by months.

Animals—
- (*g*) Animals transported by months.

Losses at sea—
- (*h*) Deaths on vessels en route.
- (*i*) Troops on vessels lost at sea.
- (*j*) Troops on vessels which on account of engine or some other trouble returned without crossing.
- (*k*) Troops removed at Halifax on account of illness.

The major part of the year has been given over to recording and compiling statistics for returning troops. It should be noted that the work involved in keeping records for returning troops is about

three times as heavy as the work involved in keeping records of an equivalent number of sailing troops. This is due to the fact that when our troops sailed abroad they were usually recorded in large, compact, and unified groups, thus facilitating the record keeping. Among the returned troops are found a great many casuals which require special attention. During the last six months almost as many troops have been returned as were sent over in an entire year.

PERSONNEL AND INSPECTION BRANCH.

At the beginning of the fiscal year 1919, there was no personnel branch of the office, all matters pertaining to personnel being handled by certain designated employees in the Administrative Division. But, due to the rapid expansion of the activities of the Transportation Service, it was found necessary during the early part of Novembe to establish a separate branch with a personnel of 1 officer and 4 civilians to handle personnel matters. This number has been gradually increased until on June 30, 1919, there were 1 officer and 10 civilians employed in this branch.

Owing to the unusual demands of all Government departments for clerical assistance it was at times difficult to obtain a sufficient number of employees through the Civil Service Commission to meet the demands of the various sections of the office, and it was found necessary to obtain authority for the temporary employment of a large number of employees. This was particularly true with reference to stenographers and typists, accountants, or clerks with knowledge of accounting, and men with technical training and railroad experience.

Due to the disparity in salaries paid for the same class of work and the inability to secure an adjustment, this branch lost the services of some of its trained employees, which required the breaking in of new employees when the work was at its height and it was only by the loyalty, splendid spirit, and self-sacrificing effort of the remaining employees who performed many hours of voluntary overtime duty, that it was possible to conduct efficiently and without serious delay the business of the office.

There is given below a statement showing the personnel on duty in the office of the Chief of Transportation Service throughout the fiscal year:

	Commissioned.	Army field clerks.	Enlisted.	Civilian.		Commissioned	Army field clerks.	Enlisted.	Civilian.
1918.					1919.				
July 1	25	.....	2	223	Jan. 1	42	.....	17	153
July 15	26	.....	2	231	Jan. 15	44	.....	17	159
Aug. 1	28	.....	3	227	Feb. 1	55	1	20	163
Aug 15	29	.....	3	231	Feb. 15	58	1	21	164
Sept 1	30	.....	4	239	Mar. 1	55	1	20	182
Sept. 15	32	.....	5	264	Mar. 15	54	1	19	184
Oct. 1	33	.....	5	267	Apr. 1	53	.....	19	182
Oct. 15	17	.....	4	86	Apr. 15	53	.....	18	197
Nov. 1	17	.....	9	104	May 1	51	.....	18	209
Nov. 15	23	.....	9	105	May 15	72	.....	18	301
Dec. 1	33	.....	17	164	June 1	74	.....	15	304
Dec. 15	36	.....	16	151	June 15	77	.....	16	319
Dec. 31	38	.....	16	152	June 30	84	.....	11	339

The large decrease shown on October 15, 1918, was due to the transfer of the former cargo section of the office to the Office of the Director of Storage. The large increase in commissioned and enlisted personnel on December 1, 1918, was due to the consolidation with this office of the former Water Transportation Branch of the Office of the Quartermaster General (which previous to this time was operating under the supervision of the Chief of Embarkation Service, although the personnel was under the jurisdiction of the Office of the Quartermaster General), and, in enlisted personnel, to the addition of the printing-telegraph branch. The large increase on May 15, 1919, was due to the consolidation of the former Inland Traffic Service with this office.

The personnel on duty at the various ports of embarkation reached a maximum prior to the signing of the armistice and was as follows:

Port of embarkation, Hoboken, N. J.:	
Officers	1,950
Enlisted men	16,899
Civilians	7,434
Total	26,283
Port of embarkation, Newport News, Va.:	
Officers	1,378
Army field clerks	104
Enlisted men	23,887
Civilians	714
Total	26,083
Baltimore, Md.:	
Officers	[1] 55
Enlisted men	[1] 271
Civilians	377
Total	703
Boston, Mass.:	
Officers	6
Civilians	95
Total	101
Charleston, S. C.:	
Officers	8
Civilians	95
Total	103
Philadelphia, Pa.:	
Officers	14
Army field clerks	2
Enlisted men	2
Civilians	23
Total	41
Grand total	53,314

The increased number of enlisted men on duty at Newport News over that at Hoboken was due to the fact that at the former port a training camp for stevedores was maintained.

[1] Figures include 8 officers and 230 enlisted men on duty with guard and fire companies.

The personnel on duty at these ports on June 30, 1919, was as follows:

Port of Embarkation, Hoboken, N. J.:	
Officers	2,092
Enlisted men	10,737
Civilians	14,193
Total	27,077
Port of Embarkation, Newport News, Va.:	
Officers	888
Enlisted men	12,755
Civilians	3,335
Total	16,978
Baltimore, Md.:	
Officers	8
Civilians	76
Total	84
Boston, Mass.:	
Officers	4
Civilians	71
Total	75
Charleston, S. C.:	
Officers	8
Enlisted men	15
Civilians	9
Total	32
Philadelphia, Pa.:	
Officers	11
Civilians	73
Total	84
Grand total	44,275

The total personnel of the Transportation Service outside of Washington on June 30, 1919, was as follows:

Permanent officers	285
Temporary officers	2,448
Enlisted men	23,869
Civilians	22,153

These figures do not include 42 permanent and 808 temporary officers of the Medical Corps and chaplains on duty at the primary ports of embarkation.

On July 1, 1918, the personnel of the Inland Traffic Service (now the Rail Transportation Division of the Transportation Service), consisted of 32 officers and 179 civilians, making a total of 211. When the armistice was signed, there were 37 officers and 335 civilians, including those on the payroll of the United States Railroad Administration assigned to the Inland Traffic Service, making a total of 372. Since the signing of the armistice, the personnel of the Inland Traffic Service has been reduced more than 50 per cent and further reductions are being made as rapidly as possible.

On June 18, 1919, a transportation bulletin was issued directing that reductions be made as rapidly as possible with a view to having the strength approximate that of the pre-war basis, and the reports received indicate that at many stations this has already been accomplished, and, at others, reductions are still going on.

It would not be proper to conclude a report of the activities of the Personnel Branch without expressing my appreciation and gratitude for the hearty cooperation and loyal support shown at all times by the officers and employees of the Transportation Service. The Transportation Service has been fortunate in having in its employ a personnel peculiarly fitted for the work by reason of previous training and experience, and all have rendered a splendid service and have given their unstinted efforts toward the accomplishment of the successful results obtained.

EFFICIENCY METHODS BRANCH.

All correspondence for the Transportation Service, War Department, is regulated by the Administrative Division and prompt steps are taken for its disposition.

The incoming mail is opened, time-stamped, given its proper file number, and immediately routed by experienced classifiers. A system of charge slips, in duplicate, is employed which enables the Administrative Division to satisfy itself that all cases are disposed of within a certain time, the original charge slips accompanying correspondence and the duplicate retained with the Administrative Division awaiting the return of the original slip with the action indicated thereon. As soon as the charge slip is attached letters are distributed into trays for the various divisions of the office and delivered immediately to the divisions concerned. These methods demonstrate a maximum of efficiency by securing an uninterrupted flow of correspondence throughout the office, placing all mail in the hands of the officer for whom it is intended, within a very short time after it is received.

All outgoing mail is reviewed and passed upon, and, after careful examination by the Dispatch Section of this division, which makes certain that all proper records are taken, it is released, routine correspondence going out by mail and messenger and important replies being conveyed by Liaison Officer between this office and other bureaus of the War Department. All mail intended for the New York offices and ports of embarkation at Hoboken and Newport News is delivered daily by courier to these points.

FINANCE BRANCH.

The activities of the Finance Branch of the Transportation Service have been of such magnitude that it is impracticable to include all the details in this report. A general summary of the most important items of interest only will be referred to. The expenditures for the fiscal years 1918 and 1919 may be summarized as follows:

Expenditures: *Fiscal year 1918.*	
Owned transport service	$4,714,894.22
Chartered transport service	97,452,805.01
River and harbor boat service	878,164.38
Coast Artillery boat service	693,664.41
	103,739,528.02
Obligations and reservations:	
Estimated amount to be reimbursed to Navy Department	$30,000,000.00
Estimated amount to be reimbursed to United States Shipping Board	35,000,000.00
Amount reserved for payment to British Government for transportation of troops and cargo	35,000,000.00
Amount reserved for payment to French Government for transportation of troops and cargo	7,000,000.00
Amount reserved to cover claims and losses not presented	25,000,000.00
	235,739,528.02

Fiscal year 1919.

Expenditures:	
Owned transport service	$3,509,270.00
Chartered transport service	110,799,904.65
River and harbor boat service	1,182,835.00
Coast Artillery boat service	1,256,297.08
	116,748,306.73
Obligations and reservations:	
Estimated amount to be reimbursed to Navy Department	85,000,000.00
Estimated amount due United States Shipping Board for charter hire and operating expenses	175,000,000.00
Estimated amount due Allied Governments for transportation of troops and cargo	90,000,000.00
Amount reserved to cover obligations	13,463,889.78
Balance held to cover emergency claims, etc	30,880,126.45
	511,092,322.96

On February 11, 1919, a settlement was reached with the British Government for the transportation of American troops and cargo overseas. The agreement was entered into by Lord Reading, representing the British Government, and Brig. Gen. Frank T. Hines, United States Army, representing the United States Government. The agreement specifies a per capita rate, which rate covers all costs, claims, and damages whatsoever. The per capita rate agreed upon is approximately $81.75, this against the flat rate of $150 per man as originally proposed by the British authorities.

The rapid return movement of the American forces from France enabled a revision of the estimates for 1919, as indicated in table on page 55. This revision of the 1919 estimates resulted in a gross saving of $249,764,659.75.

A summary of the operating expenses is shown in Table on page 55. The prompt return of chartered vessels to the Shipping Board or their owners resulted in a great direct saving to the United States in charter hire, etc., and a still greater saving was made to the Government by the resulting rapid demobilization of the forces as returned from overseas. While it is not possible to calculate with exactness the saving, from the best information obtainable it is estimated that approximately $66,000,000 was saved by returning to the United States 300,000 men two months, and an additional 300,000 men one month, sooner than the original schedule contemplated.

The operation of the Pacific transport fleet during the past year has been exceedingly satisfactory. Considering the value of the service performed by the Pacific transports, at commercial rates in effect during the year, a total saving of $2,393,866.08 was made to the Government.

Estimates and appropriations.

Item.	Item No.	Original appropriation.	First revision Aug. 12, 1918.	Second revision Nov. 29, 1918.	Amount appropriated.
Ships, purchase of (new construction)	72	$11,500,000	$33,950,000	.....	.....
Army Transport Service (chartered)	73	661,235,200	850,872,400	$618,012,840	$618,012,840
Army Transport Service (owned)	74	2,805,665	4,435,375	4,415,475	4,415,475
River and harbor boat service	75	1,202,917	21,246,225	1,746,925	1,746,925
Coast Artillery boat service	76	1,038,707	1,861,054	1,841,754	1,841,754
Total	.....	677,782,489	912,065,054	626,016,994	626,016,994

Item.	Item No.	Third revision Apr. 17, 1919.	Net amount appropriated for fiscal year.	Gross savings.
Ships, Purchase of (new construction)	72	.....	.....	.....
Army Transport Service (chartered)	73	$503,903,868.96	$503,903,868.96	$249,764,659.75
Army Transport Service (owned)	74	4,029,275.00	4,029,275.00	.....
River and harbor boat service	75	1,382,925.00	1,382,925.00	.....
Coast Artillery boat service	76	1,776,254.00	1,776,254.00	.....
Total	.....	511,092,322.96	511,092,322.96	249,764,659.75

NOTE.—The item of "Ships, purchase of," carried $11,500,000, which was granted in the first appropriation act. In the first revised estimate an additional amount of $22,450,000 was included. The House Committee on Appropriations made a cut, eliminating the entire amount of $33,950,000 from the appropriation.

The item shown under "Gross savings" in the amount of $249,764,659.75 included the amount of $135,855,688.71 for the transportation of troops and cargo on allied controlled ships, which was not included in former estimates and gives a net savings or turn back to general appropriations of $113,908,971.04.

Summary of operating expenses.

	Charter hire.	Refitting and restoration.	Ordinary repairs.	Operating costs.	Total costs.
Cargo (Dutch)	$10,925,255.73	$50.00	$38,164.76	$1,328,263.44	$12,291,733.93
Owned boats operated in Atlantic fleet	1,524,250.00	228,281.51	54,685.11	378,552.20	2,185,768.82
Owned by Navy (expense incurred on account of Army)	.....	53,374.28	.....	36,830.93	90,205.21
Interned and Shipping Board (cargo)	150,396.09	161,497.00	71,131.52	6,456,859.27	6,839,883.88
Interned and Shipping Board (troop)	.....	2,540,760.25	1,016,891.50	1,976,544.74	5,534,196.49
French boats operated by the French Government for the United States	.....	.....	.....	11,779.00	11,779.00
Cargo (time form charter)	10,737,780.91	80,434.00	260,896.55	2,267,691.84	13,346,803.30
Allied ships (special arrangement)	.....	46,935.49	21,465.72	514,624.36	583,025.57
Troop (time charter)	877,286.94	154,225.00	13,007.72	146,190.94	1,190,710.60
Troop (bare boat charter)	15,045,709.25	5,283,510.15	736,604.65	2,934,461.28	24,000,285.33
Cargo (bare boat charter)	18,935,287.80	295,686.47	1,206,565.07	4,687,936.78	25,125,476.12
Total	58,195,966.72	8,844,754.15	3,419,412.60	20,739,734.78	91,199,868.25

Statement showing average cost of installation of berths and hammocks on converted cargo vessels.

Name of steamer.	Contractors.	Date of award.	Particulars of award.		Accommodations.			Cost per bunk.
			Amount.	Days.	Berths.	Hammocks.	Total.	
Arcadia	W. & A. Fletcher Co	Dec. 13, 1918	$61,000.00	1 21	894	80	974	$62.6283
Alaskan	do	Dec. 18, 1918	133,462.00	1 26	2,078	142	2,220	60.11801
Arizonian	Morse Dry Dock & Repair Co	do	142,652.00	1 21	2,555	76	2,631	54.2198
Ancon	do	Mar. 20, 1919	132,198.00	18	3,022	137	3,159	41.8455
Amphion	Weehawken Dry Dock & Repair Co	Apr. 4, 1919	120,200.00	40	2,436	93	2,529	47.53
Artemis	W. & A. Fletcher Co	Mar. 15, 1919	155,030.00	33	3,814	84	3,298	47.01
Buford	Empire Shipfitting Co	Dec. 1918	62,020.00	1 18	1,035	115	1,150	53.9304
Black Arrow	Morse Dry Dock & Repair Co	Jan. 1 - 1919	160,738.00	58	1,565	136	1,701	94.4955
Cape May	Morgan Engineering Co	do	171,000.00	26	1,907	185	2,092	81.7399
Callao	do	Feb. 8, 1919	118,575.00	16	2,294	109	2,403	49.3424
Dakotan	W. & A. Fletcher Co	Apr. 24, 1919	119,000.00	1 23	1,650	125	1,775	67.04225
Edward Luckenbach	James Shewan & Sons	Dec. 20, 1918	189,750.00	29	2,318	120	2,438	77.8301
Edgar Luckenbach	Tietjen & Lang Dry Dock Co	Dec. 26, 1918	174,200.00	1 32	2,154	90	2,244	77.6292
Eurana	Morgan Engineering Co	Dec. 30, 1918	120,250.00	1 28	1,758	126	1,884	63.8269
El Sol	Weehawken Dry Dock Co	Mar. 27, 1919	121,500.00	28	1,200	100	1,300	91.119
El Oriente	do	Apr. 9, 1919	129,500.00	28	1,200	100	1,300	93.461
Eten	W. & A. Fletcher Co	Apr. 12, 1919	144,000.00	24	1,850	150	2,000	72.00
Freedom	James Shewan & Sons	Apr. 28, 1919	190,000.00	30	1,681	64	1,745	108.8825
Floridan	W. & A. Fletcher Co	Dec. 23, 1918	164,000.00	1 29	1,779	218	1,997	82.1231
F. J. Luckenbach	Tietjen & Lang Dry Dock Co	Jan. 30, 1919	130,195.00	21	2,309	200	2,509	51.89
Gen. Goethals	W. & A. Fletcher Co	Mar. 4, 1919	138,950.00	21	1,388	120	1,508	92.1419
Gen. W. C. Gorgas	American Standard Shipfitting Corporation	Feb. 11, 1919	165,991.00	47	1,048	80	1,128	147.16
Iowan	Morgan Engineering Co	Feb. 25, 1919	169,000.00	29	1,766	124	1,890	89.4179
Julia Luckenbach	Tietjen & Lang Dry Dock Co	Dec. 24, 1918	189,000.00	1 32	2,737	32	2,769	68.2524
Katrina Luckenbach	Hamilton Shipfitting Co	Jan. 17, 1919	179,950.00	1 28	2,252	175	2,427	74.14503
K. I. Luckenbach	Morgan Engineering Co	Dec. 21, 1918	184,995.00	38	2,390	86	2,476	74.7156
Kentuckian	Thomas F. Meehan	Dec. 30, 1918	172,000.00	1 30	1,976	160	2,136	80.5243
Lancaster	Morse Dry Dock & Repair Co	Dec. 28, 1918	180,000.00	28	2,222	165	2,387	75.4084
Liberator	W. & A. Fletcher Co	Dec. 23, 1918	189,000.00	1 32	2,478	168	2,646	71.4285
Mexican	Morgan Engineering Co	Jan. 2, 1919	192,000.00	1 30	2,573	179	2,752	69.7674
Minnesotan	American Standard Shipfitting Corporation	Dec. 20, 1918	173,500.00	1 28	2,155	129	2,284	75.9534
Montpelier	Morse Dry Dock & Repair Co	Feb. 1, 1919	118,173.00	18	2,324	70	2,394	49.3611
Nansemond	Tietjen & Lang Dry Dock Co	Mar. 7, 1919	168,825.00	1 30	4,924	541	5,465	30.892
Ohioan	W. & A. Fletcher Co	Dec. 13, 1918	99,774.00	1 22	1,605	73	1,678	59.46007
Otsego	do	Dec. 18, 1918	144,000.00	1 30	1,052	54	1,106	130.1989
Panaman	Morse Dry Dock & Repair Co	Jan. 14, 1919	113,966.00	1 18	2,187	78	2,265	50.31611
Paysandu	W. & A. Fletcher Co	Dec. 18, 1918	144,000.00	1 30	1,354	86	1,440	100.00
Philippines	do	Jan. 2, 1919	225,085.00	28	4,800	200	5,000	46.21
Peerless	Morgan Engineering Co	Apr. 18, 1919	128,990.00	24	2,653	150	2,803	46.02
Radnor	W. & A. Fletcher Co	Mar. 1, 1919	119,980.00	23	1,908	104	2,012	59.6322
Santa Ana	do	Mar. 20, 1919	118,000.00	1 26	1,368	50	1,418	83.2175
Santa Olivia	do	Dec. 24, 1918						
Santa Clara	Morgan Engineering Co	do	139,000.00	1 28	1,907	83	1,990	69.8492
Santa Cecilia	W. & A. Fletcher Co	Feb. 3, 1919	168,995.00	1 25	1,860	100	1,960	86.2219
Santa Paula	do	Mar. 4, 1919	163,000.00	33	2,054	100	2,154	75.6731
Shoshone	American Standard Shipfitting Corporation	Feb. 14, 1919	139,000.00	24	2,116	115	2,231	62.3039
Santa Rosa	W. & A. Fletcher Co	Feb. 11, 1919	148,750.00	24	1,372	100	1,472	101.0529
Scranton	do	do	166,000.00	23	2,243	87	2,330	71.2446
Santa Barbara	Tietjen & Lang Dry Dock Co	Feb. 15, 1919	135,830.00	21	1,917	183	2,100	64.6809
Suwanee	do	Feb. 19, 1919	142,000.00	23	1,530	95	1,625	87.3846
South Bend	Thomas F. Meehan & Sons	Apr. 1, 1919	148,000.00	1 28	1,926	180	2,106	70.2226
Texan	American Standard Shipfitting Corporation	Mar. 31, 1919	176,684.00	23	2,241	136	2,377	74.33
Tiger	Empire Shipfitting Corporation	Jan. 28, 1919	179,000.00	53	2,163	350	2,513	71.2296
Troy	Morse Dry Dock & Repair Co	Mar. 15, 1919	113,767.00	18	2,860	.....	2,860	39.7755
Virginian	W. & A. Fletcher Co	Mar. 1, 1919	297,500.00	39	5,811	316	6,127	48.56
Walter A. Luckenbach	do	Jan. 27, 1919	199,000.00	1 35	4,113	327	4,440	44.8198
	Tietjen & Lang Dry Dock Co	Dec. 20, 1918	164,000.00	1 26	2,587	100	2,687	61.40677
			8,345,975.00				130,305	64.049

1 Working days.

RAIL TRANSPORTATION DIVISION.

HISTORY OF ORGANIZATION.

It must be understood that until the consolidation of all the transportation activities, as directed in General Orders No. 54, War Department, 1919, no one agency of the War Department operated or completely supervised rail transportation activities. Each bureau and division of the War Department conducted its own transportation branch and each branch controlled the actual operation of rail movements in so far as that particular bureau or division was concerned. The Inland Transportation, and later the Inland Traffic Service, supervised, generally, the freight, express, and passenger traffic but in no case took over actual operation.

From July 1 to 19, 1918, the Director of Inland Transportation continued to operate under the original order establishing that division (Office Order No. 151, Purchase, Storage, and Traffic Division, dated February 4, 1918). This division gave particular attention to routing of the large overseas shipments and to prevention of congestion at ports and at points where large quantities of property were being concentrated, as well as to making recommendations, when requested, covering freight and passenger traffic matters.

On July 19, 1918, Office Order No. 38, Purchase, Storage, and Traffic Division, General Staff, directed that the Inland Traffic Service take over all those duties formerly performed by the Director of Inland Transportation. This order established branch and district offices at numerous points throughout the United States which supervised the War Department traffic in designated territory and provided representatives at the various larger stations, depots, warehouses, camps, etc.

The order establishing the Inland Traffic Service (Office Order No. 38, Purchase, Storage, and Traffic Division, July 19, 1919) outlined the duties of this service as follows:

Functions.—(*a*) At a date to be fixed by the Chief of Inland Traffic Service, the supply bureaus and each section or division thereof, and the Construction Division will discontinue their transportation organization in so far as they deal with the ordering of cars, routing and transportation of troops, ammunition and supplies of all kinds, and all activities of that character, as more fully outlined in paragraph 3 hereof, and will thereupon be assumed by the Inland Traffic Service.

(*b*) Chiefs of supply bureaus and of sections and divisions thereof, officer in charge of Construction Division, commanding officers of all depots, warehouses, posts, camps, cantonments, aviation fields, arsenals and other places where such service is required will assign to such work, under the direct jurisdiction of the Inland Traffic Service, in so far as the above-named functions are concerned, a commissioned officer of appropriate rank and experience, such additional personnel as may be necessary to perform the services named, office quarters, equipment, etc., at the expense of the supply bureau or other branch concerned.

(*c*) The Inland Traffic Service will take over and perform all duties pertaining to the transportation, inland and coastwise, of all troops, also all property of the War Department moving by express, freight, or otherwise, and the routing thereof, beginning with the ordering of cars or other vehicles for use in shipping the property, also including all matters pertaining to expedition or preference in movement, tracing, checking of railroad yards, instructions to carriers, including the disposition of shipments on arrival at destination, all other relations with the carriers, switching service and questions pertaining to transportation as distinguished from the concentration and shipping of the property and the acceptance or storing or otherwise disposing of it on arrival at destination, will require prompt acceptance of the property, unloading of cars and accomplishment of bills of lading.

(*d*) The Inland Traffic Service shall have jurisdiction over and control of railroad freight and passenger equipment, other than locomotives, belonging to the Government, and the records thereof. This to include tank cars belonging to the Signal Corps and the Ordnance Department, the freight cars purchased from the Panama Canal, and such other equipment as may be acquired from time to time. The assignment of tank cars and other special service cars to the service in which they are to be employed, and the making of leases or contracts for their use will, as heretofore, be under the jurisdiction of the bureau or department to which the cars belong.

The necessary authority was given to carry into effect the consolidation and to establish the required number of branch and district offices.

Some of the duties prescribed were not assumed by the Inland Traffic Service, viz, actual operation of transportation matters, covering duties previously performed by the several departments, and the control of rail equipment. Its work was principally that of supervision, and along these lines it accomplished that which could not have been accomplished by any War Department activity established at that time. During the emergency it probably would not have been practicable to institute an operating service as comprehensive as that prescribed for the Transportation Service as now organized. The Transportation Service as now organized assumes actual operation of all transportation facilities, except motor transport, and is so constituted as to permit of immediate expansion capable of handling all freight and passenger traffic during any emergency which could develop.

If it had been possible for the Inland Traffic Service to assume all the duties prescribed in General Orders No. 54, War Department, 1919, organizing the Transportation Service, War Department, the value of the work accomplished would have been greatly enhanced, as the actual operation of transportation activities would have been controlled by one agency of the War Department, and contracts, agreements, orders, and regulations covering transportation matters would have been prepared in a uniform manner and enforced at all points through its own personnel. As it was, the Inland Traffic Service had to refer the numerous cases of dereliction to The Adjutant General or to the chiefs of the various bureaus who, operating their own transportation branches, were the authorities having the power to direct correction or to take the necessary disciplinary measures

The Inland Traffic Service continued to function until March 11, 1919, when Supply Circular No. 21, Purchase, Storage, and Traffic Division, General Staff, directed its consolidation with the Embarkation Service.

On April 9, 1919, Supply Circular No. 28, Purchase, Storage, and and Traffic Division, General Staff, directed consolidation of all transportation activities, except those of the Motor Transport Corps, into one operating service.

DUTIES.

The duties of the Rail Transportation Division are carried on through the following branches:

(*a*) Passenger traffic.
(*b*) Freight traffic.
(*c*) Construction, maintenance, and operation.

PASSENGER TRAFFIC.

The Passenger Traffic Branch controls all movements of military passengers by rail and by water. In order better to explain the functions of this branch the following outline of the system which has gradually been evolved, is given:

A representative (department general agent) of the United States Railroad Administration is located at the headquarters of each military territorial department and port of embarkation or debarkation. There is a camp general agent at each camp, cantonment, and other important Army station. These general agents work in conjunction with the department and port transportation officers and local military authorities at the various camps in securing equipment, routing parties of less than fifty, assisting in the placing of cars and loading of trains for all movements, etc. They report to the Manager, Troop Movement Section, United States Railroad Administration, Washington, D. C. In the above manager's office is located also a routing committee.

It is the function of the above troop movement section to compile and suggest routes and arrange for equipment and train service for the movement of troops to all points in the United States.

After movements have been ordered by the Operations Division, General Staff, through The Adjutant General, request is made on the rail passenger transportation section by the department, port, zone, or camp transportation officer for routing, dates of movements, equipment, etc. After receipt of such request by this office routes are requested from and submitted by the routing committee mentioned above, which, if satisfactory, are promulgated to the military authorities interested, with information as to the availability of Pullman and coach equipment, and scheduled dates set for movement. This information, in turn, is issued by the Troop Movement Section, United States Railroad Administration, to the railroads interested and the general agents at Army headquarters. In this manner an efficient system has been built up and complete coordination maintained between the War Department and the Railroad Administration.

In the matter of troops for embarkation overseas it was customary for the Chief of Embarkation Service to formulate, in advance, a program of the organizations to be released during each succeeding month. At a conference between the Manager, Troop Movement Section, United States Railroad Administration, the Operations Division, General Staff, and this office, dates were suggested for such movements and later, upon receipt of specific orders from the Embarkation Service, routes were issued in advance to the camp interested; subsequently, when date had been set by the port commander for the arrival of troops at his port, arrangements were made for the necessary equipment and the scheduled leaving time of the trains set.

In the movement of troops from overseas the Troop Movement Section, United States Railroad Administration, is kept fully informed of the situation, in advance, by furnishing them with copies of troop cables, etc., in order that they may so arrange equipment as to prevent delay in moving the men when ready.

The ports advise this office, by telephone, of troops they wish to move, and routings with dates of movements are given them promptly by telephone. Later, this information is confirmed by mail.

Department transportation officers have authority to route all movements of troops in their own department between camps under their jurisdiction and for parties of 50 or less to any point outside of their own department. Camp authorities at camps not within the jurisdiction of a department commander have authority to route parties of 50 or less to any point. All routings, other than as outlined above, are furnished through this office.

From the following statements, it will be seen that detailed arrangements for handling over 8,500,000 troops have been made by the Passenger Traffic Branch since July 1, 1918.

It will also be noted that 1,494,533 troops have been returned from overseas since December, 1918. These troops, after arrival at the port of embarkation, are segregated into detachments and sent to the camps nearest their homes. This system made a much more complicated proposition than the movements for embarkation overseas. In the latter case, troops were moved as complete organizations to one destination; but, on the return trip, an organization may have been divided into 10 or 15 detachments for as many destinations. These movements were further complicated by the fact that it was the policy of the War Department to grant, as far as possible, the many requests for the parading and entertainment of troops at various points en route to their destination. The details of such arrangements all passed through this office, and something over 400 parades and stops for entertainment were authorized. In some cases as many as three or four stops were made by one organization, in many instances consisting of several trains and from two different ports necessitating the consolidation of trains at the various points in order to form one parade.

Statement of special troop trains operated and number of passengers handled during year ending June 30, 1919.

Month.	Special trains run.	Passengers handled.		Drafted men.	Total.
		On special trains.	On regular trains.		
1918.					
July	1,277	672,266	85,832	388,935	1,147,033
August	1,361	608,939	52,292	279,618	940,849
September	1,051	452,626	76,575	198,032	727,233
October	869	326,113	80,559	.....	406,672
November	446	185,529	94,373	.....	279,902
December	816	307,141	426,893	.....	734,034
1919.					
January	850	301,988	352,663	.....	654,651
February	673	265,519	241,619	.....	507,138
March	868	367,307	240,786	.....	608,093
April	1,009	469,371	251,252	.....	720,623
May	1,293	594,801	277,299	.....	872,100
June	1,209	542,091	366,374	.....	908,465
Total	11,722	5,093,691	2,546,517	866,585	8,506,793

Taking into consideration the number of trains run and the number of men handled, criticism of the equipment and train movement has been very slight.

During the last two weeks in June, troops arrived in such numbers from overseas as seriously to embarrass the rail lines for equipment. By suggestion of the Secretary of War, the United States Railroad Administration arranged to cancel all excursion business for the present and parades were reduced to the minimum, the result being that enough extra equipment has been provided for troop movement service fully to meet the requirements; and men now are not held at the debarkation camps a moment waiting for railroad transportation, but are moved as soon as the ports can properly prepare them.

As only a limited number of tourist cars are available it has not been possible at all times to provide tourist sleeping cars for men moving to interior camps on overnight trips. However, all concerned have endeavored to make the journey home as comfortable as it could be, and tourist cars are used as far as possible, especially for the longer trips.

Too much commendation can not be given the Troop Movement Section, United States Railroad Administration, for their wholehearted cooperation and the efficient manner in which troops have been handled by them. No problem appeared to be too complicated for them to solve and the desires of the War Department have been carried out to the full satisfaction of all concerned in every instance.

During the year ending June 30, 1919, there were 11 accidents to trains carrying troops, resulting in 18 fatalities and 171 injuries.

Statement of averages—Special troop trains during year ending June 30, 1919.

Month.	Average cars per train.	Average hours per train.	Average miles run per train.	Average miles per hour.	Average number passengers per train.
1918.					
July	12	40	830	21	527
August	12	41	817	20	448
September	11	36	700	20	431
October	10	39	787	20	366
November	11	33	692	21	417
December	10	32	629	20	376
1919.					
January	9	34	757	22	355
February	9	27	603	22	395
March	10	24	502	23	423
April	10	22	581	24	465
May	10	22	561	23	460
June	10	29	728	26	448
Total average	10.7	31	682	22	434

This branch also has charge of the handling of passengers on Army transports to and from the Panama Canal and Porto Rico from New Orleans and New York, and from the Pacific ports to Hawaii, Philippines, Vladivostok, Nagasaki, South America, Alaska, and Guam.

No Government transports regularly operate from New York to Panama at present, but a contract with the Panama Railroad Co. permits the War Department to utilize Panama Railroad steamers as though they were Government transports, for which privilege the

United States Government permits employees of the Panama Railroad Co. to travel from New Orleans to Panama on Government transports.

This arrangement during the past year has permitted the operation of the regular transports between the United States, Panama, and Porto Rico, for the base at New Orleans, giving a shorter and safer route during the submarine activities on the Atlantic coast.

This branch functioned in cooperation with the Operations Division, General Staff, Adjutant General, and, before consolidation, with the Embarkment Service (Water Transportation).

The personnel employed by the Inland Traffic Service, and taken over by the Transportation Service, consisted of railroad men of long and varied experience, and they were invaluable in supervising the rail transportation activities of the War Department. All these men, with the exception of one or two, have severed their connections with the War Department and have returned to the railroads from which they were furloughed. Much of the traffic knowledge of this personnel has been absorbed by the Transportation Service, and the traffic work of the War Department has been and will be inestimably benefited by the acquisition of this knowledge. The United States Railroad Administration has and still continues to maintain at the Rail Transportation Division an excellent corps of civilian experts who carry out the work necessary in the issuance of transportation orders, effect a complete liaison with the Railroad Administration, and in every way cooperate with the War Department in conducting the multitudinous transportation matters in which the War Department and railroads are interested.

Statement of passenger equipment used in special troop trains during year ending June 30, 1919.

Month.	Standard Pullman.	Tourist Pullman.	Coaches.	Baggage.	Kitchen and dining.	Total.
1918.						
July	472	4,079	8,228	1,123	240	14,142
August	379	4,727	8,267	1,213	129	14,715
September	152	3,894	5,788	815	195	10,844
October	176	2,731	5,529	631	105	9,172
November	53	1,562	2,549	378	90	4,632
December	57	3,622	3,400	547	94	7,720
1919.						
January	40	3,787	3,321	423	159	7,730
February	115	2,738	3,045	244	103	6,245
March	152	3,037	4,905	211	94	8,399
April	107	3,818	5,906	336	122	10,289
May	118	4,230	8,160	349	172	13,029
June	73	3,650	7,851	327	236	12,137
Total	1,894	41,875	66,949	6,597	1,739	119,054

FREIGHT TRAFFIC.

The Freight Traffic Branch controlled—(*a*) transportation orders; (*b*) express movements; (*c*) accumulation, embargo, and demurrage; (*d*) tracing express; (*e*) tracing freight; (*f*) expediting freight; (*g*) freight rates; (*h*) War Department railroad equipment—and had for its object the prevention of congestions and accumulations of cars, control of express shipments, tracing and expediting freight movements for the Navy Department and other Government offices in

addition to the War Department, adjustment of disputed freight rates, and the keeping of all records connected with the operation of some 1,342 Government-owned tank cars.

The following is quoted from report rendered by the Chief, Inland Traffic Service, formerly Director Inland Transportation, to the Director of Traffic, United States Railroad Administration, upon the former's relief from duty with the War Department, February 28, 1919:

On January 10, 1918, the congestion at the several North Atlantic ports was most serious. Approximately 30,000 carloads of Government freight, including that of the War Department and the Allies, were on hand at the ports of Boston, New York, Philadelphia, Baltimore, Newport News, and Norfolk. There were approximately 2,000 cars under load with War Department property, more than 300 carloads on piers, and approximately 1,100 on the ground. These figures are exclusive of coal and grain in bulk.

On March 30, 1918, there was a total of 22,118 cars of Government property, including that of the Allies, at the same ports, but the War Department property had been reduced to a total of 1,938 carloads, including that on wheels, on piers, and on the ground. This reflects, during the period of great difficulty in railway operation, something of the result accomplished.

Owing to the emergency which existed shipping officers resorted to the use of express service to such a degree as to congest the facilities for transporting property by express, resulting in deterioration in that service; also very large expenditures not necessary to the prosecution of the war.

Investigation having determined that the conditions did not warrant such excessive use of express service by the War Department, control over the shipment of property by that means was established by the Inland Traffic Service by agreement with the American Railway Express Co., effective August 20, 1918, by Inland Traffic Service Order No. 6, and American Railway Express Co. Circular No. 9.

In addition to supervising the movement of troops and property for the War Department, to which much time and energy has been devoted, the Inland Traffic Service has given special attention to the following subjects:

(*a*) Matters pertaining to the construction and maintenance of railroad trackage.
(*b*) Prompt unloading of cars.
(*c*) Loading of cars to full capacity.
(*d*) Prompt accomplishing of bills of lading by receiving officer.
(*e*) Routing of traffic to avoid congestion and improve the service.
(*f*) Settlement of disputed questions as between the War Department and the carriers as to passenger and freight rates and other charges.
(*g*) Completing arrangements for the movement in special trains at regular intervals, or otherwise, of high explosives, poisonous gases, and highly important freight.
(*h*) Inauguration and operation of suburban passenger service for the accommodation of persons employed in the construction and operation of War Department plants; also, to and from camps, cantonments, and other places for the accommodation of troops.

TRACING AND EXPEDITING.

Due to the many shipments moving, improper billing, and other causes, the Inland Traffic Service found it expedient to establish in that office an Expediting and Tracing Section. In order to facilitate this work, it was imperative that direct correspondence be had with the carriers through the Railroad Administration, and, with this object in view, the Railroad Administration detailed certain of its employees to duty in that section. For obvious reasons the Transportation Service has found it advisable to continue to avail itself of the services of the Expediting and Tracing Section, formerly known as the Tracing Bureau, Car Service Section. All requests for expediting and tracing are received in this office, except for local shipments when zone transportation officers are authorized to confer directly with the carriers. If the requests contain sufficient data for proper action, they are passed to the Tracing Bureau, United States Railroad Administration, which complies therewith, by direct communication

with the carriers. If additional information is necessary before action can be taken, it is secured by the Transportation Service from the War Department official making the request, before same is passed to the Tracing Bureau. During the past six months the Expediting and Tracing Section has handled approximately 3,500 files, secured necessary action with least practicable delay, and advised all parties concerned. In addition to this work the Tracing Bureau also handles tracers for the Navy Department, the United States Shipping Board, and the United States Housing Corporation

DEMURRAGE.

Due to the great emergency of the past two years it was found absolutely necessary for the proper prosecution of the war program to direct and effect the shipment of enormous quantities of materials of all kinds with the least possible delay. During that period all branches of the War Department provided for transportation of their respective classes of property, primarily with a view to meeting the imperative demand, the cost of such transportation being a secondary matter. This resulted in the accrual of large bills for demurrage at many points.

Every effort was made, by the placing of embargoes and otherwise, to overcome accumulations of freight, but this was very difficult to accomplish, due to the many large shipments moving and to the fact that it was necessary to utilize the services of many officers and civilians who had little knowledge of transportation. Demurrage charges were particularly excessive at ports of embarkation and at divisional camps, especially during the construction and first occupancy of those camps. Many of these accounts have been settled, and, with the exception of current accounts, those now remaining unpaid represent claims in connection with which neither the War Department nor the carriers have definite substantiating records. These accounts are being investigated and in each case when they can be properly certified payment is being made. Those which lack sufficient supporting evidence to warrant payment are being passed to the Auditor for the War Department.

No direct effort was made to curtail all demurrage until March, 1919, when the Transportation Service assumed control of all transportation for the Army. At that time the personnel employed in connection with transportation was largely reorganized, specific instructions were published to the Army, and a system of reports of shipments of War Department property was inaugurated, whereby a substantial improvement and a considerable reduction in demurrage bills has been effected. The demurrage reported to this office during the past three months is as follows:

March	$74,262.00
April	50,768.00
May	33,802.00

Indications are that the June report will show great reduction. There is no excessive congestion of freight at any point at this time. During the past two months 994 demurrage bills, aggregating $134,504.41, have been examined in this office and passed for payment.

RAIL EQUIPMENT.

One of the most important tasks recently undertaken by the Transportation Service was the inventory and classification of all Government-owned rolling stock, the authority over which was vested in that service by General Orders No. 54, War Department, 1919. While the work of inventorying this equipment has not been completed, it has been found that economies can be effected by having in charge of all rail equipment one central agency. This will enable this agency to transfer equipment of this character from one activity to another where most needed.

The Tank Car Section of the Rail Transportation Branch operates 1,342 tank cars purchased by the Ordnance Department, United States Army. A regular car-record office is maintained for keeping the records of each car.

This office obtains junction reports from the railroads and a complete record on each car is kept, in order to collect mileage from railroads over which cars are operated, as well as to collect rental for their use and to check repair bills and to see that they are properly rendered and approved for payment. This section also orders these cars to various plants to handle acids and oils needed by the Government in the manufacture of chemicals and explosives.

During the past fiscal year $272,490.01 was collected for rental and mileage, and $11,714.95 was expended for the repairs and maintenance of this equipment.

At the present time there are 157 cars in daily use, 211 stored loaded, and 974 stored empty.

RECONSIGNMENTS AND DIVERSIONS.

Often shippers desire to change the destination of shipments after same have gone forward. If such shipments are intercepted en route they become diversions; if they reach original destinations they become reconsignments or reshipments.

All requests for reconsignments and diversions are required, under instructions from this office, to contain certain information, including car initial and number. A car record book is kept and cross-indexed in such a way that if two or more requests are received covering the same diversion or reconsignment, the record will prevent a duplication. The diversion or reconsignment is accomplished by this office directly with the carrier or through the transportation officers at point of origin, at destination, or at intermediate points, as may be most expedient. No records were kept of this work until October 1, 1918. Since that date approximately 500 individual files covering between 3,000 and 3,200 cars have been handled in this office.

This section also handles all questions relating to freight rates.

Zone transportation officers also effect reconsignments and diversions within their respective territories.

TRANSPORTATION ORDERS.

Through the organization and work of this section, the freight traffic of the War Department has been controlled. As stated above, the congestions occurring in December, 1917, and the early part of 1918, brought to a head the necessity for War Department control

over its inland transportation. This was effected by placing embargoes upon all points where congestion had already occurred or was likely to occur. Carload shipments moving on Government bills of lading could not be shipped to an embargoed point without a transportation order from the War Department. The embargoes were placed by the United States Railroad Administration at the request of this office. The United States Railroad Administration promulgated same to the agents of all the carriers throughout the country. The transportation order bears an added significance in that it not only embodies instructions to the agent to permit a shipment to go forward to an embargoed point, but also carries with it directions to the agent to furnish the necessary rail equipment. In this way, during congestions, the material actually required for immediate use was shipped, and that which was not for immediate use had to wait until the facilities at destination were such that it could be handled. The transportation order insured that equipment would be furnished for War Department shipments, and in cases where equipment was short commercial shipments had to wait until the requirements of the War Department were met.

It is thought that by September 30, 1919, the necessity for embargoes will have practically ceased in so far as the War Department is concerned, but it is believed that this system of control should not be lost sight of and that the Rail Transportation Division should be kept in readiness to revive the system upon short notice, in the event that a public emergency again should arise necessitating a nation-wide control of rail traffic.

The following table shows, by months, the number of transportation orders issued during the fiscal year, also the tonnage and number of carloads covered by same:

Month.	Transportation orders issued.	Approximate number of cars.	Approximate number of tons.
1918.			
July	2,922	18,706	654,710
August	2,898	19,215	672,525
September	3,035	21,359	747,565
October	4,771	31,558	1,104,530
November	3,400	26,709	934,815
December	2,548	31,037	1,086,295
1919.			
January	2,947	32,400	1,134,000
February	2,877	36,373	1,273,055
March	2,842	41,301	1,445,535
April	2,909	27,771	971,985
May	1,716	23,523	537,059
June	1,319	18,712	662,353
Total	34,184	328,664	11,224,427

EXPRESS SHIPMENTS.

Early in the war there was so much congestion attending freight shipments that a great deal of property was shipped by express when express movement was not necessary. As a result, Order No. 6, Inland Traffic Service, was issued under date of August 20, 1918, which limited the weight of express shipments, with certain exceptions, from one shipper to one consignee, in one day, to 1,000 pounds. If

this weight were exceeded, Order No. 6 provided that same should be covered by transportation order from this office. A great many shipments were made in violation of this order, but as arrangements had been made that all copies of bills of lading, covering express shipments, be furnished this office, these violations were detected, and in all cases handled with the responsible parties, so that express business was gradually brought under control. Effective July 1, 1919, the limiting weight of 1,000 pounds was reduced to 500 pounds.

Statement of freight equipment used in special troop trains during year ending June 30, 1919.

Month.	Box.	Flat.	Stock.	Gondola.	Miscellaneous.	Total.
1918.						
July	1,169	273	453	227	.....	2,122
August	624	154	496	30	3	1,307
September	379	74	249	3	7	712
October	232	6	102	1	.....	341
November	65	8	47	1	6	127
December	187	21	35	4	1	248
1919.						
January	118	19	3	.....	1	141
February	77	19	7	.....	1	104
March	120	20	42	1	6	189
April	132	35	.....	28	10	205
May	114	2	11	2	4	133
June	214	22	58	2	.....	296
Total	3,431	653	1,503	299	39	5,925

CONSTRUCTION, MAINTENANCE, AND OPERATION.

During the entire emergency it became necessary at the various War Department activities, particularly the division camps and larger Government munitions plants, to construct and maintain railroad trackage for the accommodation of the extensive military traffic. The carriers responded freely to requests for this construction and maintenance; and as no specific instructions were given for the guidance and information of the War Department officials controlling this construction, a great variety of claims by the carriers for this work are still unsettled.

CLAIMS BOARD, TRANSPORTATION SERVICE.

To meet the demand for a prompt and equitable settlement of these claims the Chief of Transportation Service, under Office Order No. 37, dated June 2, 1919, appointed a War Claims Board, Transportation Service. This board is now sitting and will rapidly dispose of all unsettled railroad claims.

BILLS OF LADING.

A new system of consecutively numbered bills of lading has been instituted, effective July 1, 1919. The advantage of concentrating rail transportation activities into one operating service is particularly noticeable in the control of traffic and in the distribution of orders and regulations covering rail transportation matters, which formerly had to be effected through several operating heads, but which are now communicated direct to the transportation officers, Transportation Service, at all military activities, who are responsible for the proper administration and operation of transportation matters through commanding officers to the Chief of Transportation Service; the great reduction in demurrage charges has been brought about, as well as marked economy in routing and securing advantage of cheapest tariff rates; the issuance of instructions and orders directing that cars be loaded to capacity—an economy greatly neglected by many War Department agencies; all this by the direct control of traffic operations. Another very noticeable reform has been the securing of prompt delivery of express shipments of soldiers' remains. Previous to the consolidation of the Transportation Service express companies, in many cases, were collecting charges on these shipments, collections being made necessary on account of nonarrival of bills of lading. This necessitated reimbursement to relatives and others making payments. As this was not brought to the attention of the proper authorities, its correction did not take place until immediately after the consolidation of transportation activities, when arrangements were made insuring the immediate delivery of such shipments and doing away with the annoyance of demanding payment for express charges from relatives and other consignees.

HISTORY AND GROWTH (WHAT BROUGHT ABOUT THE RAIL TRANSPORTATION DIVISION).

The Inland Traffic Service of the War Department was the outgrowth and development of the Division of Inland Transportation of the office of the Director of Storage and Traffic, originally authorized January 10, 1918, and by Office Order No. 151 of the Director of Storage and Traffic, January 15, 1918, its functions were, in general terms, established.

At the time war with Germany was declared, the American Railway Association, representing the railway systems of the United States, had a well-equipped force in Washington familiar with the requirements of the War Department. On April 11, 1918, the War Board of that association was organized, by which means there was placed at the constant service of the Government a corps of men expert in their particular lines of transportation activity and under able direction.

The Quartermaster Corps, upon which rested the responsibility of transporting property and troops, undertook and discharged its duties earnestly and intelligently. The closest cooperation existed between it and the War Board, and methods were employed which aided materially in the prompt prosecution of the war program of construction and preparation.

Upon the selection of cantonment sites and adoption of plans, competent representatives of the American Railway Association were sent to each cantonment and rendered valuable assistance in the construction work. The railways undertook the installation of tracks at the cantonment sites, and the movement of material was expedited by the use of every device known to the railway profession which could be made available. New and greater problems in transportation constantly arose, however, and of a character for which no precedents existed and which could not have been anticipated by previous experience of either the railways or the War Department. The War Board amplified its organization and the railways responded to the constantly increasing demands.

Despite the well-directed efforts to avoid such a condition, congestion of terminals and delays in delivery of urgently needed material became a serious menace. By reason of the constantly growing Army and the necessity for increasing the production and shipment of equipment and supplies, the several supply bureaus of the Army were bending every energy to procure, produce, and forward such equipment and supplies to the ports and other points. The natural result followed. Great quantities of equipment and supplies reached the ports and other destinations prior to the requirement for their use for shipment overseas or domestic consumption, and in advance of other material urgently needed. As a consequence, there resulted a serious congestion of railway, steamship, and War Department facilities, caused by the shipment of property in excess of the ability of receiving officers to unload cars and care for the property shipped. Equipment and supplies for the American Expeditionary Forces in Europe, particularly those in France, had been shipped to the ports with little or no regard as to whether or not it was required for immediate movement overseas, or vessels in which to transport it were available.

To expedite the movement of its own particular material, several of the supply bureaus built up traffic organizations, and, with the growing congestion and decreased car supply, a competition among them was created which, while making for expedition in individual cases, complicated the situation and served to impede the plan as a whole. It was found that there was no organization within the Army through which the proper coordination and control of the transportation of property for the several bureaus of the War Department could be accomplished.

By the creation of the Priorities Committee of the War Department certain relief was given, but it became manifest during the closing months of 1917 that only by a coordination and control of the transportation of all property of the War Department in one organization could its movement in as orderly a manner as required by the war program be brought about and the constantly increasing and stifling congestion of the railways relieved.

With the assumption of control of the railways by the Federal Government, a complete coordination of transportation facilities and management was accomplished and the element of competition eliminated. Control of motive power, car supply, routings, and other activities were centralized in the United States Railroad Administration, and the successful prosecution of the war program was given first consideration.

The opportunity was thus made, not only to establish within the War Department an organization which could coordinate and control the transportation of all property and troops of the War Department but one which would have the full recognition of the United States Railroad Administration and operate under its advice and sanction.

No time was lost. A man of determination, broad traffic experience, sound judgment, tireless energy, and unusual foresight was selected to head the new organization, and on January 10, 1918, the Inland Transportation Division of the Office of the Director of Storage and Traffic was created.

To carry the work of the organization to a successful conclusion it was necessary to have the services of men of broad railway traffic experience and, further, to have the force composed of men familiar by first-hand knowledge, with traffic conditions in the various sections of the United States, the principal points of interchange, and at the principal ports. These men were made available and assigned to duty by Mr. Edward Chambers, Director Division of Traffic, United States Railroad Administration, whose constant interest and cooperation was a great factor in the success of the service. Operations were commenced at once, but not until March 1, 1918, was complete control established.

The regulations prescribed by the fundamental orders issued established the necessary control in that they provided that no shipments of War Department property might be made to ports, or other specified points, except when authorized by a "transportation order" issued by the Director of Inland Transportation, a procedure properly concurred in and authorized by the United States Railroad Administration.

By coincident orders to the railways, cars were not made available for loading, nor were shipments accepted except upon presentation of "transportation orders." By this means it was possible to at once control shipments of War Department property, confining the movement to such commodities as were known to be required and which could promptly be unloaded from the cars on arrival at destination. Under this system embargoes were placed against shipments to the ports, and from time to time other points, as became necessary, shipments thereafter being made only as authorized by "transportation orders."

The Inland Transportation Division assumed the functions previously exercised by traffic representatives of supply bureaus, so far as they related to the physical transportation of War Department property. It did not, however, assume the duties of the Quartermaster Corps with respect to the preparation for shipment, issue, or accomplishment of bills of lading, or disposition of property upon delivery to consignee at destination. It took jurisdiction over certain field forces previously organized by the Ordnance Department, and which had been utilized in connection with ordnance shipments only, and made their services available with respect to all War Department material, regardless of corps or department.

To intelligently develop, as necessity indicated, the requirements of the several supply bureaus there were included in the organization of the office five sections, representing the Quartermaster Corps, Engineer Corps, Signal Corps, Ordnance Department, and Medical Department. These sections were in immediate charge of officers designated to serve on the Priorities Committee. Their duties, however, were confined to investigation as to urgency of requirements of their several bureaus and the details in connection therewith.

Quite early in the history of the organization, in order to avoid confusion and to aid in uniformity, its designation was changed to the Inland Traffic Service, War Department, and the head of the service was thereafter designated as Chief, Inland Traffic Service, War Department, exercising the same functions and assuming such further responsibilities as were added from time to time.

The following indicates the volume of property of the War Department shipped overseas during the periods indicated:

From June 1, 1917, to December 31, 1918.

	From—											
	New York.		Philadelphia.		Baltimore.		Hampton Roads.		Other ports.		Total.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.	Tons	Per cent.
1917.												
June	15,848	100	.....	.....	.....	.....	.....	.....	.....	.....	15,848	3.5
July	11,831	100	.....	.....	.....	.....	.....	.....	.....	.....	11,831	2.5
August	19,390	100	.....	.....	.....	.....	.....	.....	.....	.....	19,390	4
September	48,197	92	.....	.....	.....	.....	378	1	4,005	7	52,580	11
October	50,408	46	20,112	18	.....	.....	19,858	18	20,330	18	110,708	24
November	25,559	33	9,452	12	663	1	30,251	39	11,018	15	76,943	17
December	91,751	52	13,782	8	7,152	4	41,819	23	23,400	13	177,904	38
Total	262,984	56	43,346	9	7,815	2	92,306	20	58,753	13	465,204	.....

	From—					
	New York.		Philadelphia.		Baltimore.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
1918.						
January	66,739	56	7,188	6	5,901	5
February	141,802	60	16,137	7	25,948	11
March	139,610	48	35,308	12	16,432	6
April	187,551	51	27,150	7	54,206	15
May	161,955	36	46,549	10	58,073	13
June	236,976	56	24,604	6	42,504	10
July	230,094	43	55,679	10	56,088	11
August	285,319	49	46,961	8	88,543	15
September	386,710	57	43,501	6	58,224	9
October	371,431	50	82,616	11	80,225	10
November	479,047	59	64,274	8	68,882	9
December	230,116	40	45,003	8	54,875	9
Total	2,917,350	50	494,970	9	609,901	10

	From—					
	Hampton Roads.		Other ports.		Total.	
	Tons.	Per cent.	Tons.	Per cent.	Tons.	Per cent.
1918.						
January	24,322	20	14,602	13	118,752	2
February	40,639	18	8,791	4	233,317	4
March	85,217	30	12,180	4	288,747	5
April	74,810	20	26,499	7	370,216	6
May	143,603	32	39,787	9	449,967	7
June	105,273	25	13,669	3	423,026	8
July	129,285	24	60,223	12	531,369	9
August	126,131	22	33,288	6	580,242	10
September	145,577	22	41,950	6	685,962	12
October	161,489	22	52,084	7	747,845	13
November	163,117	20	34,454	4	809,774	14
December	78,300	13	[1] 174,861	30	583,155	10
Total	1,277,763	22	512,388	9	5,812,372	.....

[1] Includes San Francisco, 1,064 tons, 0.2 per cent; United States Food Administration, 103,136 tons, 18.5 per cent.

CARGO MOVEMENT OVERSEAS.

On July 11, 1918, in accordance with the verbal instructions of the Chief of Staff, a careful study was made of the tonnage situation, then existing, as affecting the carrying out of our military operations abroad from July 1, 1918, to July 31, 1919. Three programs were considered, viz:

A. Sixty-division program, giving a total strength of the American Expeditionary Force by July 31, 1919, of 2,500,000.

B. Eighty-division program, giving a total strength of the American Expeditionary Force by July 31, 1919, of 3,355,000.

C. One hundred-division program, giving a total strength of the American Expeditionary Force by July 31, 1919, of 4,260,000.

The increased cost of the military establishment corresponding to the several programs outlined above can be estimated from the following table:

	Basis present estimate.	Program—		
		A.	B.	C.
Average strength of Army 1918–19 for maintenance	2,600,000	3,360,000	3,715,000	4,255,000
Strength June 30, 1919	3,000,000	3,910,000	4,650,000	5,420,000
Divisions in United States June 30, 1919	12	14	18	18
Divisions overseas July 31, 1919	44	60	80	100
Men to be drafted	1,500,000	1,895,000	2,845,000	3,795,000
Strength June 30, 1919	2,230,000	2,500,000	2,500,000	2,500,000
Total for initial equipment during fiscal year 1919	3,730,000	4,395,000	5,345,000	6,295,000

The total approximate cost of the military establishment for the year ending June 30, 1919, based on estimates submitted to the present Congress and on the approved program of a total of 3,000,000 men at the end of the fiscal year, is as follows:

Army appropriation bill	$12,000,000,000
Fortification bill	5,400,000,000
Sundry civil bill	8,600,000,000
Total	26,000,000,000

The proposed programs will cost, in addition to the above, a sum roughly estimated in each case as follows:

Minimum program	$4,500,000,000
Intermediate program	8,500,000,000
Maximum program	12,000,000,000

The table following gives a comparison, by months, of the three programs considered, and shows the additional troops and cargo capacity estimated as being necessary at that time to carry out each program.

Comparison of the three programs.

Month.	Additional troop capacity required (number of men).			Additional cargo capacity required. (dead-weight tons).		
	A.	B.	C.	A.	B.	C.
1918.						
July	107,000	117,000	132,000	1,202,000	1,202,000	1,202,000
August	22,000	112,000	207,000	1,091,755	1,217,755	1,343,000
September	60,000	110,000	205,000	996,384	1,185,384	1,437,384
October	49,000	109,000	201,000	849,984	1,117,734	1,511,484
November	23,000	83,000	198,000	613,449	859,949	1,511,199
December		31,000	196,000	313,899	731,274	1,510,899
1919.						
January		16,000	86,000	8,766	497,016	1,363,265
February			65,000		209,641	1,162,516
March			145,000			1,103,516
April		106,000	171,000			1,044,516
May		86,000	151,000			885,516
June		79,000	144,000			726,516
July		72,000	137,000			567,516

With reference to the three programs above referred to, the report submitted to the Chief of Staff, at that time, said:

PROGRAM "A."

It will be seen that a deficit in troop capacity exists for the months from July to November, requiring an additional troop capacity each month to be supplied either by commercial tonnage or that of our allies, from 107,000 to 23,000 troops per month. Commencing with December American tonnage now in operation and that to become available will be sufficient to carry the total number of troops needed to complete this program.

During the months of May and June, just past, foreign vessels have carried the following troops:

	May.	June.
British	135,611	145,340
French	2,044	3,412
Italian	12,128	13,385

NOTE.—Included under British tonnage are four Russian vessels chartered to the British and assigned in American convoys.

From this it will be noted that no difficulty should be had in meeting the deficit in troop capacity.

The transportation situation in the United States, based on the experiences had during the months of May and June, where over 200,000 troops passed through the Port of New York alone, establishes the fact that the inland carriers will be able, without difficulty, to place at ports of embarkation the number of troops required by program A. The movement should, however, be fairly well distributed throughout the month and troops drawn from several departments and not from one particular locality. With these conditions maintained and the auxiliary ports of Boston, Philadelphia and Baltimore used as in the past, no difficulty will be had in embarking the requisite number of troops.

The cargo situation is somewhat different, and a cargo deficit exists at the present time. While this deficit is largely accounted for by Gen. Pershing's requirement of 250,000 tons per month of construction material, still the additional cargo tonnage needed to meet program A is considerable.

Gen. Pershing's estimate (cable No. 1342) of 250,000 short tons of construction material is much greater in proportion to the total tonnage requirements than shipments heretofore made. Reference to Table 1 indicates that it decreases from 32.4 per cent of the total tonnage for July, 1918, to 14.2 per cent in July, 1919. The shipments of Engineers' supplies, which include all construction material, from January 1 to June 30, 1918, have been as follows:

	Short tons.	Per cent of total shipments for month.
January	35,556	29.93
February	49,243	21.50
March	84,608	29.52
April	112,400	30.50
May	110,809	24.70
June	108,597	25.40

The foregoing and Gen. Pershing's recommendation in his cable No. 1430 of July 8 of only 150,000 short tons for installation, railroad and construction material, for the month of July, would seem to indicate that his first estimate of 250,000 tons per month is probably excessive. This reduction of 100,000 short tons is important and amounts to approximately 350,000 dead-weight tons of shipping. Deducting this amount from the cargo requirements still leaves a substantial deficit even under program A, but not such a serious one.

PROGRAM B.

Troops.—The troop capacity required under this program can readily be met, as indicated under A, if only a part of foreign tonnage now operating is continued in that service.

Cargo.—The cargo deficit under this program (B) increases over that of program A during the period from August, 1918, to February, 1919, as follows:

	Dead-weight tons.
August	126,000
September	189,000
October	267,750
November	246,500
December	417,375
January	488,250
February	209,641

TABLE I.—*80 division program.*

	Total to be shipped.	Troop capacity, American tonnage.	Deficit troops for which commercial tonnage or that of our Allies will have to be provided.	Surplus.	Expected strength A. E. F., at end of each month.	Cargo tonnage required (based on Gen. Pershing's cable No. 1342).			Total cargo tonnage required, in dead weight tons.	Total cargo tonnage available, including expected new tonnage, in dead weight tons.	Expected new tonnage (dead weight tons).	Deficit cargo tonnage to be obtained from all other sources (dead weight tons).	Surplus over and above all requirements (dead weight tons).
						For maintenance.	For construction material.	Total (short tons).					
	A	B	C	D	E	F	G	H	I	J	K	L	M
1918.													
July	220,000	103,000	117,000	.....	1,160,000	522,000	250,000	772,000	2,702,000	1,500,000	236,245	1,202,000	.....
August	220,000	108,000	112,000	.....	1,320,000	594,000	250,000	844,000	2,994,000	1,736,245	284,371	1,217,755	.....
September	220,000	110,000	110,000	.....	1,480,000	666,000	250,000	916,000	3,206,000	2,020,616	366,900	1,185,384	.....
October	220,000	111,000	109,000	.....	1,670,000	751,500	250,000	1,001,500	3,505,250	2,387,516	441,285	1,117,734	.....
November	200,000	117,000	83,000	.....	1,850,000	832,500	250,000	1,082,500	3,788,750	2,828,801	441,300	859,949	.....
December	150,000	119,000	31,000	.....	1,985,000	893,250	250,000	1,143,250	4,001,375	3,270,101	446,883	731,274	.....
1919.													
January	150,000	134,000	16,000	.....	2,120,000	954,000	250,000	1,204,000	4,214,000	3,716,984	500,000	497,016	.....
February	150,000	155,000	.....	5,000	2,255,000	1,014,750	250,000	1,264,750	4,426,625	4,216,984	500,000	209,641	.....
March	160,000	170,000	.....	10,000	2,395,000	1,077,750	250,000	1,327,750	4,647,127	4,716,984	500,000	.....	69,857
April	300,000	194,000	106,000	.....	2,635,000	1,185,750	250,000	1,435,750	5,025,127	5,216,984	600,000	.....	191,857
May	300,000	214,000	86,000	.....	2,875,000	1,293,750	250,000	1,543,750	5,403,127	5,816,984	600,000	.....	413,857
June	300,000	221,000	79,000	.....	3,115,000	1,401,750	250,000	1,651,750	5,781,125	6,416,984	600,000	.....	635,859
July	300,000	228,000	72,000	.....	3,355,000	1,509,750	250,000	1,759,750	6,159,127	7,016,984	600,000	.....	857,857
	2,890,000	1,984,000	921,000	15,000	.....	12,696,750	3,250,000	15,946,750	55,813,633	50,862,167	6,116,984	7,020,753	2,169,287

PROGRAM C.

Troops.—To meet this program (C), the transportation of troops on allied tonnage would have to be increased over the numbers shipped during either May or June, the maximum requirements being 207,000 in August, 205,000 in September, and 204,000 in October. Movement of the total number of troops required offers no serious difficulty, but greater troop capacity for concentration purposes will be required. This can be provided by the assignment of Camps Dix and Upton, and with the use of Camp Lee for replacements.

Cargo.—Under this program (C) a cargo deficit of approximately a million and one-half dead-weight tons from August, 1918, to January, 1919, offers a serious problem and can only be overcome by the assignment of allied tonnage to tide over the period referred to. At no time before July 31, 1919, was the American tonnage sufficient to meet all needs.

The situation which then existed abroad was such as to require the making of a supreme effort at the earliest possible date. It was felt that the troops movement for programs B or C could be met, but the cargo situation offered the greatest obstacle. On this point the same report stated:

POSSIBLE SOURCES OF ADDITIONAL TONNAGE.

The following American tonnage is at the present time in other services. To just what extent this tonnage can be withdrawn to assist in making up the deficit shown in the tables above referred to will necessarily require the most careful consideration, especially that employed in the nitrate, manganese, chrome, sulphur, and New England coal trades. Not all of the tonnage employed in these trades is suitable for trans-Atlantic service, but it is possible that a material reduction can be made in the present assignments as new wooden steamers or vessels not suitable for trans-Atlantic service come into service from the Emergency Fleet Corporation.

	Number of ships.	Dead-weight tons.
French service	51	313,286
Italian service	33	238,393
Belgian relief	10	56,420
Swiss Government	14	106,976
British service	16	112,468
Nitrate trade	116	655,192
Manganese trade	96	317,366
Chrome trade	10	28,450
Sulphur trade	6	30,830
Phosphate trade	7	27,495
New England coal trade	154	591,488
West India sugar trade	22	53,606
Banana trade	21	81,410
Total	556	2,613,300

If only a very small percentage of the foregoing tonnage were withdrawn from some of the trades indicated, it would add greatly to our trans-Atlantic fleet.

Every effort should be made to reduce the turn around of present cargo vessels, as this offers the quickest and surest means of increasing our cargo capacity. A reduction in turn around from 70 to 60 days is not beyond all possibility, and such a reduction would result in increasing our present cargo fleet by approximately 386,000 dead-weight tons.

In commenting upon the possible shipments of overseas cargo between August 1 and December 31, 1918, the chairman of the Shipping Control Committee, in a letter of July 9 to this office, states:

"Considering the available tonnage, the estimates of new steel-ship building contained in letter from Mr. Piez to Gen. Goethals dated June 12, summary of which estimate is attached hereto,[1] and assuming a production of wooden steamers for the balance of the year of at least 700,000 total dead-weight tons' capacity, and putting

[1] Summary not quoted.

against this the shipping requirements for essential imports, our shipping obligations to our allies and neutrals and the New England coal trade, we estimate that we will have suitable tonnage available to move the following amount of traffic:

	Short tons.
August	575,000
September	650,000
October	725,000
November	800,000
December	825,000
Total	3,575,000

"It must be understood that the above figures are based upon the following conditions remaining as favorable as at present, or improving:

"(*a*) The foreign flag steamers now under charter to be continued with no increase of off-charter time.

"(*b*) The turn-around of steamers in the Army trade to France to be improved so that the average stay in port in France shall not exceed 14 days for cargo steamers, and further, that the turn-around in the essential import trades and movement to the Allies shall not be greater than at present.

"(*c*) Submarine interference and losses to remain constant or decrease.

"(*d*) The difficulty of procuring crews for the vessels operating in the essential import trade, and particularly in the New England coal trade, to remain as at present or decrease.

"(*e*) It is predicted also upon there being brought into effect such measures of control over the flow of export traffic to United States ports as will insure the loading time of army transports being reduced to a minimum.

"(*f*) Also upon the operation of such machinery as may be found necessary for the securance without delay, and at all times, of adequate supplies of bunker coal of the character required for Army transports.

"(*g*) All other conditions affecting the efficiency of the steamers to remain as favorable as at present, or improve.

"We wish to point out that only a percentage of our shipping is at present available for trans-Atlantic carrying, because many of the ships are not of sufficient size to do satisfactory work when they have to be coaled for the round trip, as is the case at present.

"During the winter the weather encountered on the north Atlantic, and at the ports of embarkation, will seriously affect the overseas movement, and this together with the inevitable port congestion in France, and the fact that many of the steamers must now go to Marseilles, will all tend toward a considerable lengthening of the turn-around, and consequent reduction of steamer efficiency.

"In view of the facts the estimate which we give above for the monthly carrying capacity is as large as our experience and knowledge of the situation will allow us to suggest at this time."

It will be noted that the foregoing estimate of tonnage capacity to December 31, 1918, agrees very closely to the requirements under program A, being slightly less than that given in the table. Considering Gen. Pershing's reduction to 150,000 tons of construction material each month, in place of 250,000 tons originally estimated, used in computing the table, the capacity indicated in letter from the Shipping Control Committee corresponds very closely to the estimate of requirements of program A.

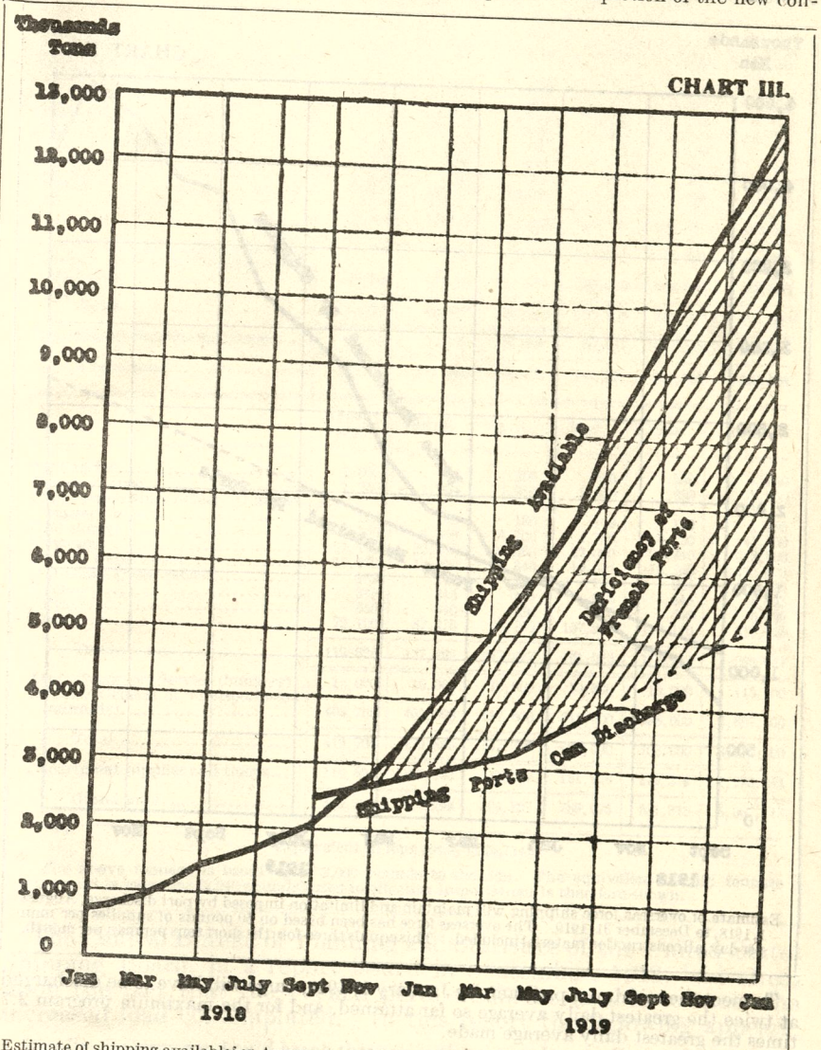
When all American sources of additional tonnage have been exhausted, it would seem entirely proper, in view of the urgent demands of our Allies, that the maximum effort in troop capacity be made at this time, that part of the deficiency in cargo tonnage be made up by the allocation of tonnage from that source, or in lieu thereof, a suitable arrangement that certain essential supplies be furnished through the British Service of Supply. This is along the line of the original understanding had with the representatives of the British Government (General Hutchinson and Mr. Graeme Thompson, of the British War Mission), at the conference held in New York on May 3, 1918.

At that time, in addition to the shortage of cargo tonnage, there was some apprehension as to whether the facilities provided at the French ports would be able to meet the situation. On this point the following extract from a report submitted by the Director of Purchase, Storage, and Traffic is significant (prepared in office of Chief of Embarkation, July 11, 1918):

CAPACITY OF FRENCH PORTS:

A reduction in the turn-around of our cargo vessels is dependent, in a large measure, upon conditions existing in the French ports.

Table V[1] herewith shows the estimated "Maximum Monthly Capacity of the French Ports," as they will exist on September 1, 1918, upon the completion of the new construction now under way; also the "Maximum Monthly Capacity Required" to meet Programs "A", "B" and "C"; and the "Additional Capacity Required" for each of the programs referred to.



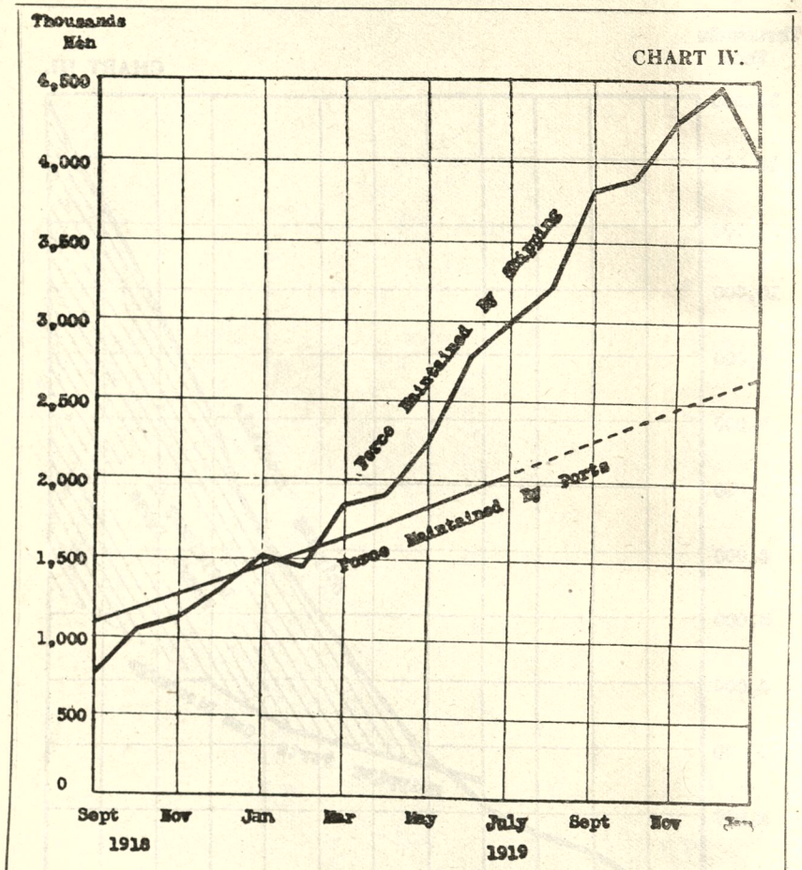
Estimate of shipping available for Army versus shipping French ports can discharge. September 1, 1918, to December 31, 1919 (tankers excluded). Shipping available shows trans-Atlantic tonnage in Army service. French port capacity is based on total short-ton discharge capacity, as estimated in this report, less capacity used for discharge of coal from England. The discharge capacity remaining for trans-Atlantic cargo has been turned into shipping on the basis that 3 deadweight tons of shipping continuously employed will carry the equivalent of 1 short ton of cargo per month from United States to France.

[1] Table V not quoted

Aside from the question of evacuation, it will be noted that considerable additional capacity must be provided in some way to meet even the minimum program.

Regardless of the optimistic view taken abroad with regard to their ability to handle the large amount of cargo now going abroad and that required as our forces increase, this phase of the situation, in my opinion, requires the most careful consideration before arriving at a decision on our future military program.

CHART IV.



Estimate of overseas force shipping will maintain and limitation imposed by port discharge, August 1, 1918, to December 31, 1919. The overseas force has been based on 50 pounds of supplies per man per day, all construction material included. This equals three-fourths short tons per man per month.

To meet the miminum program, by January 1, 1919, cargo will have to be discharged at twice the greatest daily average so far attained, and for the maximum program 2.7 times the greatest daily average made.

Coal requirements for troops, projects, and railroads of American Expeditionary Forces.

[Aug. 1, 1918, to June 30, 1919.]

	August.	September.	October.	November.	December.	January.
Air Service	50	100	300	500	1,000	1,000
Bakery branch	650	650	650	1,300	1,300	1,950
Chief purchasing officer, Quartermaster Corps	180	180	180	180	180	180
Cold storage	3,500	3,500	3,950	3,950	3,950	4,300
Engineers	12,475	13,600	15,135	16,470	17,475	19,570
Medical Department	7,741	10,752	13,356	14,190	15,684	16,725
Ordinance Department	29	45	71	96	129	159
Remount	345	345	345	345	345	345
Salvage	500	500	600	600	600	650
Troops	37,200	43,500	52,700	58,500	67,425	73,625
Total	62,670	73,372	87,287	96,131	108,088	118,504
Army Transport Service (bunkers)	5,000	5,000	10,000	10,000	15,000	15,000
Director General of Transportation (railroads)	78,000	94,000	113,000	135,000	162,000	357,000
Total	83,000	99,000	123,000	145,000	177,000	372,000
Department supplies and troops	62,670	73,372	87,287	96,131	108,088	118,504
Grand total	145,670	172,372	210,287	241,131	285,088	490,504

	February.	March.	April.	May.	June.	Total.
Air Service	1,000	900	500	500	500	6,650
Bakery branch	1,950	1,950	1,950	1,950	1,950	16,250
Chief purchasing officer, Quartermaster Corps	180	180	180	180	180	1,980
Cold storage	4,300	4,300	4,700	4,700	4,700	45,850
Engineers	21,140	22,385	24,260	27,000	28,340	218,050
Medical Department	17,772	18,996	20,340	19,057	18,260	172,873
Ordinance Department	189	222	252	284	284	1,760
Remount	345	345	345	345	345	3,795
Salvage	650	640	650	650	650	6,690
Troops	72,100	87,575	93,750	107,260	118,110	811,745
Total	119,626	137,493	147,227	161,926	173,319	1,285,643
Army Transport Service (bunkers)	15,000	10,000	10,000	10,000	10,000	115,000
Director General of Transportation (railroads)	404,700	469,800	537,600	618,000	698,000	3,667,100
Total	419,700	479,800	547,600	628,000	708,000	3,782,100
Department supplies and troops	119,626	137,493	147,227	161,926	173,319	1,285,643
Grand total	539,326	617,293	694,827	789,926	881,319	[1] 5,067,743

[1] Equivalent in long tons, 4,524,734⅓.

The above tonnage is based upon 2,000 pounds to the ton. The equivalent of said tonnage expressed in long tons (2,240 pounds) used in effecting importations is therefore shown.

The Central Bureau of Planning and Statistics of the United States Shipping Board, in a report issued in September, 1918, laid stress upon the fact that the French ports would be unable to meet the increased load contemplated. In this report the following appears:

Finally, if Germany should break through to the channel ports, England would then inevitably be forced to move some portion of her army supplies through our ports. While this danger seems remote at the present moment, it is not an impossible event Should it occur a most critical situation would instantly confront us.

With this picture of French ports we can better understand the limitations imposed by existing conditions and the difficulties under which our engineers abroad have labored. We have been discharging at a rate of approximately 400,000 to 500,000 tons a month. By next April the figures will be 1,863,000 and by July, 1919, 2,615,000. Better equipment and better organization, more rolling stock, and

larger warehouses will assist, but the shallow channels, cramped approaches to the berths, and narrow dock space, which are to be found at most of the ports, present ultimate limitations which can not be removed. The need for securing additional facilities seems clear, and if these are to be ready to meet the deficit indicated next April, immediate action is called for.

Unless this is done the situation which will confront us next spring will be serious. Idle ships at the rate of several hundred thousand tons a month will accumulate on our hands, and the whole of our industrial life will have been needlessly thrown out of gear. The size of our forces overseas will be held to a dead level, and the men we are planning to send to France in such numbers will be forced to remain on this side.

At this time it is most interesting to see how the situation actually developed. Program B (80-division) by July 31, 1919, was adopted and the department put all possible force behind the undertaking.

It was evident that we could make our maximum effort in man power early and at a time when it would be the most effective, but to do this required assistance in cargo tonnage from the Allies.

If the building program of the emergency fleet met expectations, then the period during which this assistance would be required would not be long. Otherwise the additional tonnage indicated in Table B would have to be extended over a longer period.

Great Britain was the only one of the Allies capable of extending this tonnage credit and she had been the hardest hit by the submarine, and, at that time, was bending every effort to assist in increasing the movement of American troops to France. The situation required radical steps if the Allied cause were to be saved, and with this in view the Secretary of War and the Chief of Transportation Service (then Chief of Embarkation) appeared before the Allied Maritime Transport Council in London on September 30, 1918, and presented the needs of the United States for additional cargo tonnage to carry through the increased troop program. What transpired at this meeting can best be stated by quoting from the official record of the same.

[Extract from minutes of the fourth session of the Allied Maritime Transport Council.]

AMERICAN ARMY SUPPLY PROGRAM.

The American military program of 80 divisions in France by July, 1919, recommended by the Supreme War Council, creates a serious supply problem. Secretary Baker and Gen. Hines have produced an estimate that the American Government requires a supplement to their own tonnage amounting to 1,200,000 tons from August, 1918, reducing month by month to 200,000 in February, 1919, and then ending.

Expressed in terms of imports into the European countries, the demand put forward by America represents the transport of an extra 2,000,000 tons, involving the further reduction of Allied imports by that amount, but it is not yet known how far the arrangements now being made in Paris to supply artillery and ammunition from France and Great Britain to the American Armies will affect the above estimate.

This estimate allows for the absorption of all American new building until March in the Army service, and for the withdrawal for the same service of considerable tonnage now in other American services.

The difficulties which therefore must be met are—

(*a*) An immediate American deficit; and

(*b*) An allied deficit for the whole cereal year which develops to its worst point in the later part of that year.

The solution of these two problems, if dealt with independently, would be impossible, but their association makes it possible for the European Allies and America to hope by joining resources to surmount them.

By meeting the immediate American needs, the Allies will inevitably reduce food imports from America and will throw the burden of their deficit on to the later part of the cereal year.

After her immediate deficit has been met by allied contribution, America (by comparison with the European Allies) should have available tonnage, as shown by the

estimate presented by Secretary Baker and Gen. Hines, which can be utilized to meet the accumulated European deficit and to supply food and commodities which the Allies need. It is only because of their confidence in the American position that the Allies can make their contribution now.

In these circumstances, it is clearly necessary that America, like the European Allies, should put into full execution the agreement of the Paris conference, and this means in practice that—

(*a*) America should with the European Allies table her programs of imports for joint consideration by the Allied program committees and her tonnage for similar joint consideration by the Allied Maritime Transport Council, and enable her representatives on these bodies to consider adjustments in the programs of her imports and the allocation of her tonnage.

(*b*) That in order to secure (1) in the immediate future additional tonnage for the American Army supply service, and (2) later to meet the accumulated European deficit and to supply commodities vitally needed by any one of the four countries, America, like the European Allies, should be guided in the arrangement of her import services and the disposition of her tonnage by the information and recommendations of the program committees and the transport council, with the definite intention of utilizing this Allied machinery in order to achieve the objects unanimously agreed on by the Paris Conference, viz:

1. To make the most economical use of tonnage under the control of all the Allies.
2. To allot that tonnage as between the different needs of the Allies in such a way as to add most to the general war effort, and
3. To adjust the programs of requirements of the different Allies in such a way as to bring them within the scope of the possible carrying power of the tonnage available.

These resolutions are intended to be read with and interpreted in the light of the fuller statement of the working principles of the Allied machinery printed below.

If these principles are accepted, we recommend the following further resolutions:

1. That the council should not recommend at this moment any reduction in the embarkation of American soldiers in spite of the grave condition of the import programs as indicated above, but should be prepared to recommend such a reduction, if necessary, in the embarkations of next year in order to meet any crisis that may arise in the imports of food or other supplies at the time.
2. That in view of the severe sacrifices that must in any event be entailed if the American military program is continued a full statement of the position should be issued in the name of the council and through the respective governments to the public of the four countries, this statement emphasizing the fact that it is the supreme importance of increasing the Allied forces in France which is the reason for the sacrifices asked for, and that these sacrifices are likely to be required only during the winter and spring, the supply position being thereafter in all probability greatly improved.
3. That the council having before it the following provisional allocations of tonnage for arrival from September to December, inclusive, viz, food, including military oats, 7,000,000 tons; munitions and raw materials, 9,000,000 tons; recommends that approximately 500,000 tons be diverted from the above allocation for the American Army program for October, November, and December, including the 200,000 tons already arranged, but in addition to any further space that can be provided by the release of double bottoms.
4. That the council arrange to meet in about six weeks to consider a further report on the American Army program in connection with the detailed reports of the program committees and the munitions council.

SUPPLY PROGRAM FOR AMERICAN ARMY.

The enlarged American troop movement recommended by the Supreme War Council and approved by the President of the United States would require for supply tonnage (according to estimates submitted by Secretary Baker and General Hines) a supplement to American tonnage amounting to 1,200,000 tons from August 1918, reducing month by month to 200,000 tons in February, 1919, and then ending.

This amount of tonnage would transport about 2,000,000 tons dead weight of cargo, and its allocation to the supply program of the American Army would, therefore, involve a further reduction of about that quantity of imports to the European Allies.

The estimate is based upon (*a*) an allowance of 30 pounds a day per man of stores from the United States, and (*b*) 250,000 tons a month in addition for constructional material.

It allows for the absorption of American new building in the Army program, and also for the withdrawal of a considerable amount of tonnage for the same purpose from other American service

The executive would desire to make the following observations:

(*a*) The 30 pounds a day per man is necessarily a rough estimate. It is in addition to commodities, e. g., coal, forage, or timber obtained from the United Kingdom or France.

(*b*) On the other hand no allowances appears to have been definitely calculated for the conveyance of horses, which is an important factor.

(*c*) It is observed that the calculations allowed for bunkering for the round voyage in America. This, though now necessary in view of the reduced production of coal in the United Kingdom, means a great waste of cargo-carrying capacity.

(*d*) While the estimate is incomplete for the above reasons the net conclusion does not appear to give an excessive estimate of the requirements of the American Army raised to 80 divisions by July, 1919.

(*e*) It is understood that the Munitions Council is now considering large supplies of artillery of France and Britain to America. These arrangements, if concluded, would increase the import requirements of France and Great Britain and correspondingly relieve the requirements of America for transport from the United States.

For the above reasons the executive does not consider that it is possible to deal with the program as a whole, but that consideration must be confined to the immediate future.

It does, however, appear clear that whatever be the case for a further period the American Government has a serious need for more tonnage than is now at its disposal during the next few months, especially during October and November.

(*f*) Arrangements have been made to provide Allied tonnage to the extent of 200,000 tons for loading in September and October with a further increase up to, say, 50,000 tons if the allocation of further tankers enables the use of double bottoms for oil fuel to be discontinued. It should be noted that the provision of this tonnage, unless replaced within the cereal year, would diminish pro tanto the amount of importation allowed for in the earlier part of this memorandum.

(*g*) The estimate which shows a deficit of American tonnage to the end of February shows a surplus from March onward which amounts to over three-quarters of a million tons by July and should increase continually afterwards.

(*h*) It is impossible to state the exact way in which Allied tonnage should be distributed so as to give maximum assistance to the war efforts between American Army supplies, American import services, European Army supplies and European import services except after a detailed examination of each service one by one by the Allies as a whole. This, of course, is precisely the purpose for which the Allied Maritime Transport Council and the associated Allied machinery, and the Food Council and Munitions Council, and the program committees were formed.

The extent to which our troop program was increased and our overseas efforts speeded up is clearly indicated by reference to the following extract from a report made to the Chief of Staff, December 31, 1917, by Brig. Gen. C. B. Baker, Chief of Embarkation:

The total number of troops and animals that can be transported abroad with the ships now in operation, and those in preparation, which will become available prior to July 1, 1918, giving due consideration to the dates on which such additional tonnage may be reasonably expected, is as follows:

TROOPS.

Total troops transported abroad to December 31, 1917, 191,825. (This includes troops which have actually landed or are en route.)

Number that it is expected to transport abroad during:

1918	By transports.	By commercial liner.	Total.
January			
February	64,607	20,000	84,607
March	61,410	20,000	81,410
April	62,900	20,000	82,900
May	71,272	20,000	91,272
June	72,272	20,000	92,272
Grand total	71,272	20,000	91,272
Less 10 per cent for losses and delays			715,558
Leaving balance by July 1, 1918			52,373
			663,185

ANIMALS.

Total number of animals transported or en route abroad to Dec. 31, 1917	14,276
Total number purchased to Dec. 31, 1917	14,326
Grand total transported abroad or en route Dec. 31, 1917 (disregarding losses)	28,602

Even the Commanding General of the American forces in France as late as March 1, 1918, did not anticipate that the department would be able to speed up its overseas movements to the extent finally reached. In a report to the Secretary of War, under date of March 1, 1918, Gen. Pershing states:

From present available data the number of men, A. E. F., is estimated as follows:

Apr. 1	
May 1	287,000
June 1	334,000
July 1	408,000
Aug. 1	529,000
Sept. 1	650,000
	771,000

In connection with the supply of such force, study has just been completed of the unloading capacity of the ports now in use by the A. E. F. The Director General of Transportation reports that with the improvements now contemplated and the material on hand he will be able to handle the following tonnage daily:

Beginning—

Apr. 1—	
Tons	8,700
Pounds per man per day	31
May 1—	
Tons	11,500
Pounds per man per day	35
June 1—	
Tons	11,500
Pounds per man per day	35
July 1—	
Tons	15,200
Pounds per man per day	41
Aug. 1—	
Tons	15,200
Pounds per man per day	41
Sept. 1—	
Tons	21,200
Pounds per man per day	46

Coal and oil can be unloaded in addition to the figures given above. This does not take into consideration the possible use of facilities at Havre or Cherbourg, which might be available in case of emergency.

As to the possibility of executing such a program it is pointed out that last month 165,000 tons of cargo, exclusive of coal, were actually discharged at the bases, or approximately 5,500 tons per day. But berths were very often empty, especially at Bordeaux. Moreover, in addition to this, it will be noted that our plans call for 15 additional berths to be available beginning September 1. There has also been some delay on account of untrained stevedores, which will be decreased from now on.

Reducing the figures in paragraph 2 to pounds per man per day, we will have, approximately, an unloading capacity in pounds, per day per man in France, as follows:

Apr. 1	
May 1	60
June 1	63
July 1	51
Aug. 1	59
Sept. 1	48
	56

Except in the case of August, these figures exceed 50 pounds per man per day, which has heretofore been the basis of all our estimates. This is well on the side of safety, considering the experience of other nations, and leaves us considerable leeway. In report on British shipments recently received it appears that the average weight per man per day in tonnage sent across the channel to France is about 30 pounds.

The Director General of Transportation estimates that of all material arriving during March and April, 20 per cent will be either used at the ports or will be sent away from there on its own wheels. For May and June this figure will become 15 per cent; for July and August, 10 per cent. These figures reduce the amount of tonnage to be moved by car, but for safety we should figure that 50 pounds per day will have to be hauled away for each man, to wit:

April 1	7,175
May 1	8,350
June 1	10,200
July 1	13,255
August 1	16,250
September 1	19,275

The tonnage in French cars obtainable through the past month has been about 3,500 tons per day. As military activities will increase during the summer, it is not believed safe to count on obtaining any more than this number of cars during the next six months. This leaves the following amount of car tonnage to be provided daily from some other source:

April 1	3,675
May 1	4,850
June 1	6,700
July 1	9,755
August 1	12,750
September 1	15,775

The Director General of Transportation also reports that if car repairing forces arrive namely, 1,000 during month of March, 2,000 during the month of April, and 1,200 during the month of May, that his department would be able to turn out a sufficient number of cars to give a daily car tonnage out of the ports, due to repaired cars alone, as follows. This is a conservative estimate and can probably be increased. There are 30,000 cars in France out of repair.

May	
June	1,800
July	5,350
August	7,500
	7,500

He also reports that the number of new American cars that he is now prepared to erect is 50 cars per day. These cars will have a capacity of 30 tons. A locomotive should be provided for each group of 20 cars. If these cars are ordered immediately the total made available would be about as follows:

April	
May	750
June	2,250
July	3,750
August	5,250
	6,750

It is possible that these shipments can be reduced after June, depending upon the rapidity of arrival of freight.

While this report sets forth our needs generally speaking, and should form the basis of shipment from the States, yet nothing should delay the rapid shipment of troops, material and supplies to the full capacity of available shipping, and I will add that we shall take care of and handle all that can be sent. The necessity of the military ptuation as set forth in frequent cablegrams should be the governing factor. Every siossible energy is being and will continue to be exerted here to expedite matters.

Under the foregoing agreement allocations of cargo tonnage were made as follows:

1918	Cargo vessels complete (deadweight tons.)	In liners (deadweight tons.)	Total (deadweight tons.)
September			
October	28,445		28,445
November	96,365	8,602	104,967
December	62,967	35,979	98,946
		7,335	7,335
Total	187,777	51,916	239,693

The signing of the armistice automatically canceled the agreement and further allocations.

DELIVERY OF TONNAGE BY SHIPPING BOARD.

The performance of the emergency fleet in supplying the expected new tonnage is indicated by the following comparison:

Actual deliveries.

1918	Expected new tonnage (deadweight tons).	New vessels (deadweight tons).	Lake vessels (deadweight tons).	Chartered tonnage withdrawn from the trades (deadweight tons).	Total (deadweight tons).
July	236,245	60,260	22,540	85,563	168,363
August	284,371	72,311	34,153	187,630	294,094
September	366,900	177,347	49,973	158,835	386,158
October	441,300	216,365	44,148	260,795	521,308
November	446,883	192,211	43,917	328,083	564,211
Total	1,775,699	718,494	194,731	1,020,906	1,934,134

The signing of the armistice on November 11, 1918, left uncompleted the great cargo program. The 80-division program contemplated the increased monthly shipments, by July, 1919, of 1,759,750 short tons of cargo per month. We had reached 823,000 in November, 1918, with the real test of the supply bureaus and French ports ahead.

While it is believed that the cargo program would have been put through, just as the troop movement program was put through, the fact yet remains that no supply bureau was able to build up the necessary supply reserves at the ports in the United States, and the indications were that a slowing up of the troop movement overseas would have eventually become necessary. There was not, however, any slowing up at that time, and the fact that the present Chief of Staff insisted upon every possible effort being made to meet the cargo requirements in order that no slowing up would become necessary contributed greatly to the bringing of the issue to a successful and early conclusion.

The following table shows the status of cargo shipments just preceding the armistice:

1918	Cargo required for the 80-division program.	Cargo actually called for by A. E. F.	Cargo actually shipped.
July	*Short tons.*	*Short tons.*	*Short tons.*
August	772,000	430,746	535,618
September	844,000	750,527	572,037
October	916,000	887,968	683,943
November	1,001,500	1,021,000	745,299
	1,082,500	1,131,000	823,382

THE SHIPMENT OF SET-UP LOCOMOTIVES.

One of the most interesting accomplishments connected with our overseas cargo shipments was the transfer on cargo vessels of a large number of set-up locomotives. Each of these American-built steam

locomotives weighed 100 tons and was assembled, all but the smokestack and tender, and was shipped so that it could move out under its own steam within a day or so after its arrival in France.

This method also greatly relieved the assembling plants in France, the capacity of which for assembling locomotives was equal to only 100 a month, and locomotives were badly needed. Of the 100-ton type, 1,512 consolidation locomotives were shipped from New York during the year 1918–19; of these, 497 were shipped set up on their own wheels so they could be unloaded on the tracks in France.

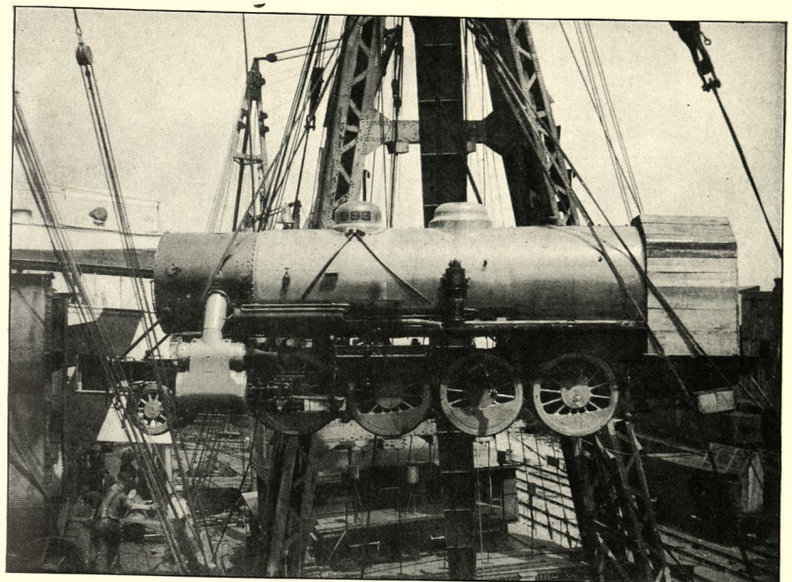
The idea of shipping locomotives complete was conceived when it was learned that England was making shipments of locomotives across the channel ready to move away on arrival. America could do what England was doing, and a fleet of ore-carrying vessels was commandeered immediately.

The large hatches of these vessels were well suited to the purpose, and the hatches of other ships were especially lengthened so that locomotives could be swung into the holds by derrick lighters. These ships were of a special type with three holds, each hold measuring 60 by 102 feet, entered by hatches 39 feet wide and 42 feet long. Into each of these three holds of some of these ships were packed 12 locomotives, 36 in all. For a bed or flooring on which they rested for the voyage, more than 3,000 tons of interlaced steel rails were used. The locomotives when in position were braced with heavy wooden beams, and the space between the boilers to the level of the top of the steel dome was packed solidly with highly compressed hay. On this hay another flooring was laid, and on this floor were placed tenders and smokestacks with more baled hay or other lighter cargo packed in the tenders. On top of the tenders trucks were packed to the level of the deck, and, during the "rush days," the above-deck space was filled with crated aeroplanes. When completely loaded with the 36 locomotives and the rest of the cargo, every one of these vessels carried a full cargo of approximately 9,000 tons.

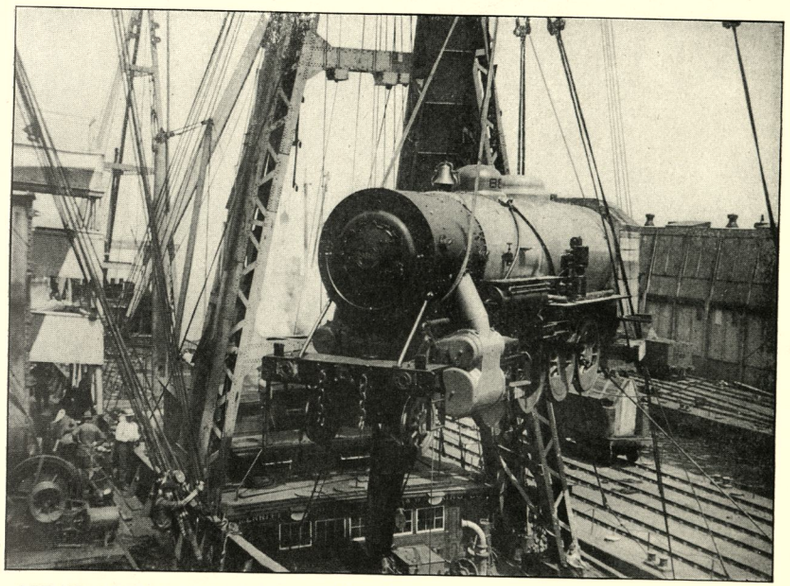
The process of loading a locomotive into a ship's hold is simple: The steel railroad barges carrying 14 locomotives are made fast alongside a 100-ton capacity floating derrick lighter, which, in turn, is made fast to the ship. A sling of steel wire is looped around the forward end of the boilers, another sling of steel wire is looped under the supports of the locomotive's cab, then at a given signal the locomotive is lifted 40 or 50 feet into the air and swung from the railroad barge over the rail of the cargo ship and lowered gently and easily down into the ship's hold. The operation takes one hour. It is as easy to swing a locomotive over the ship's side as it is to stow a 500-pound bale of cotton.

When the overseas movement was at its height, it took 24 hours to bring a locomotive from the shop, where it was built, to the New Jersey terminals; it took six hours to transfer the locomotive from the rails to the car float; six hours more, and the locomotive had reached the ship's side; one hour and the locomotive had been swung into the ship's hold; nine days later the locomotive had been carried from New York to France.

When the armistice was signed, the Army was prepared to ship these set-up locomotives at the rate of 200 a month.



73-TON LOCOMOTIVE BEING LIFTED FROM LIGHTER TO BE LOWERED INTO SHIP'S HOLD.

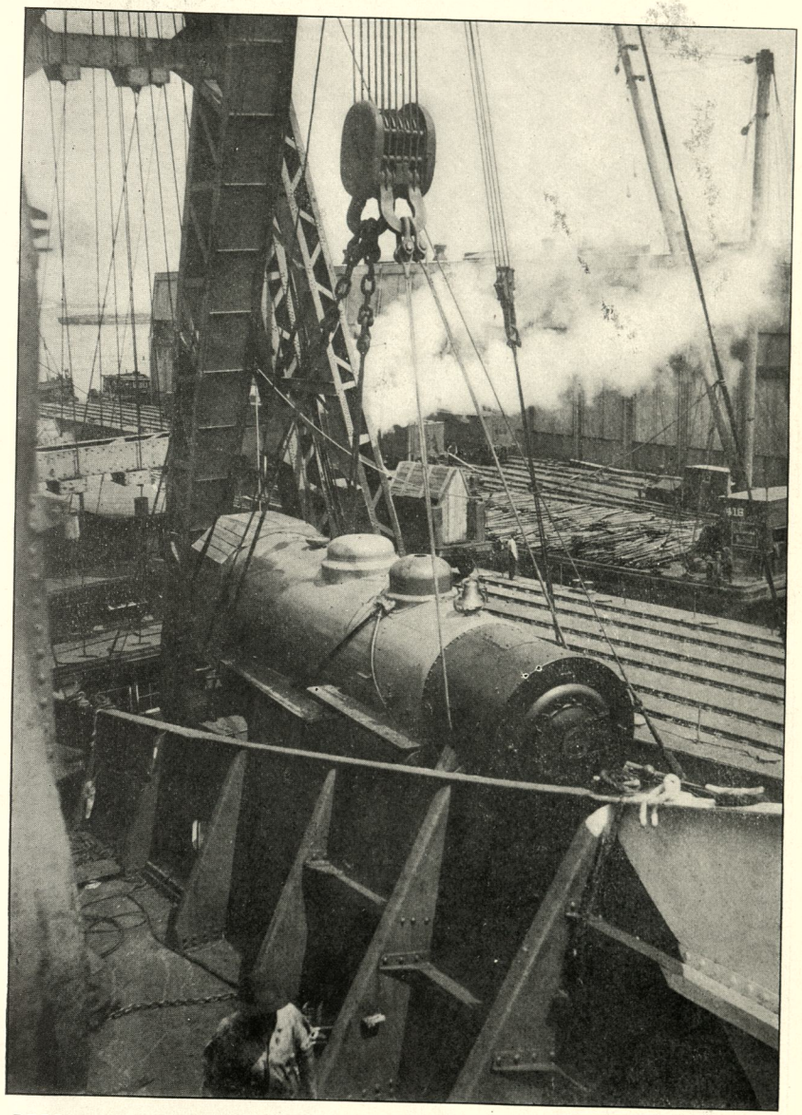


SET-UP LOCOMOTIVE HELD BY DERRICK LIGHTER PRIOR TO PLACING ON BOARD CARGO VESSEL.



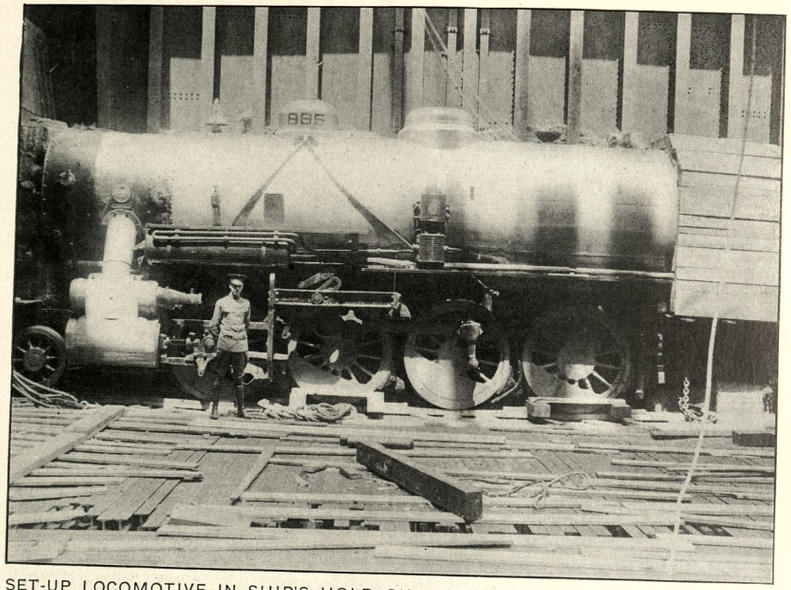
DERRICK LIGHTER LOWERING SET-UP LOCOMOTIVE INTO HOLD OF CARGO VESSEL.

88–2

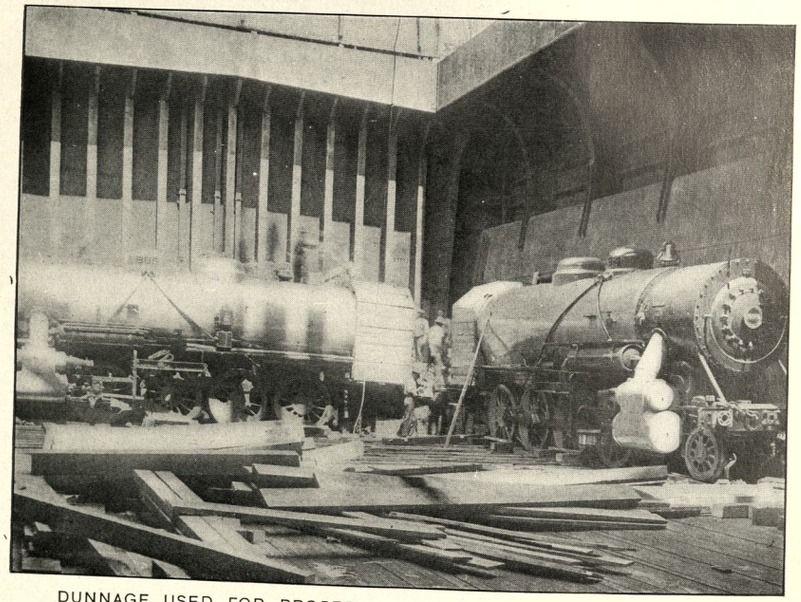


DERRICK LIGHTER ABOUT TO SWING LOCOMOTIVE OVER SHIP'S SIDE FROM FLOAT.

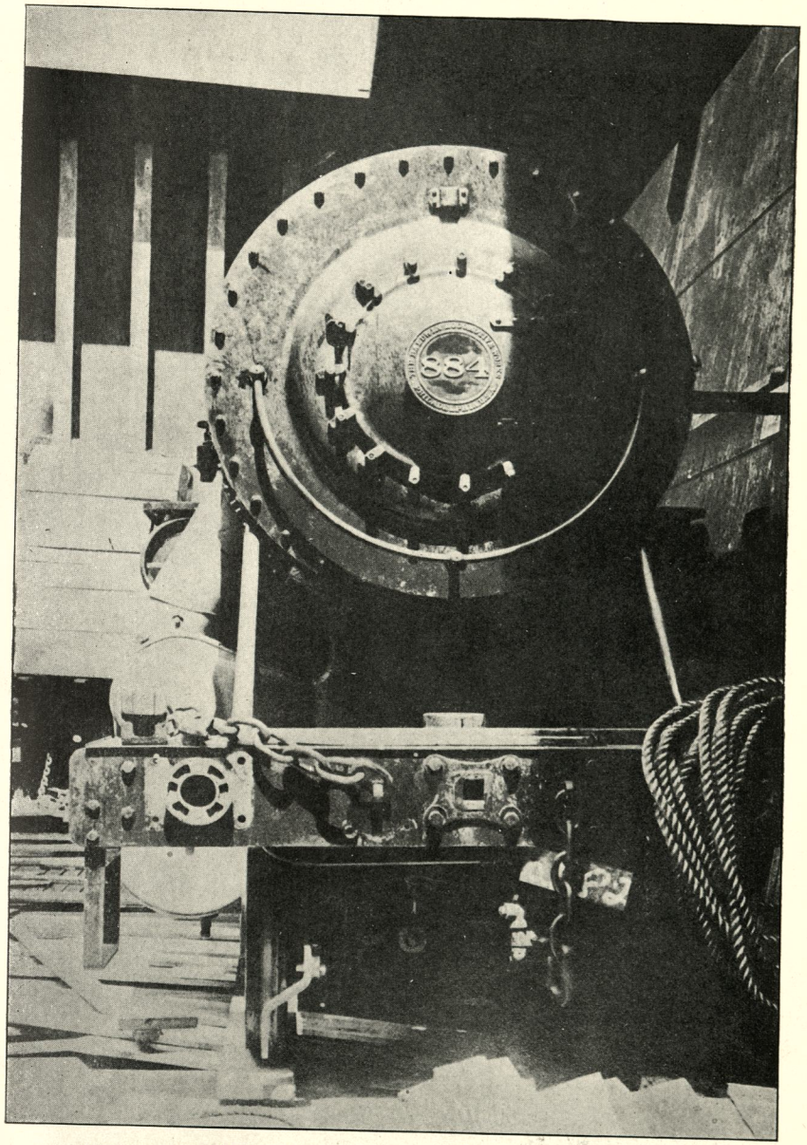
88–3



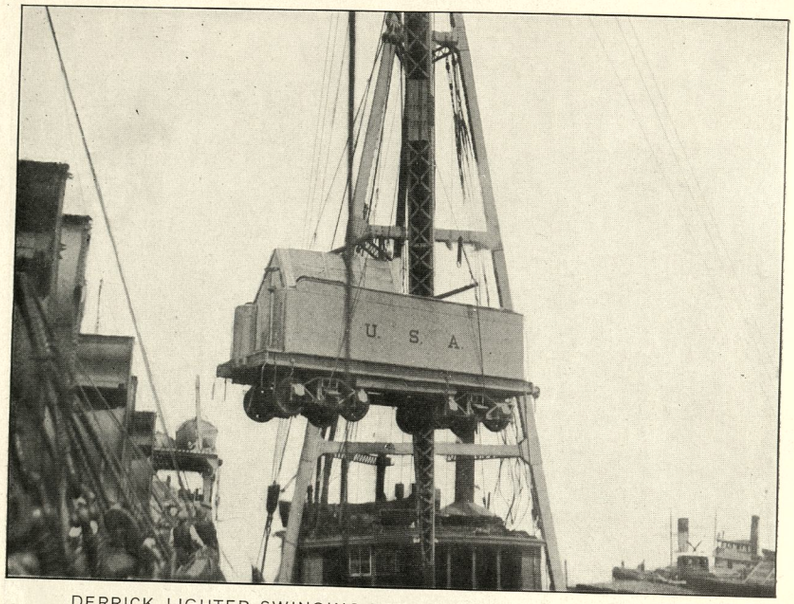
SET-UP LOCOMOTIVE IN SHIP'S HOLD ON A PLATFORM OF STEEL RAILS.



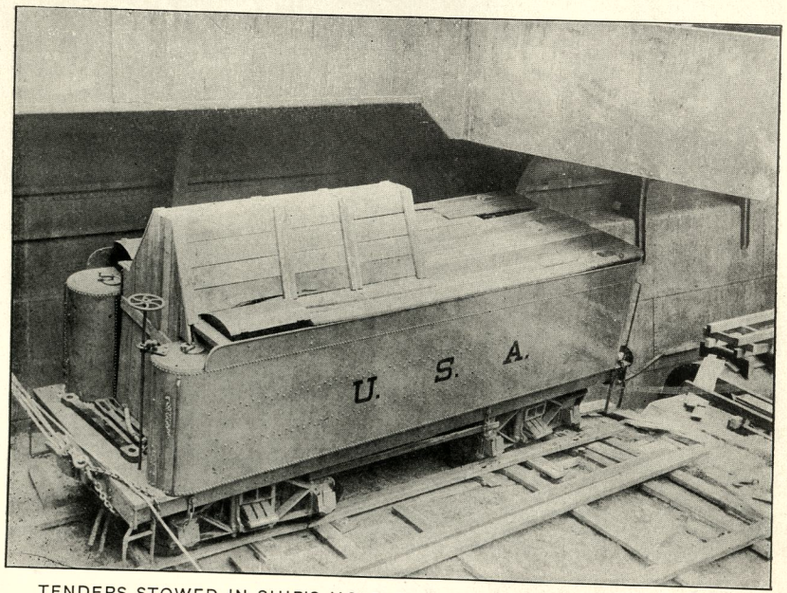
DUNNAGE USED FOR PROPER STOWING AND BLOCKING SET-UP LOCOMOTIVES.



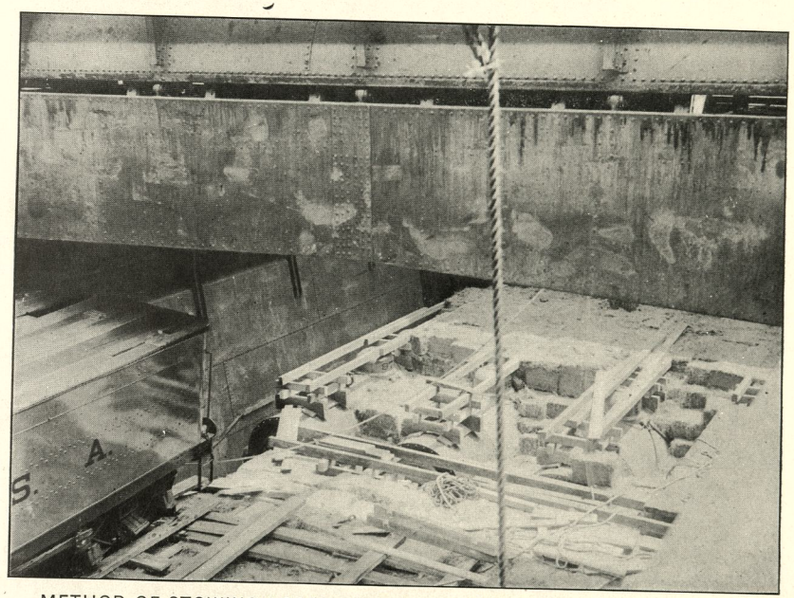
SET-UP LOCOMOTIVE IN HOLD READY FOR BRACING.



DERRICK LIGHTER SWINGING TENDER FROM FLOAT TO VESSEL.



TENDERS STOWED IN SHIP'S HOLD ON A DECK OF LOCOMOTIVES AND COMPRESSED HAY.



METHOD OF STOWING LOCOMOTIVES AND TENDERS IN THE HOLD OF A VESSEL.

SHIPMENT OF CARS FOR THE FRENCH GOVERNMENT.

During the year a total of 8,739 cars were transported for the account of the French Government. Cars were received by rail at the ports of New York and Newport News in a knocked-down condition and these parts assembled in lots of 50 for shipments in that condition to La Pallice, France, where the French assembling shops turned out the cars for immediate use. Cargo boats were not allocated unless they were structurally suited to handle these car parts and large enough to permit loading suitable additional cargo to make a well-balanced shipment.

Monthly priority reports from the Chief of Port Operations were received in sufficient time to permit the allocation of suitable vessels to move both French cars and A. E. F. general cargo, which allowed efficient loading and the utilization of all cargo space. Baled hay, sacked oats, bran, etc., gave the necessary stowage material in these shipments. The average number of days for loading these car boats was eight, and on certain days as many as six vessels were engaged in loading this material.

ANIMALS.

In addition to the cargo mentioned, the Army shipped 37,605 horses and mules, and at the cessation of hostilities was shipping animals at the rate of 20,000 per month. Vessels had to be specially fitted for this service, and detailed arrangments made for their maintenance and care en route. The transportation of animals during the year was accomplished with a loss of only one-half per cent. The total shipments from various ports is shown as follows:

1918.	Horses.	Mules.	Monthly total.	Grand total.
Total shipments to June 30	18,066	13,014	.....	31,080
July	.....	.....	.....	.....
August	.....	.....	.....	.....
September	460	1,379	1,839	.....
October	145	440	585	.....
November	8,318	7,830	16,148	.....
	11,895	7,138	19,033	.....
Total shipments July 1–Nov. 30	20,818	16,787	.....	37,605
Grand total	38,884	29,801	.....	68,685

GASOLINE.

During the year there was shipped from Atlantic and Pacific ports a total of 79,391,416 gallons or 238,134 tons of motor gasoline. The majority of this material was transported in bulk by tank ships allocated for the War Department by the United States Shipping Board. The total shipment from different ports is shown as follows:

	Gallons.	Equivalent in tons.
New York	48,379,762	145,139
New Orleans	15,722,919	47,129
Philadelphia	13,340.060	40,020
Baltimore	1,265,991	3,798
Newport News	313,335	940
Norfolk	239,374	718
San Francisco	129,975	390
Total	79,391,416	238,134

Cargo shipped overseas July, 1918–May, 1919.

[Short tons.]

Corps.	1918.					
	July.	August.	Sept.	Oct.	Nov.	Dec.
Medical	10,348	11,148	11,819	13,948	11,441	4,595
Signal	8,489	3,156	2,942	3,410	3,095	2,404
Aviation	19,063	21,010	22,370	7,998	8,545	724
Engineer	101,921	148,520	153,766	146,735	134,754	27,999
Quartermaster	244,719	223,934	299,502	328,186	400,376	468,264
Ordnance	118,378	127,596	135,618	160,760	164,228	30,641
Chemical Warfare Service		2,412	3,552	2,157	3,260	10
Motor Transport		24,979	19,942	54,967	54,318	27,035
French account						
Freight cars	8,166		28,220	1,037	8,205	8,733
Locomotives	18,886		13,270	16,642	21,315	14,744
Food Administration						
Miscellaneous	5,657	9,282	12,942	9,459	13,845	32,556
Total	535,618	572,037	683,943	745,299	823,382	617,795

Corps.	1919.					
	Jan.	Feb.	Mar.	Apr.	May.	June.
Medical	1,996	1,789	1,736	976	89	19
Signal	37	54	18	27	30	16
Aviation		17		25	486	41
Engineer	2,665	2,020	5,162	3,347	1,410	2,404
Quartermaster	165,737	183,660	207,936	152,062	22,432	8,751
Ordnance	1,978	1,113	892	2,085	1,847	251
Chemical Warfare Service						
Motor Transport	4,770	8,139	4,152	2,106	1,111	31
French account	2,417	594	1,543	2,728	984	
Freight cars	14,715	27,326	53,225	43,527		
Locomotives	19,894	8,662	5,460	2,142		
Food Administration	139,020	23,335	6,054			
Miscellaneous	17,920	11,389	13,519	9,094	6,871	3,654
Total	371,149	268,008	299,697	218,119	35,224	15,167

Motor and wheel transportation shipped overseas during fiscal year 1919.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Trucks:													
Medical	73	17	76										166
Signal	540	499	55	2									1,096
Aviation				3									3
Engineer	264	237	101	17									619
Quartermaster	895	2,681	1,293										4,869
Ordnance	882	1,030	778	227									2,917
Motor Transport Corps			3,379	8,407	9,556	3,951	226	206	12		8	4	25,749
Total	2,654	4,464	5,682	8,656	9,556	3,951	226	206	12		8	4	35,419
Autos:													
Medical	17	5	8										30
Signal	222	205	32	1									460
Aviation			238										238
Engineer	85	8	7										100
Quartermaster	609	324	149										1,082
Ordnance	106	86	88										280
Motor Transport Corps			308	1,470	1,223	803	395	161	415	42	1	1	4,819
Total	1,039	628	830	1,471	1,223	803	395	161	415	42	1	1	7,009
Truck bodies:													
Medical													
Signal	160	91		10									261
Aviation													
Engineer	58	29											87
Quartermaster	80	121											201
Ordnance	1												1
Motor Transport Service			459	1,155	1,680	840	66						4,200
Total	299	241	459	1,165	1,680	840	66						4,750

Motor and wheel transportation shipped overseas during fiscal year 1919—Continued.

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total
Auto bodies:													
Medical		18											18
Quartermaster	58	2											60
Motor Transport Service				67	2								69
Total	58	20		67	2								147
Ambulance bodies:													
Medical	37	63	7	11									118
Quartermaster													
Motor Transport Service				150	707	89	11		4				961
Total	37	63	7	161	707	89	11		4				1,079
Ambulance, Medical:													
Motor-driven	288	333	677	1,351	825	884			4				4,362
Horse-drawn	18	103	115	127	49								412
Total	306	436	792	1,478	874	884			4				4,774
Motorcycles:													
Medical	133	102											235
Signal	707	677	200										1,584
Quartermaster	449	1,281	796	392									2,918
Engineer	30	75	45										150
Ordnance	36	104											140
Motor Transport Service			1,054	4,689	3,293	2,867	80						11,983
Total	1,355	2,239	2,095	5,081	3,293	2,867	80						17,010
Side cars:													
Medical	133	102											235
Signal	507	777	290										1,574
Engineer	16	96	25										137
Quartermaster	1,112	1,305	967	170									3,554
Ordnance	36	104											140
Motor Transport Corps			2,120	2,386	3,436	1,977	100	4					10,023
Total	1,804	2,384	3,402	2,556	3,436	1,977	100	4					15,663
Ford machine-gun cars	12	50	39	86	43	40							270
Commerce machine-gun cars	22												22
Bicycles	1,362	2,912	5,059	1,890	3,798	3,190	906	934					20,051
Trailers	268	700	634	876	1,000	367							3,846
Trailmobiles	425	423	155			36		10				1	1,049
Tractor	196	279	426	531	518	450	2						2,402
Rolling kitchens	374	1,107	2,330		1,155	199		15					5,180
Road rollers	20												20
Wagons:													
Tool	16	107	166	35	22								346
Escort	361	1,534	2,043	5,058	3,434								12,430
Combat	426	412	483	404	86								1,811
Water	74	21											95
Caissons and limbers	799	1,194	1,278	548	2,190	222							6,231
Miscellaneous	328	208	22		2,168	422							3,148
Buckboard	74	33	41	57									205
Fire engines	28							211	12				251
Gas railway motor cars	100	200	157										457
Push cars	220												220
Freight house trucks	100												100
Ammunition		231											231
Red Cross		1											1
Tank		6	18	6									30
Dump		130	80	40									250
Mountain		29	38	372									439
Mining	100												100
Log							109						109
Lumber							90						90
Carts:													
Wire	50	105	366	411	91	18							1,041
Dump		72											72
Water	491	1,533	778	1,041	1,219								5,062
Medical	257	291	187	88	133								956
Machine gun	928	2,321	2,034	8,448	1,456	741							15,928
Ammunition	20	13	1,178	428	37								1,676
Spray	64												64
Miscellaneous	87	228	43		505								863
Drinking	114	347	30	201									692
Ration		675	4,747	1,578	569								3,296
Reel		23		145									168
Push				162									162

Cargo shipped overseas, July, 1918–June, 1919.

[Short tons.]

Port.	Destination.	1918					
		July.	August.	September.	October.	November.	December.
North Atlantic:							
St. John	France						700
Boston	do	4,243		7,127	6,444	15,529	21,411
New York	do	233,770	293,947	396,725	379,572	473,520	350,897
Do	Rotterdam						
Philadelphia	France	55,684	43,104	44,282	82,772	63,875	56,886
Baltimore	do	56,603	83,712	58,226	80,267	69,502	54,576
Newport News	do	129,270	118,078	145,788	161,490	163,203	72,479
South Atlantic and Gulf:							
Jacksonville	do	14,024	6,627				
New Orleans	do	17,173	12,760	5,551	9,795	28,186	39,566
Do	Rotterdam						
Lake ports and St. Lawrence:							
Duluth	France	1,631					
Chicago	do						
Detroit	do	1,330				2,503	
Toledo	do	1,270					
Cleveland	do	2,360	2,054	7,088	17,616	4,537	
Montreal	do	18,260	11,755	16,468			4,093
Pacific coast:							
Seattle	Siberia						
San Francisco	do			2,603	5,278	1,757	10,454
Do	Islands			45	2,065	770	6,643
Total		535,618	572,037	683,943	745,299	823,382	617,705

Port.	Destination.	1919					
		January.	February.	March.	April.	May.	June.
North Atlantic:							
St. John	France						
Boston	do	4,550		10,659	11	3,727	23
New York	do	227,311	167,930	136,615	100,775	9,174	4,103
Do	Rotterdam			34,881	40,064	7,197	[1] 883
Philadelphia	France	16,141	12,718	17,085	5,558		957
Baltimore	do	34,831	33,843	3,369			
Newport News	do	58,742	40,329	83,265	49,091	6,482	177
South Atlantic and Gulf:							
Jacksonville	do						
New Orleans	do	21,862	11,118	9,854	8,517		
Do	Rotterdam				6,683		
Lake ports and St. Lawrence:							
Duluth	France						
Chicago	do						
Detroit	do						
Toledo	do						
Cleveland	do						
Montreal	do						
Pacific coast:							
Seattle	Siberia	6,109					
San Francisco	do	258	540	1,207	6,714	7,647	8,052
Do	Islands	1,335	1,530	2,762	706	997	1,022
Total		371,149	268,008	299,697	218,119	35,224	15,167

[1] Shipped to Antwerp.

Cargo returned from A. E. F. to the various ports by months.

	November.	December.	January.	February.	March.	April.	May.	June.	Total.
New York	327	42,088	39,454	66,339	46,965	37,032	30,104	33,269	295,578
Philadelphia		1,608	18,449	15,403	20,486	9,001	221	4,751	69,919
Baltimore	32	2,610	15,174	6,973	8,481	4,052			37,322
Newport News	686	3,413	35,327	14,359	16,323	21,160	26,763	11,372	129,403
Other ports			1		1,129	297	18	130	1,575
Total	1,045	49,719	108,405	103,074	93,384	71,542	57,106	49,522	533,797

NOTE.—No cargo was returned prior to Nov. 1, 1918.

Cargo returned from A. E. F. to the United States each month by the staff corps.

	November.	December.	January.	February.	March.	April.	May.	June.	Total.
Medical Corps			3	201	2		9	85	300
Signal Corps	10	260	1,578	3,269	1,120	1,088	361	407	8,093
Aviation	110	4,611	5,607	3,665	1,996	2,847	1,438	1,113	21,387
Engineer Corps	590	10,682	51,028	39,770	47,716	26,606	27,721	18,237	227,750
Quartermaster Corps	81	199	1,019	1,223	383	335	224	106	3,570
Ordnance Department	17	26,019	45,439	47,978	38,039	33,629	24,798	24,284	230,203
Chemical Warfare Service	87	1,906	2,079	1,928	996	8	3		7,007
Motor Transport Corps		87	553	1,223	621	135	196	16	2,831
Miscellaneous	150	555	1,099	3,817	2,511	6,894	2,356	5,274	22,656
Total	1,045	49,719	108,405	103,074	93,384	71,542	57,106	49,522	533,797

NOTE.—No cargo was returned prior to Nov. 1, 1918.

FREIGHT TRAFFIC BRANCH.

On July 1, 1918, the Cargo Branch was divided into sections as follows: Quartermaster, Ordnance, Signal Corps, Aviation, Medical Corps, Engineer Corps, Chemical Warfare, Refrigeration, Animal, and Statistical, each subdivision being charged with making the necessary arrangements for shipment of the supplies pertaining to the service to which assigned.

As originally organized the Cargo Branch followed shipments through from point of origin to port in France, and a systematic follow-up on each item of requisition received from abroad was maintained. Monthly priorities were compiled and furnished to the Cargo Section by the Overseas-Distribution Division of the Purchase and Storage Service, and cargo was shipped in accordance with schedules furnished.

On October 1, 1918, the personnel and records pertaining to the Port-Operations Section was transferred to the office of the Director of Purchase and Storage, and the Cargo Branch of the Transportation Service operated simply as a transportation unit, being charged only with the loading and shipment of cargo delivered to the custody of the Transportation Service at the piers or lighters. This change was made such a short time before the armistice that no opportunity was had to determine what the final result would have been, but from the difficulties had during the month of October in obtaining cargo as rapidly as needed to load the rapidly increasing tonnage it is extremely doubtful if the final results would have substantiated the wisdom of the change.

The plan was wrong in principle in that it resulted in a divided responsibility, and a complete test would, it is believed, have resulted in a return to the original plan of placing the shipment in the hands of the Transportation Service at the point of origin and leaving it there until it reached its final destination.

The fact that the several supply corps were unable, due to the rapid increase in the troop movement overseas, to build up at the several ports an adequate reserve, resulted in unbalanced shipments and, consequently, poorer loading than would have been possible if a greater variety of cargo had been available to give well-balanced loading.

Regardless of these deficiencies, the cargo movement overseas is an accomplishment worthy of praise. Its magnitude can only be appreciated by a careful study of the details.

The American forces always had plenty and they were well fed and clothed at all times, and, in spite of the activities of the German submarine, we were rapidly building up a reserve supply in the stocks in France.

Our effort in the shipment of cargo differs from that of troop movement overseas in that it was accomplished almost entirely by United States flagships. Less than 5 per cent of the cargo carried abroad was transported in ships of our Allies. Relatively small amounts were carried in troopships. After the signing of the armistice each ship was withdrawn from the service as soon as it could be spared and put back into commercial trade or in the food-relief work in Europe. There was transported in Army vessels for the Food Administration for relief work in Europe 168,409 tons.

DOCKS AND PIERS.

On the 1st of July, 1918, all docks and piers were under lease at the various Atlantic ports, Montreal, Canada, and various ports on the Pacific coast, at a total monthly rental of $177,055.45. These piers included the extensive Bush terminal facilities at Brooklyn, N. Y.; piers of the Holland-American Line, and other lines at Hoboken; municipal piers at New York; Commonwealth Pier, Boston; city pier No. 78, at Philadelphia; Canton Co. piers, Baltimore; Lambert's and Pinners' Point piers, Norfolk; municipal piers, New Orleans; and Harbor Commission pier, Montreal. These docking facilities were continued in use from the previous fiscal year and many smaller rentals were added up to the time of the signing of the armitice. In addition to the enumerated leases, the Transportation Service had full control of the piers at Hoboken formerly belonging to the Hamburg-American and North German Lloyd Lines. These were used to the greatest extent in the embarkation and debarkation of troops and the loading and shipping of troop property.

Consistent with the return of troops from Europe and the decrease in cargo movement, prompt steps were taken to release all piers and docks, so that they could be utilized by their owners in commercial shipping. Program of relinquishing docking and pier facilities was begun in November, and from that date pier facilities were gradually released, so that on June 30, 1919, all of the leased piers had been released except those at the port of Hoboken and piers 3 and 6, Bush terminal, at Brooklyn, N. Y. Their further retention is contingent to a large extent on the completion of new Army bases at South Brooklyn. The Construction Division has had under construction during the fiscal year Army supply bases at different Atlantic ports as follows:

Project.	Square feet of floor area.	Approximate cost.
Port Newark terminal	1,652,400	$10,260,090
	[1] 367,600	
Norfolk Army supply base	2,016,000	25,975,770
	[2] 884,500	
Philadelphia Army supply base	845,570	15,510,112
	1,152,000	
Charleston Quartermaster's terminal	[1] 379,200	
	[2] 269,000	12,675,000
Boston Army supply base	1,651,104	
Brooklyn Army supply base	882,000	28,040,000
New Orleans Army supply base	3,936,000	32,500,000
	[2] 1,143,000	
	1,792,000	11,660,875
	[2] 280,000	

[1] Sheds. [2] Pier sheds.

The above projects are practically completed and are being used for the Army needs. It will be possible, therefore, to terminate within a short period most of the leases of piers at different ports.

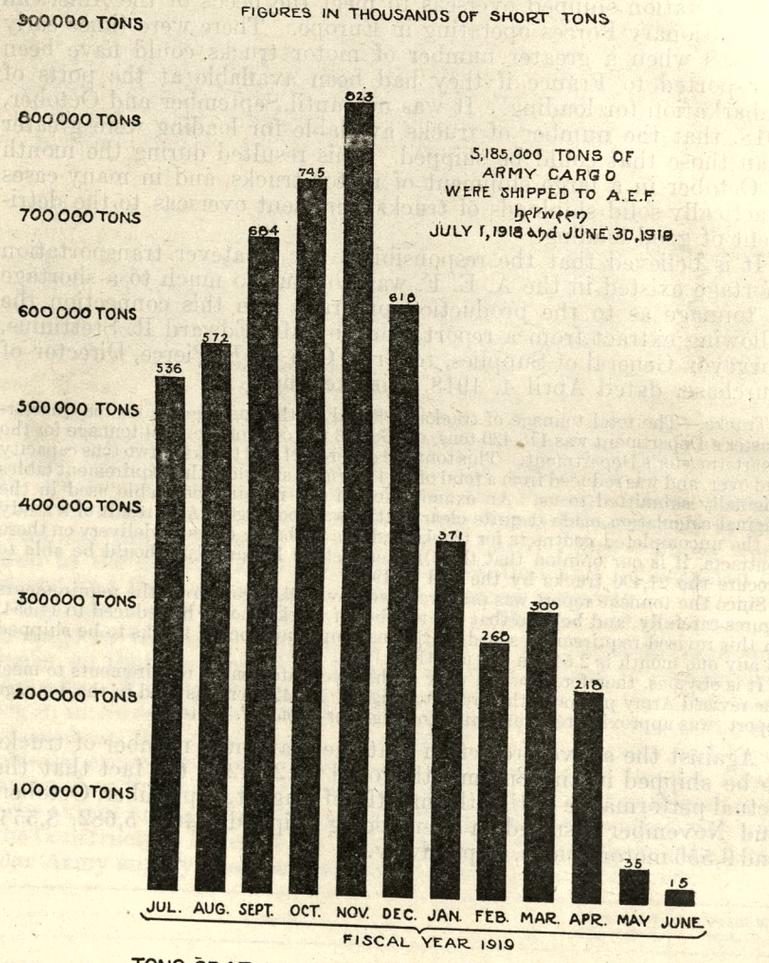
SHIPMENT OF MOTOR TRANSPORTATION.

There has been some question raised as to the amount of motor transportation shipped overseas to meet the needs of the American Expeditionary Forces operating in Europe. There were times early in 1918 when a greater number of motor trucks could have been transported to France if they had been available at the ports of embarkation for loading. It was not until September and October, 1918, that the number of trucks available for loading were greater than those that could be shipped. This resulted during the month of October in a large shipment of motor trucks, and in many cases practically solid shiploads of trucks were sent overseas, to the detriment of good loading.

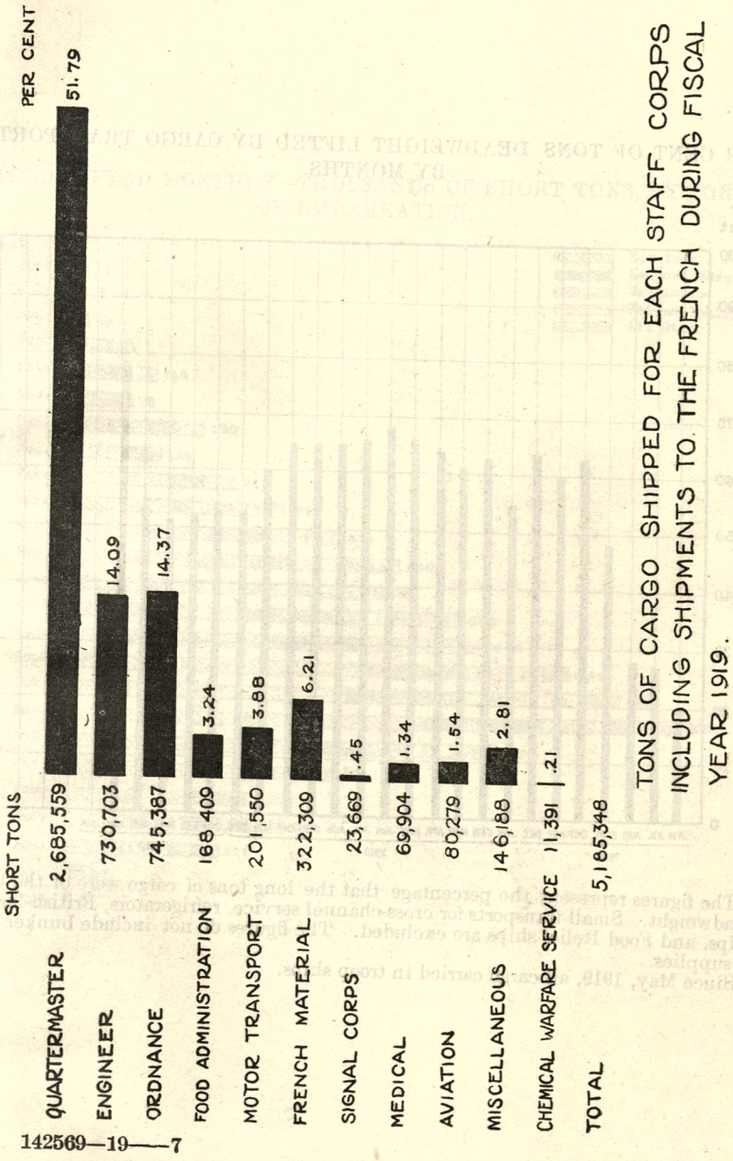
It is believed that the responsibility for whatever transportation shortage existed in the A. E. F. was not due so much to a shortage of tonnage as to the production program. In this connection the following extract from a report made by Mr. Edward R. Stettinius, Surveyor General of Supplies, to Brig. Gen. P. E. Pierce, Director of Purchase, dated April 4, 1918, is interesting:

> Trucks.—The total tonnage of trucks included in the tonnage figures for Quartermaster's Department was 116,420 tons, or about 6 per cent of the total tonnage for the Quartermaster's Department. This tonnage covered 21,490 trucks of two tons capacity and over, and was reduced from a total of 26,446 trucks shown in the requirement tables originally submitted to us. An examination of the requirement table used in the original calculation made it quite clear that it was too large. As a result of a study in the uncompleted contracts for trucks and the probable dates of delivery on these contracts, it is our opinion that the Quartermaster's Department should be able to procure the 21,490 trucks by the end of 1918.
>
> Since the tonnage report was prepared, we have again gone over the requirements figures carefully, and believe that the number of trucks should be reduced to 14,654. In this revised requirement schedule the maximum number of trucks to be shipped in any one month is 2,542 in the month of June.
>
> It is obvious, therefore, that in view of this overstatement of requirements to meet the revised Army program, the truck tonnage of 116,420 tons, as used in the tonnage report, was approximately one-third too high, or about 37,500 tons.

Against the above prediction that the maximum number of trucks to be shipped in any one month would be 2,542 is the fact that the actual performance during the months of August, September, October, and November resulted in there being shipped 4,464, 5,682, 8,556, and 9,556 motor trucks, respectively.

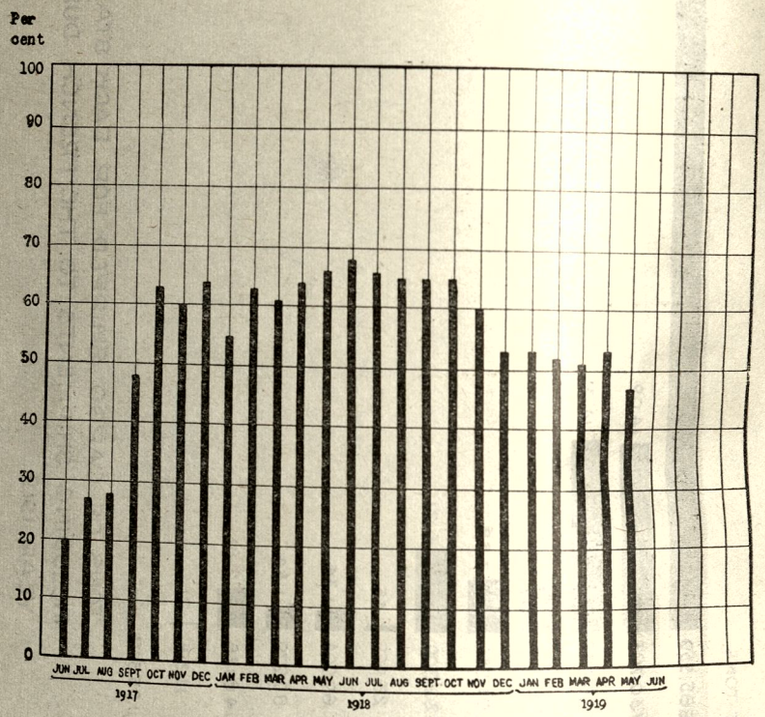


TONS OF ARMY CARGO SHIPPED TO A.E.F. EACH MONTH
INCLUDES 203,476 TONS FRENCH CARS AND LOCOMOTIVES



TONS OF CARGO SHIPPED FOR EACH STAFF CORPS INCLUDING SHIPMENTS TO THE FRENCH DURING FISCAL YEAR 1919.

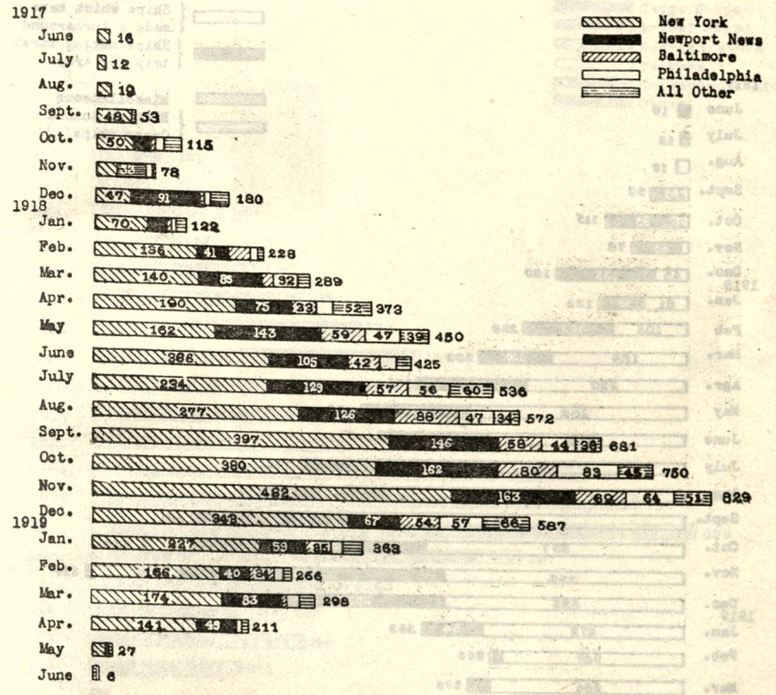
PER CENT OF TONS DEADWEIGHT LIFTED BY CARGO TRANSPORTS, BY MONTHS.



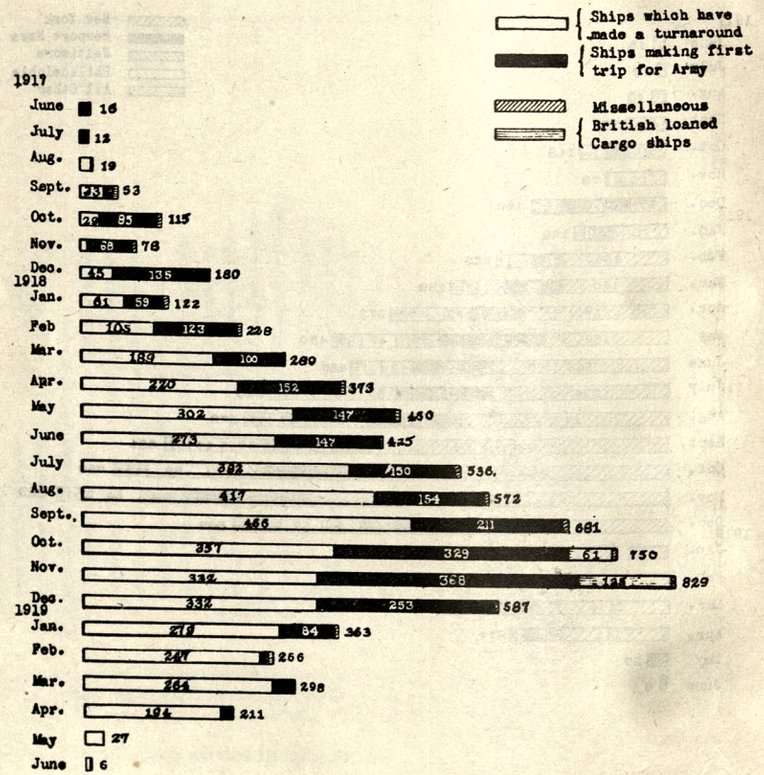
The figures represent the percentage that the long tons of cargo were of the total deadweight. Small transports for cross-channel service, refrigerators, British-loaned ships, and Food Relief ships are excluded. The figures do not include bunker coal or supplies.

Since May, 1919, all cargo carried in troop ships.

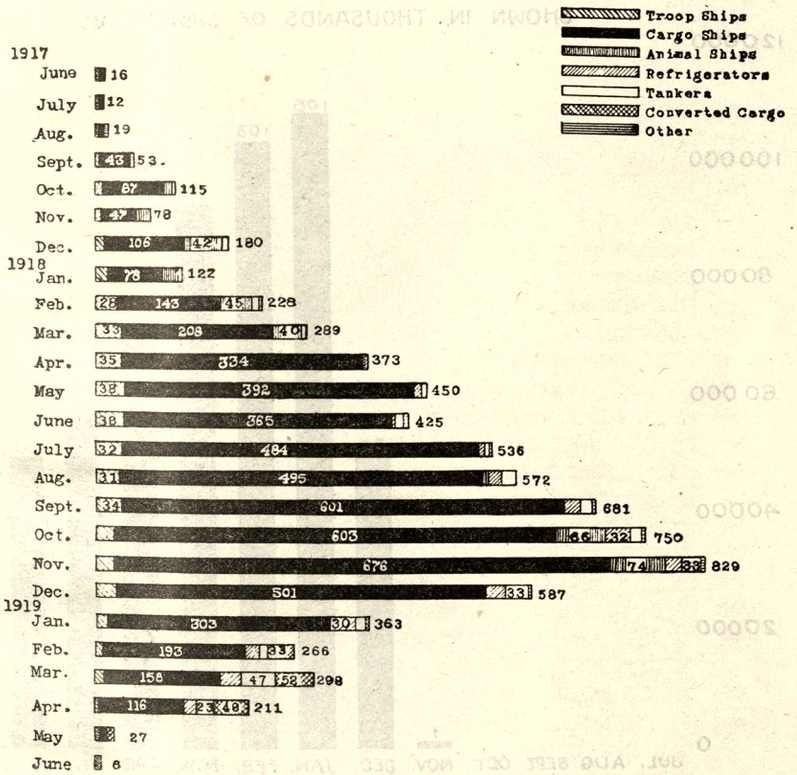
CARGO LIFTED MONTHLY—THOUSANDS OF SHORT TONS, BY PORT OF EMBARKATION.

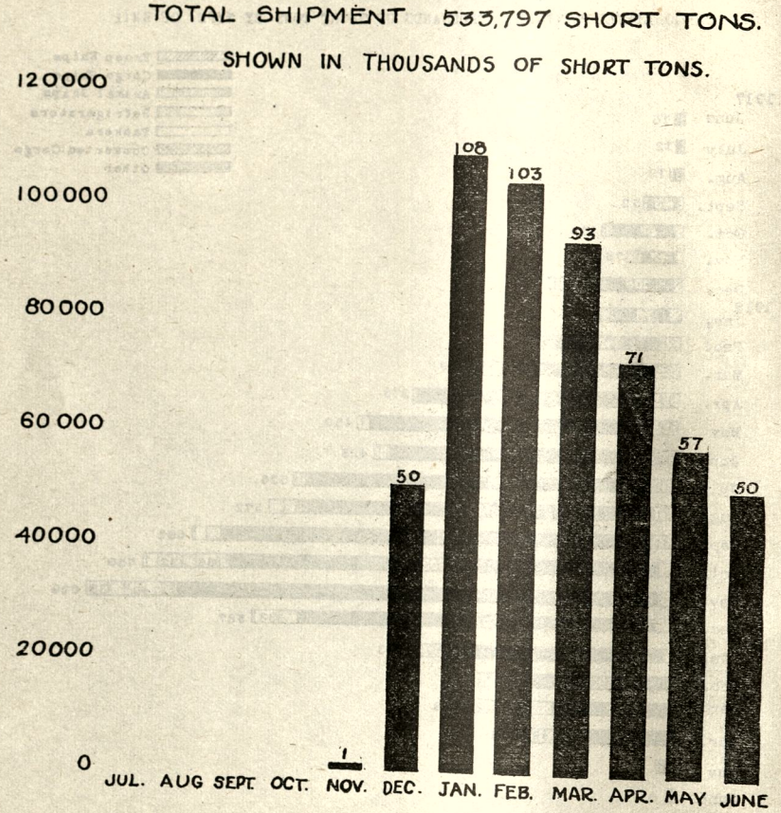


CARGO LIFTED MONTHLY—THOUSANDS OF SHORT TONS, BY OLD AND NEW SHIPS.



CARGO LIFTED MONTHLY THOUSANDS OF SHORT TONS BY TYPE OF SHIP





Cargo returned to the United States from A. E. F. during fiscal year 1919.

Short tons of cargo returned from A. E. F. to the United States from November, 1918, to May, 1919, inclusive.

BY SERVICE.

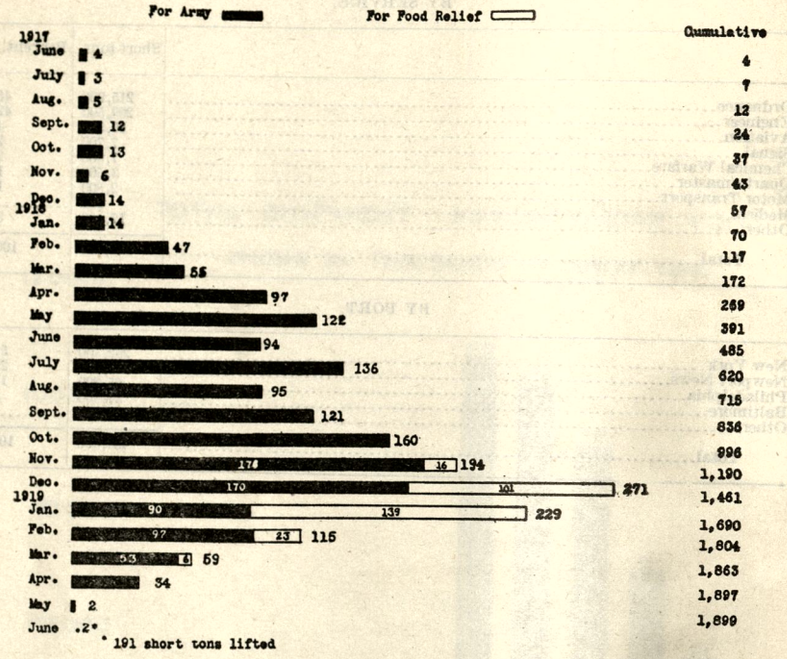
	Short tons.	Per cent.
Ordnance	215,900	45
Engineer	209,500	42
Aviation	20,300	4
Signal	7,700	2
Chemical Warfare	7,000	2
Quartermaster	3,500	1
Motor Transport	2,800	1
Medical	200	.....
Other	17,400	3
Total	484,300	100

BY PORT.

New York	262,300	54
Newport News	118,000	24
Philadelphia	65,200	14
Baltimore	37,300	8
Other	1,500	.....
Total	484,300	100

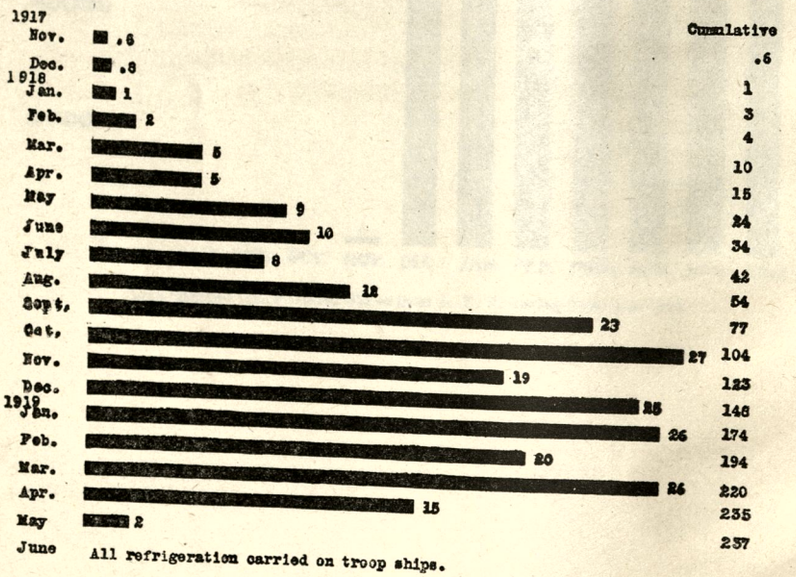
SUBSISTENCE—THOUSANDS OF SHORT TONS LIFTED, BY MONTHS.

[Exclusive of Refrigeration.]



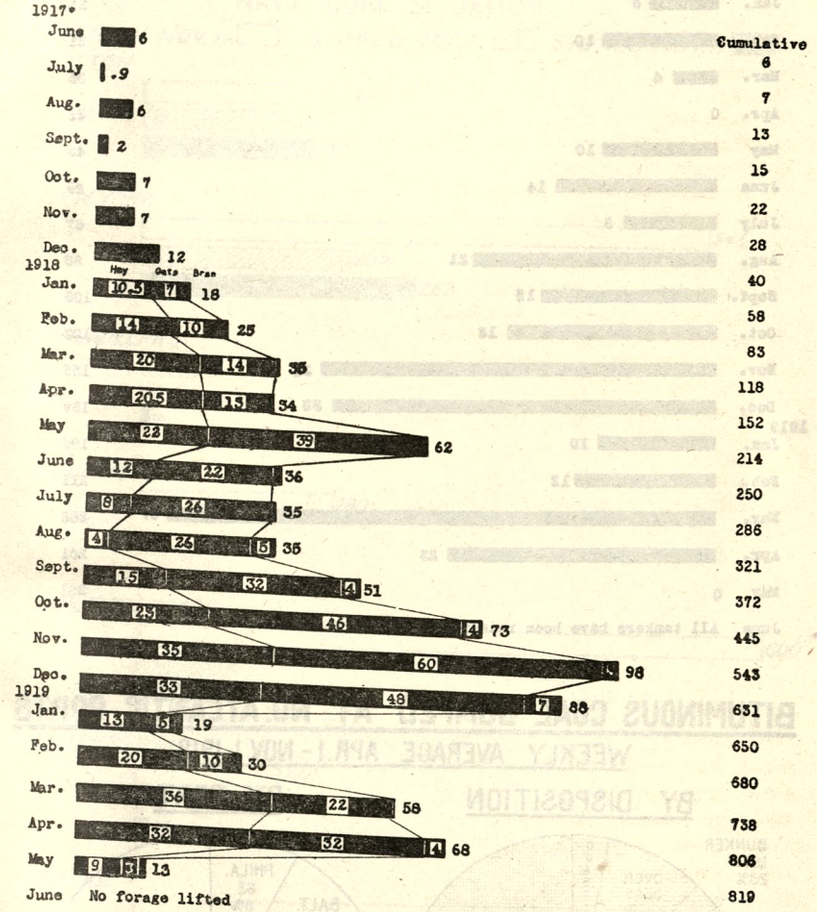
* 191 short tons lifted

REFRIGERATION—THOUSANDS OF SHORT TONS LIFTED, BY MONTHS.



All refrigeration carried on troop ships.

FORAGE LIFTED—THOUSANDS OF SHORT TONS.



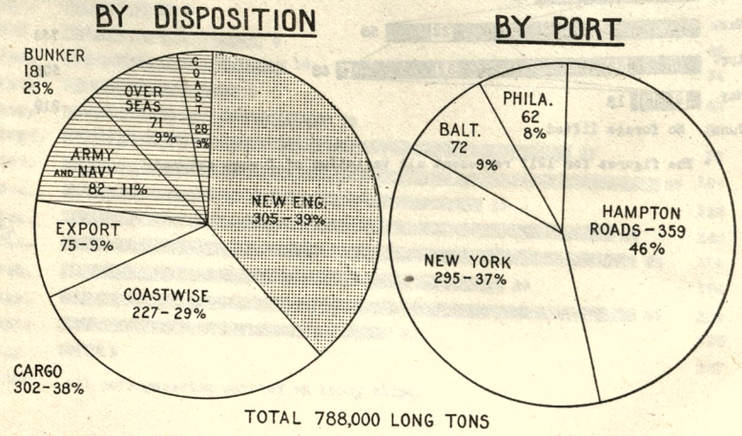
* The figures for 1917 represent all varieties of forage shipped

BULK OIL—THOUSANDS OF SHORT TONS LIFTED, BY MONTHS.

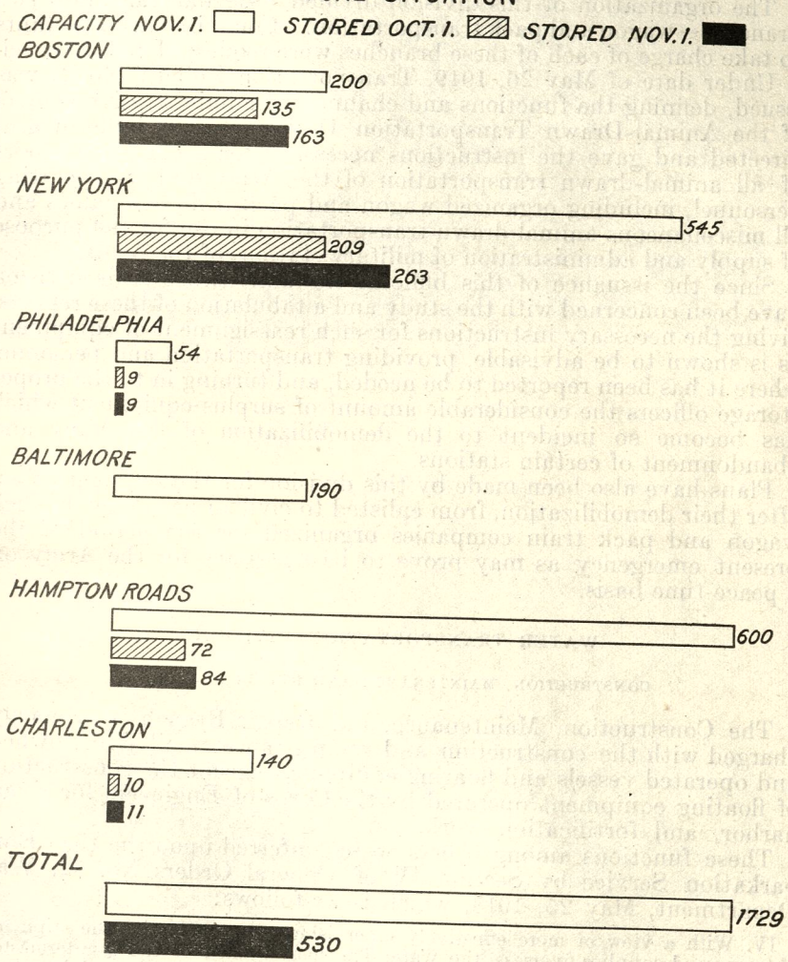
			Cumulative
1917	Oct.	4	4
	Nov.	0	4
	Dec.	10	14
1918	Jan.	6	21
	Feb.	10	31
	Mar.	4	35
	Apr.	0	35
	May	10	45
	June	14	59
	July	8	67
	Aug.	21	88
	Sept.	15	103
	Oct.	18	122
	Nov.	34	156
	Dec.	33	189
1919	Jan.	10	199
	Feb.	12	211
	Mar.	47	258
	Apr.	23	281
	May	0	281
	June	All tankers have been redelivered to the U.S.S.B.	

BITUMINOUS COAL DUMPED AT NO. ATLANTIC PORTS

WEEKLY AVERAGE APR. 1 - NOV. 1. 1918



NAVY COAL SITUATION



ANIMAL-DRAWN TRANSPORTATION DIVISION.

The Animal-Drawn Transportation Division of the Transportation Service came into existence pursuant to General Orders No. 54, War Department, April 21, 1919, consolidating the operation of all forms of transportation of the Army, except motor, into one operating service. Transportation Bulletin No. 20, dated May 6, 1919, directed the organization of this division of the Transportation Service.

The organization of this division divided itself naturally into two branches—wagon and pack transportation. Commissioned assistants to take charge of each of these branches were requested and assigned.

Under date of May 26, 1919, Transportation Bulletin No. 27 was issued, defining the functions and channels of administrative control of the Animal-Drawn Transportation Division. This bulletin also directed and gave the instructions necessary for a complete report of all animal-drawn transportation of the Army and its operating personnel, including organized wagon and pack train companies and all miscellaneous animal drawn transportation in use for the purpose of supply and administration of military stations of the Army.

Since the issuance of this bulletin the activities of this division have been concerned with the study and a tabulation of these reports, giving the necessary instructions for such reassignment of equipment as is shown to be advisable, providing transportation and personnel where it has been reported to be needed, and turning in to the proper storage officers the considerable amount of surplus equipment which has become so incident to the demobilization of the Army and abandonment of certain stations.

Plans have also been made by this division for the reorganization, after their demobilization, from enlisted to civilian personnel, of such wagon and pack train companies organized for the period of the present emergency as may prove to be necessary for the Army on a peace-time basis.

WATER TRANSPORTATION DIVISION.

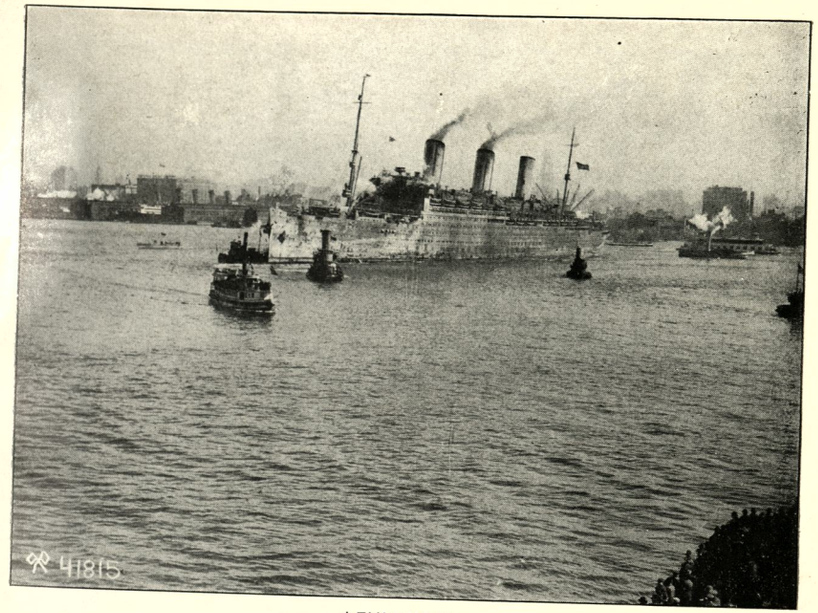
CONSTRUCTION, MAINTENANCE AND REPAIR BRANCH.

The Construction, Maintenance, and Repair Branch is primarily charged with the construction and maintenance of all Army owned and operated vessels and floating equipment except the construction of floating equipment operated by the Corps of Engineers for river, harbor, and fortification work.

These functions among others were conferred upon the then Embarkation Service by Section IV of General Orders No. 52, War Department, May 25, 1918, which is as follows:

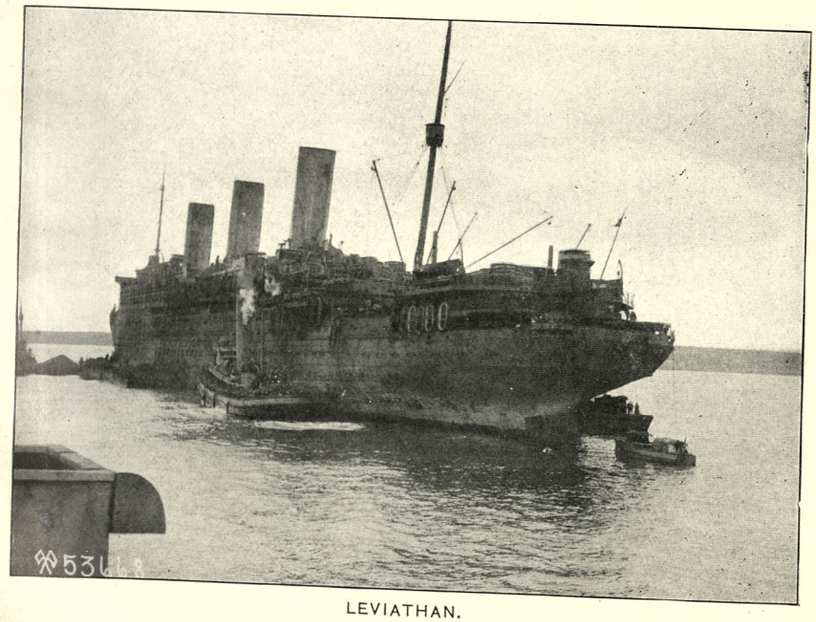
> IV. With a view of more effectively supervising and coordinating the shipment of troops and supplies overseas, the Water Transport Branch of the Quartermaster General's Office, is placed under the control of the Embarkation Divison of the Office of Purchase, Storage and Traffic during the present emergency.

The Water Transport Branch of the Quartermaster General's Office, among its other duties, was charged with the maintenance of Army transports and floating equipment and, when this branch of the Quartermaster General's Office was transferred to the Embarkation Service, the construction and maintenance functions of the Water



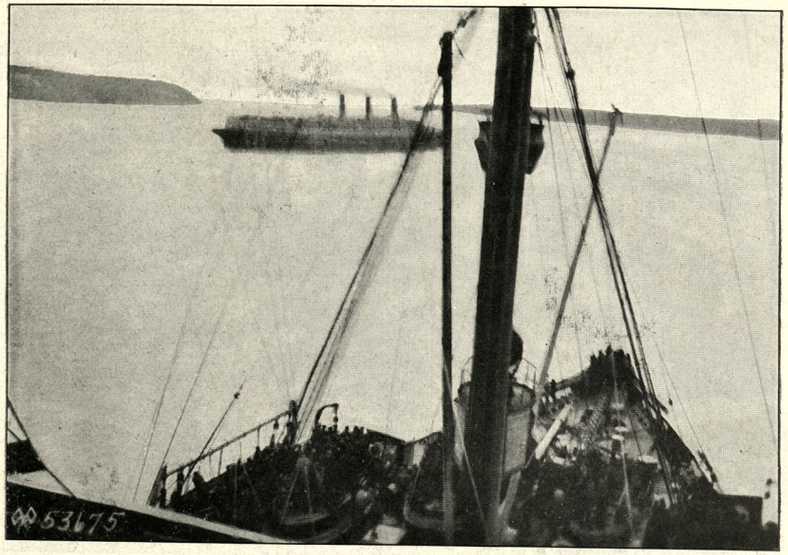
LEVIATHAN.

View of the Leviathan coming up North River to her Hoboken pier, the New York sky line in the distance. Owing to a strike by marine workers in the harbor, the usual small craft are conspicuous by their absence.



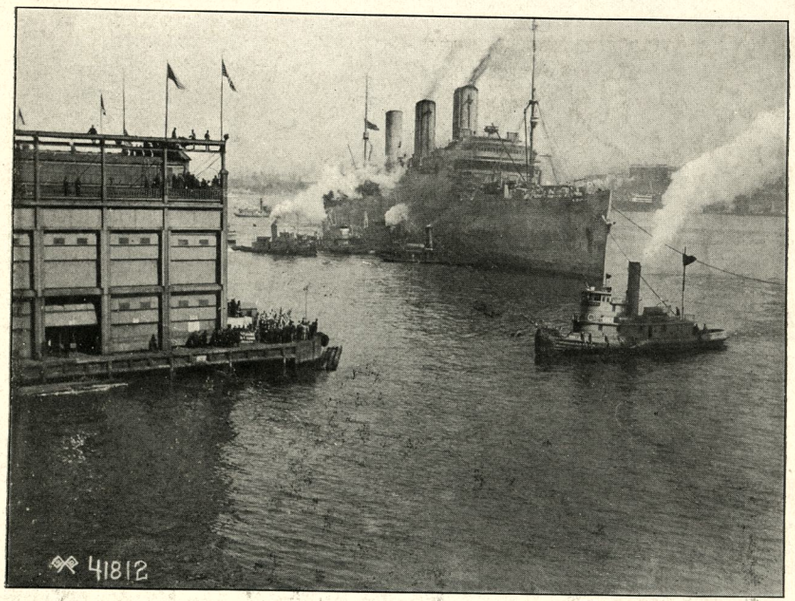
LEVIATHAN.

Going aboard the Leviathan April 17, 1919.



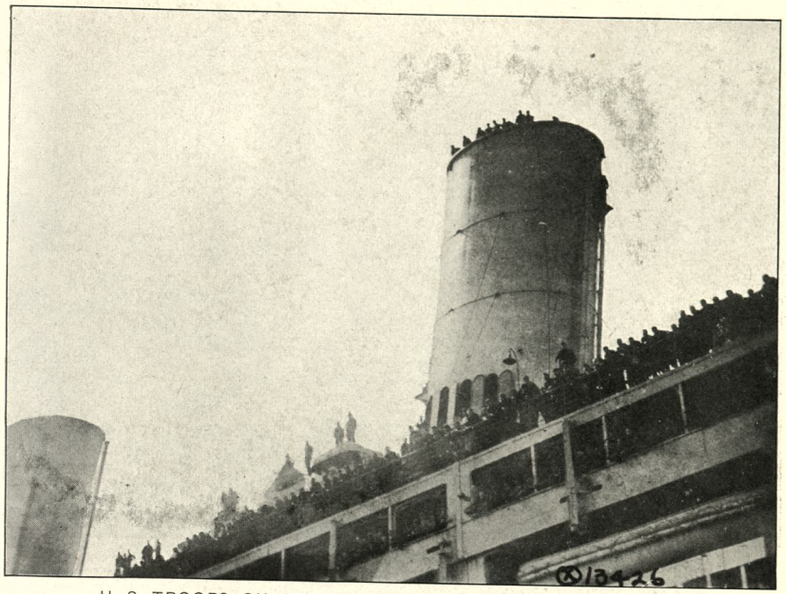
LEVIATHAN.

Leviathan leaving port of Brest with Headquarters Company Forty-second Division April 18, 1919.

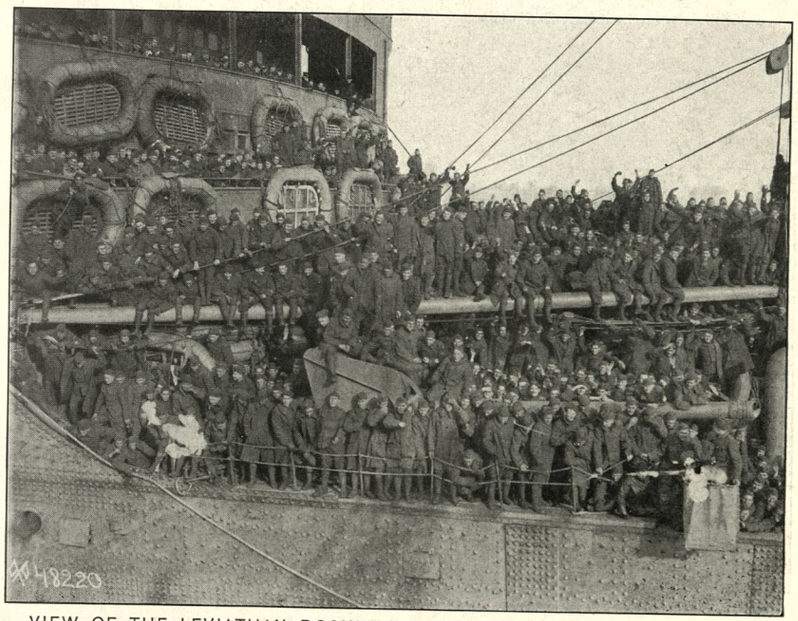


LEVIATHAN.

Warping the Leviathan into her slip while the P of E band and Red Cross women greet them.



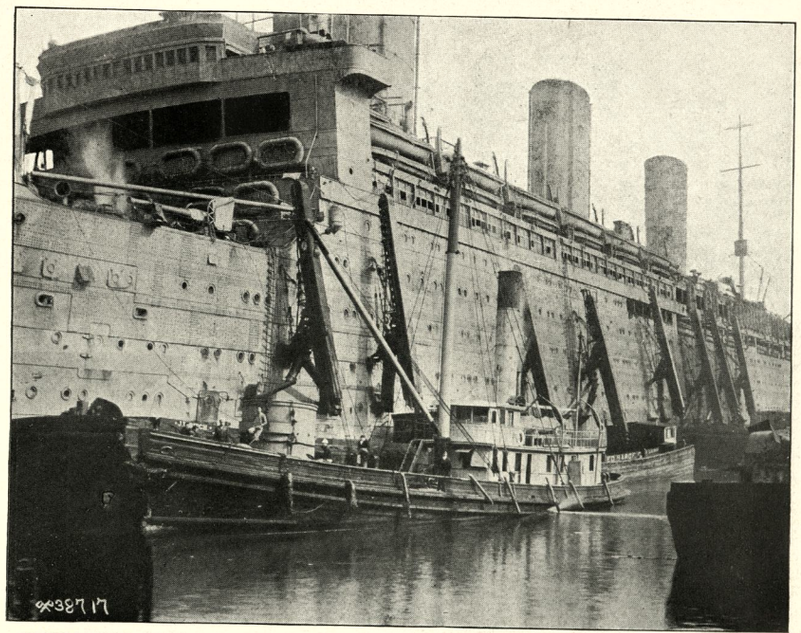
U. S. TROOPS ON STACK OF S. S. LEVIATHAN IN FRANCE.



VIEW OF THE LEVIATHAN DOCKING, WITH TROOPS ON DECK WAVING.



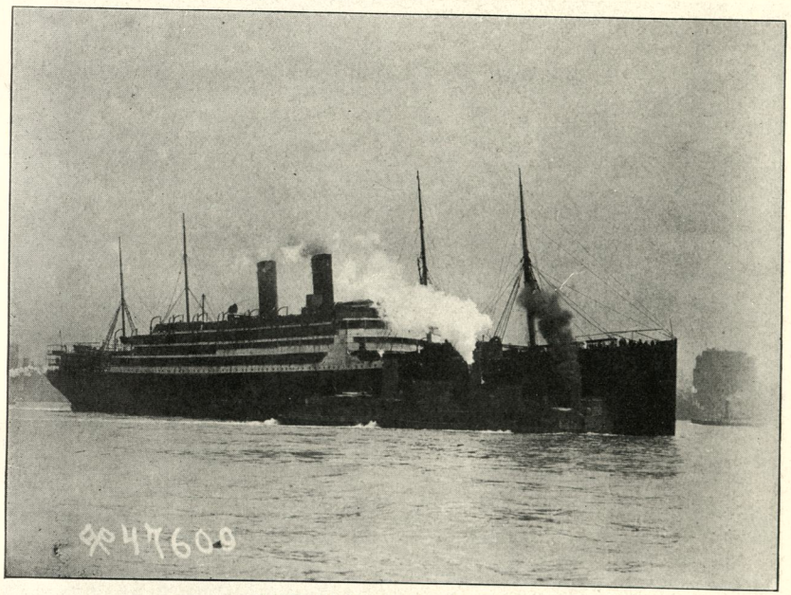
LEVIATHAN.
Leaving Brest April 18, 1919.



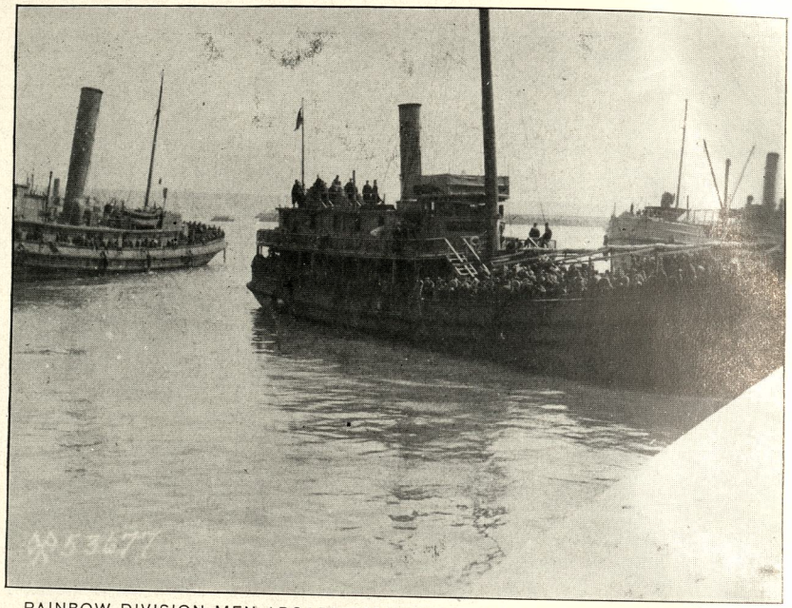
SUPPLYING COAL FOR ARMY TRANSPORTS IS ONE OF THE MANY DUTIES OF THE SUPPLY SERVICES. THIS PHOTOGRAPH SHOWS THE COALING OF THE LEVIATHAN.



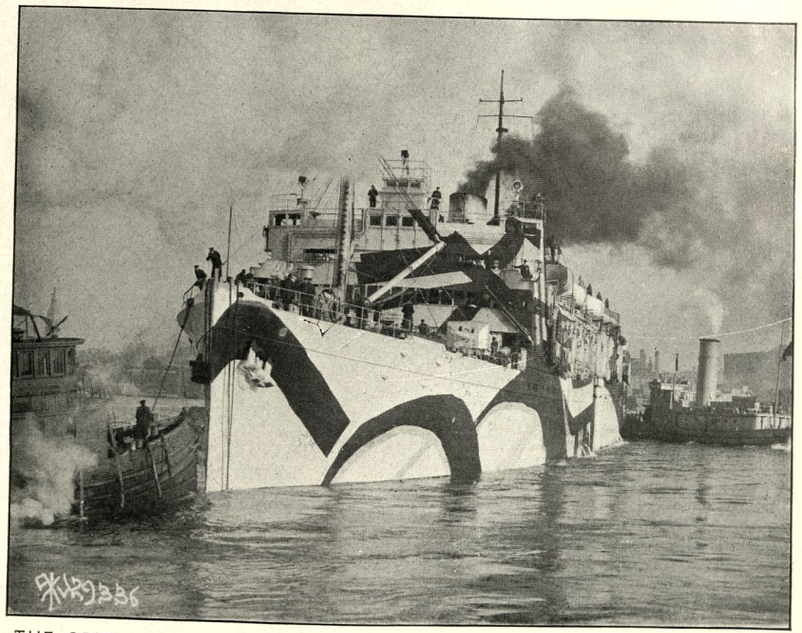
VOLUNTEERS FROM INFANTRY AND ARTILLERY OUTFITS FOR COALING-SHIP DETAIL, SAVING ONE DAY IN SAILING, APRIL 17, 1919.



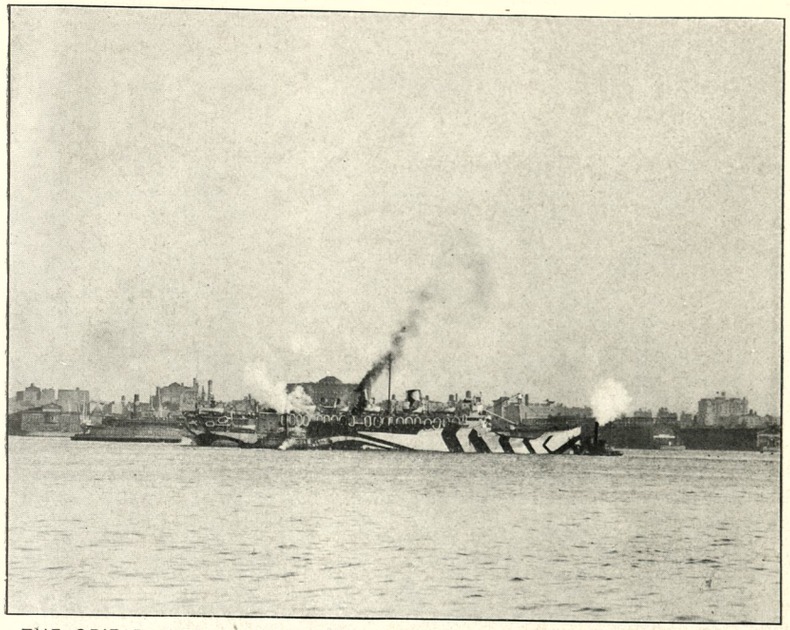
KAISERIN AUGUSTA VICTORIA.
Full view of the port side, Kaiserin Augusta Victoria.



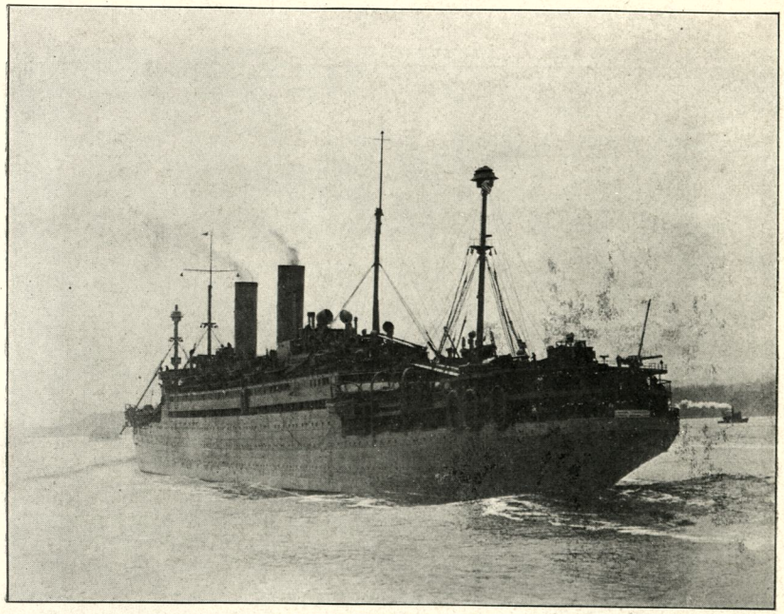
RAINBOW DIVISION MEN ABOARD LIGHTERS BOUND FOR LEVIATHAN, BREST ROADS.



THE ORIZABA LEAVING THE SLIP AND GOING DOWN THE NORTH RIVER.



THE ORIZABA LEAVING THE SLIP AND GOING DOWN THE NORTH RIVER.

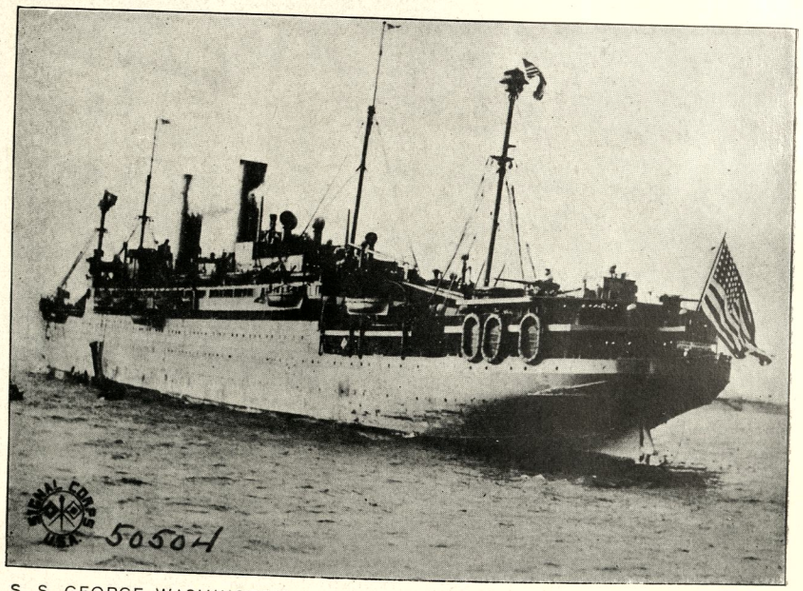


GEORGE WASHINGTON.

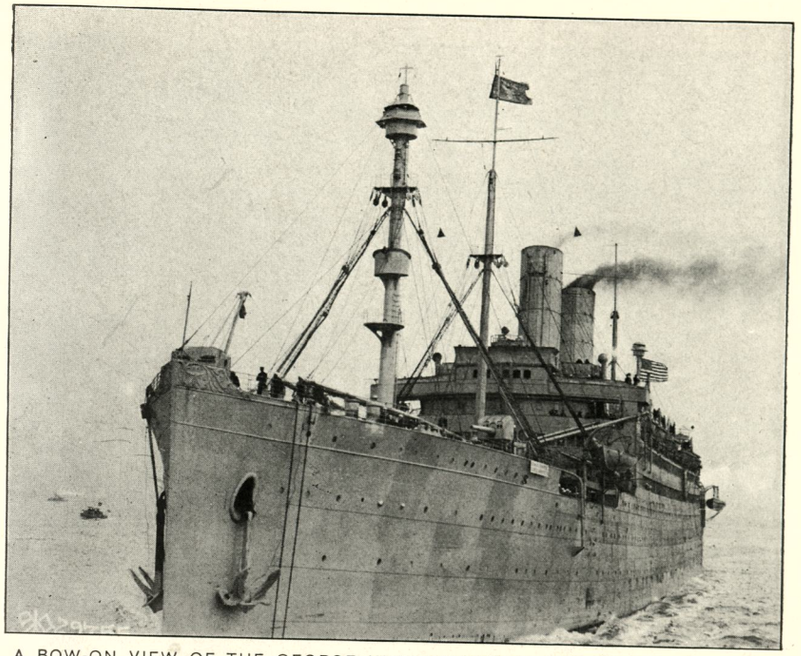
Stern view of the George Washington as she went down the harbor.



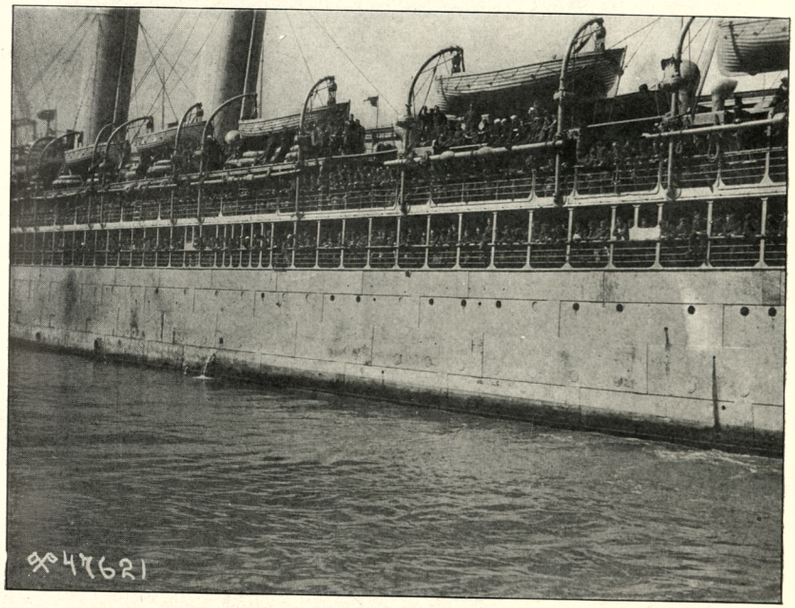
THE GEORGE WASHINGTON AND ESCORTING DESTROYERS AND AIRPLANE PASSING FORT WADSWORTH (ON RIGHT OF PICTURE).



S. S. GEORGE WASHINGTON, WITH PRESIDENT WILSON ON BOARD, ARRIVES AT BREST, FRANCE. DECEMBER, 1918.



A BOW-ON VIEW OF THE GEORGE WASHINGTON AS SHE APPROACHED THE STATUE OF LIBERTY.

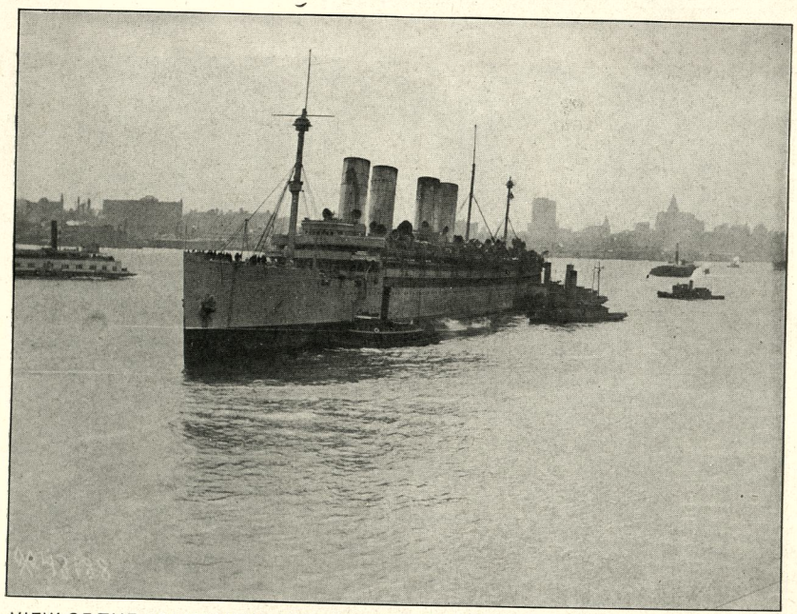


GEORGE WASHINGTON.

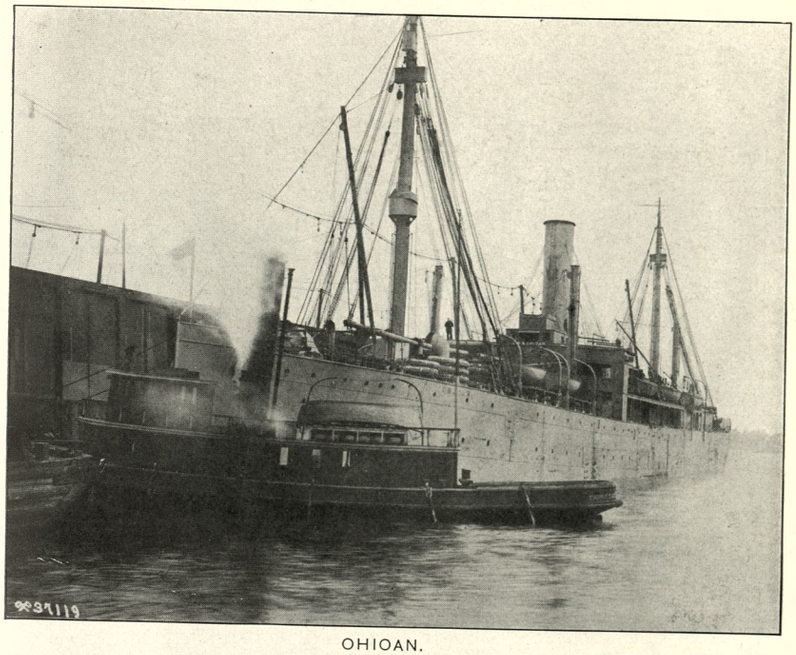
George Washington being warped into her slip.



THE PATROL ALONGSIDE THE GEORGE WASHINGTON.



VIEW OF THE AGAMEMNON DOCKING WITH TROOPS OF THE SEVENTY-SEVENTH DIVISION ON BOARD.

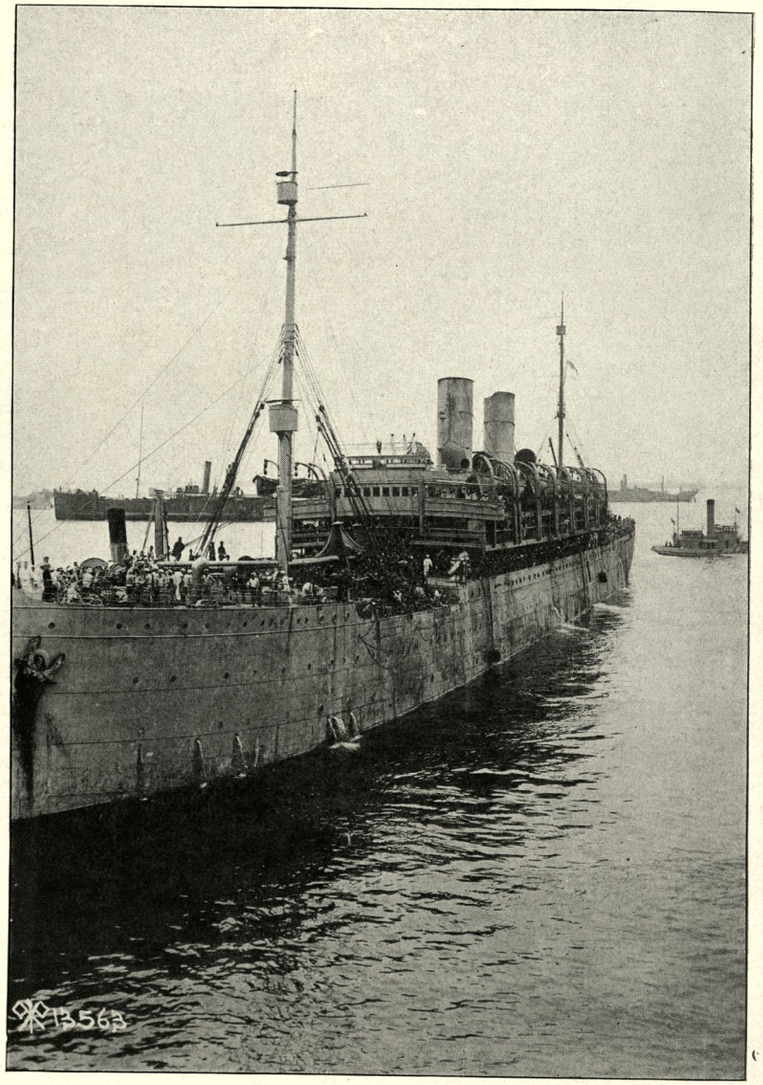


OHIOAN.

Exterior view of the Ohioan as she was just about to be snaked into her slip at Pier 9.



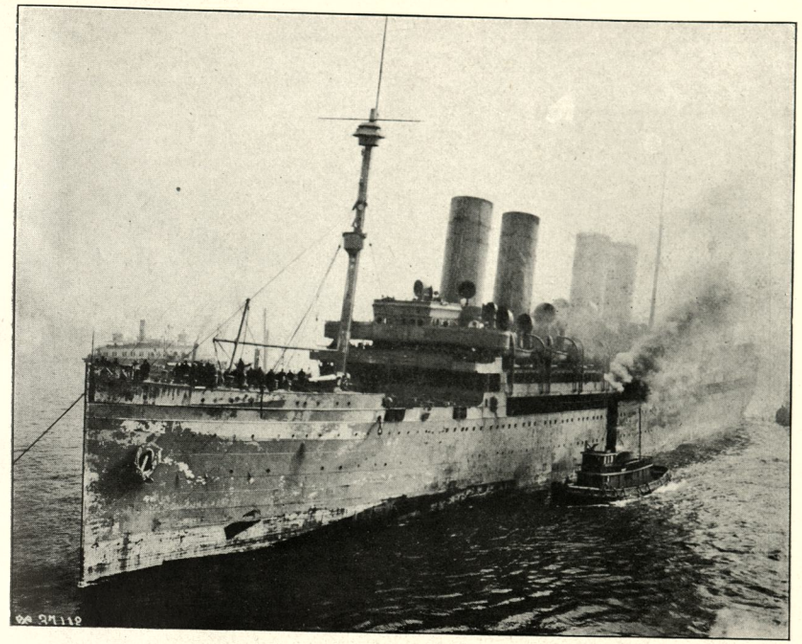
SIGN OF WARNING.



MERCURY.

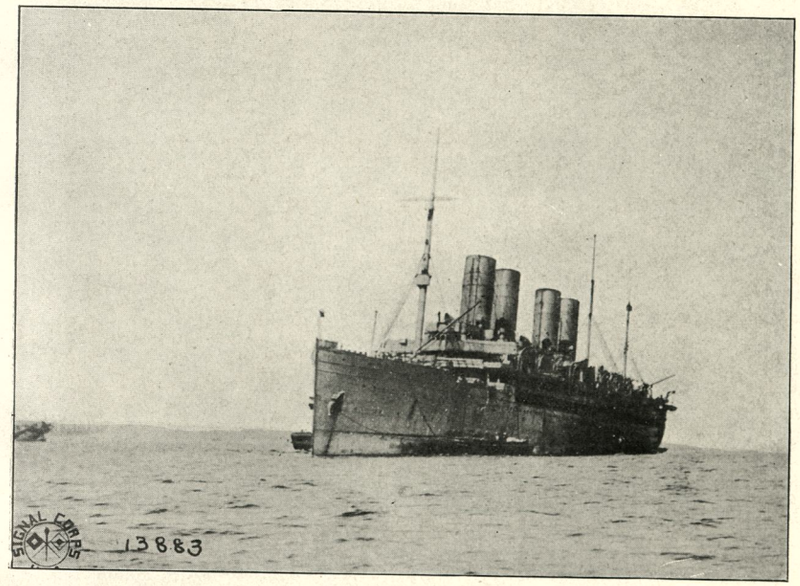
Full view of the Mercury, showing tug hauling her down the bay.

108–12



AGAMEMNON.

The Agamemnon being warped into her slip.



MOUNT VERNON.

One of the ships that made up the largest convoy that ever crossed the Atlantic.

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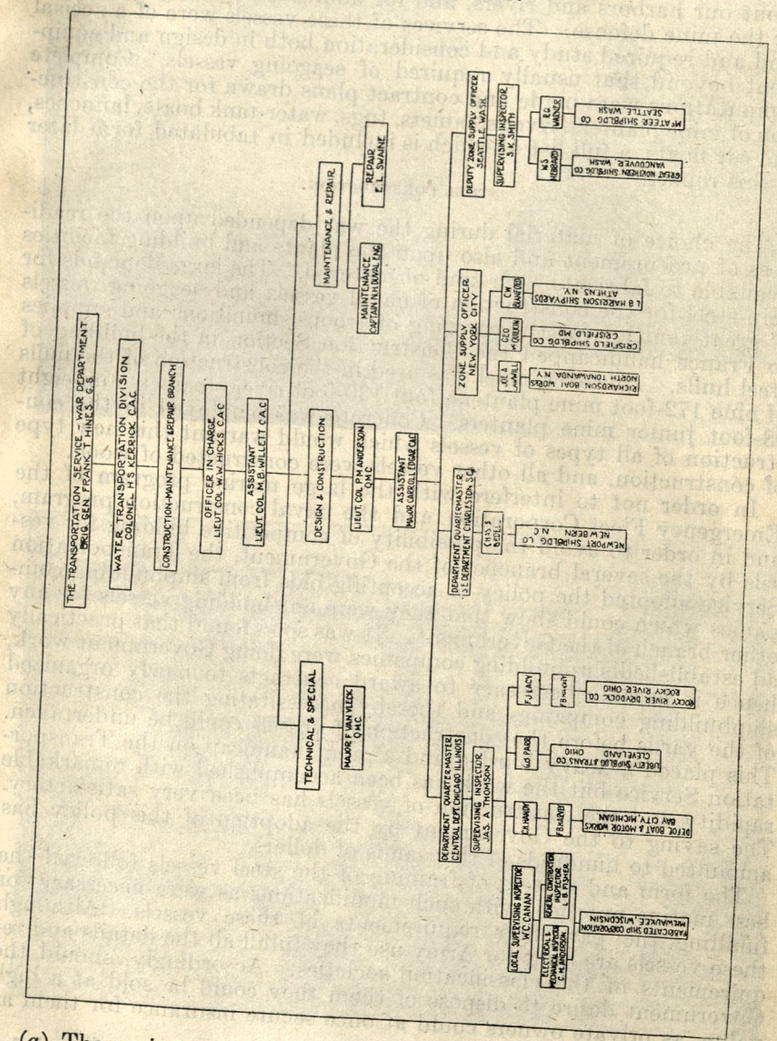
Transport Branch were conferred upon the Construction, Maintenance, and Repair Section of the Embarkation Service.

The Construction, Maintenance, and Repair Branch of the Embarkation service without formal orders in each particular case, eventually absorbed the following additional functions:



(*a*) The review and control of requisitions from officers in charge of harbor boats and harbor floating equipment, for supplies and equipment for the physical upkeep and maintenance of these vessels.

(*b*) The control of procurement of coal and fuel oil vessels owned and operated by the Army.

CONSTRUCTION SECTION.

In the days of the cry of "ships and more ships," the Construction Section undertook to build those vessels demanded by our Army in home waters. This included craft for the transfer of troops and freight about our harbors and rivers, and for additional floating equipment for the mine defense. The services of these vessels were of a special kind and required study and consideration both in design and equipment beyond that usually required of seagoing vessels. Complete computations were made and contract plans drawn for the construction of mine planters, river steamers, tugs, water-tank boats, launches, and car floats, a full list of which is included in tabulated form later in this report.

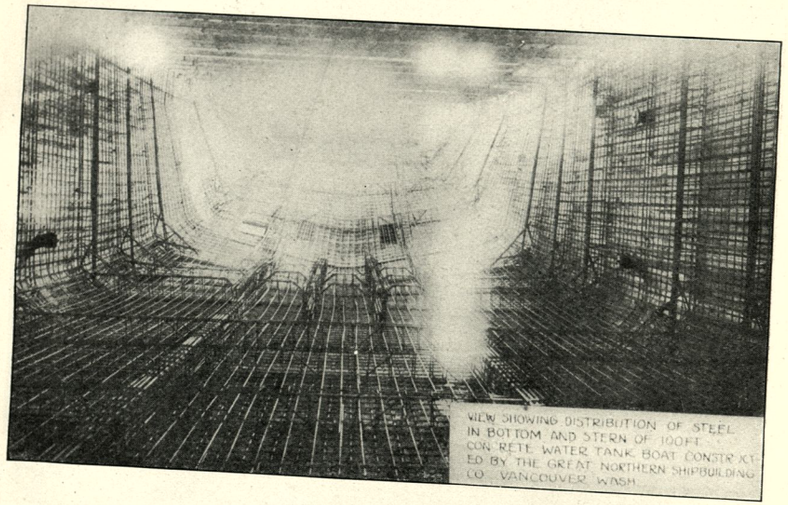
STEEL CONSTRUCTION.

The choice of material during the war depended upon the readiness of procurement and also upon the plants and building facilities available to fabricate such kind of material. The large demands for ship steel for the construction of naval vessels and seagoing vessels of great tonnage for the carrying of troops, munitions and supplies to France handicapped the Construction Section in the building of steel hulls. However, steel was used in the construction of the hulls of nine 172-foot mine planters, four 130-foot river steamers and eight 98-foot junior mine planters. Concrete was employed in the construction of all types of vessels which would warrant this new type of construction, and all other vessels were constructed of wood.

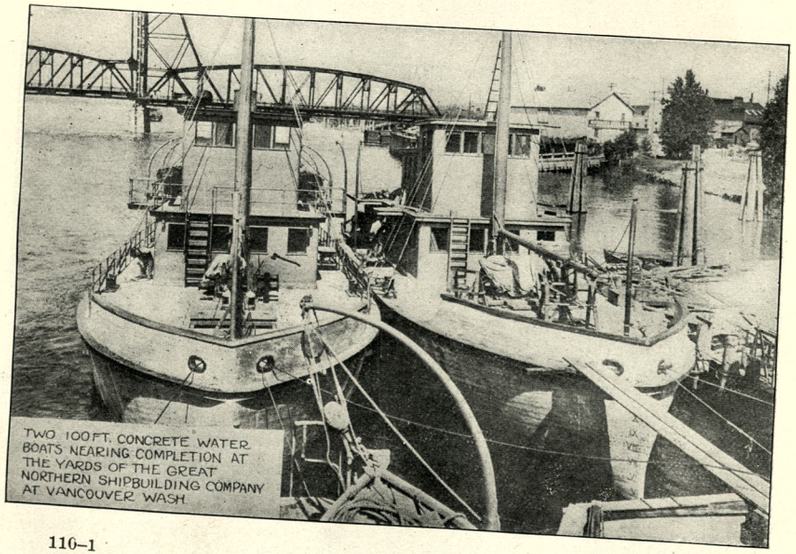
In order not to interfere with the large marine program of the Emergency Fleet Corporation and the naval construction program, and in order to avoid the possibility of competitive bidding for vessels by the several branches of the Government, the Transportation Service adopted the policy of accepting bids from shipbuilding companies which could show that they were not building vessels for any other branch of the Government. It was soon found that practically all established shipbuilding companies were doing Government work, hence it became necessary to award contracts to newly organized shipbuilding companies and thereby necessitating the construction of the yards before the construction of vessels could be undertaken. This placed a heavy burden and a great handicap on the Transportation Service but the work has been accomplished with remarkable rapidity and the construction of vessels has been very satisfactory. The saving to the Government by the adoption of this policy has amounted to hundreds of thousands of dollars.

The form and system of framing of the steel vessels followed the best marine practice, with such modifications as were necessary for fulfilling the particular requirements of these vessels. Although these vessels are built for Army use they fulfill all the details and requirements of the classification societies. Accordingly, should the Government desire to dispose of them they could be sold at a high value, as private owners could at once secure insurance for them as commercial carriers.

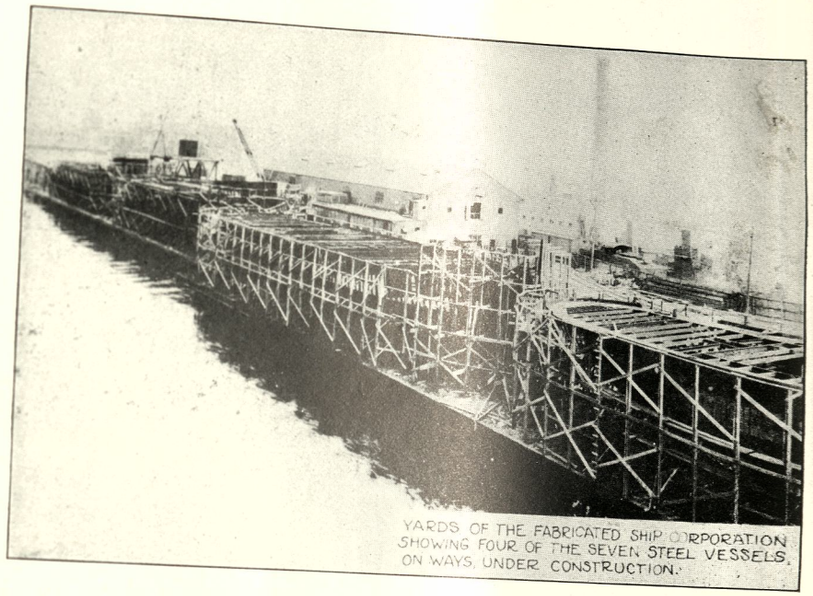
The steel mine planters and river steamers were contracted for with the Fabricated Ship Corporation of Milwaukee, Wisconsin, and a new yard was established for their construction. The manner of building the hulls is partly by a prefabricated shop system. Units and parts are entirely completed in the shops and assembled on the



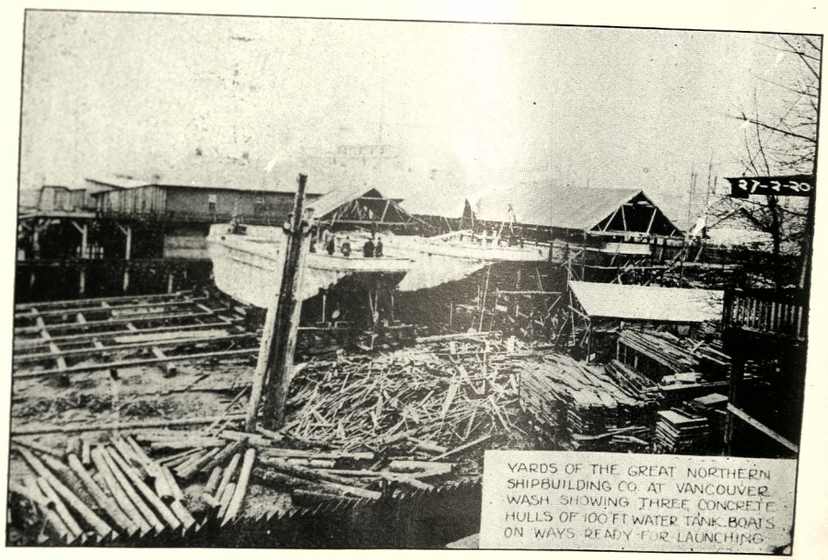
VIEW SHOWING DISTRIBUTION OF STEEL IN BOTTOM AND STERN OF 100FT. CONCRETE WATER TANK BOAT CONSTRUCTED BY THE GREAT NORTHERN SHIPBUILDING CO. VANCOUVER, WASH.



TWO 100FT. CONCRETE WATER BOATS NEARING COMPLETION AT THE YARDS OF THE GREAT NORTHERN SHIPBUILDING COMPANY AT VANCOUVER, WASH.



YARDS OF THE FABRICATED SHIP ORPORATION SHOWING FOUR OF THE SEVEN STEEL VESSELS ON WAYS, UNDER CONSTRUCTION.



YARDS OF THE GREAT NORTHERN SHIPBUILDING CO. AT VANCOUVER WASH. SHOWING THREE CONCRETE HULLS OF 100 FT. WATER TANK BOATS ON WAYS READY FOR LAUNCHING

way. In fact, parts of the hull have been fabricated at auxiliary plants some miles removed from the shipyard. This has required more complete detailed drawings of the hull with size of plates and shapes carefully computed, and connections and rivets fully detailed. This system of prefabrication has produced more uniformity of construction and has increased the speed of production.

The Defoe Boat and Motor Works of Bay City, Michigan, are the builders of the junior mine planters in a new yard established for this special purpose, and have followed the usual methods of lay-out in the mold loft and in the fabrication and assembly.

Wood has been used in the hull construction of the smaller vessels such as junior mine planters, distribution box boats, motor tugs, and troop launches. Boats of this size are economical when constructed of wood, and this material has permitted the awarding of contracts to such companies who have a small organization familiar with wooden construction and who are able, without a large investment, to establish a shipyard. The yards have been also permitted to be located at points away from the crowded industrial centers. The wooden vessels involved nothing unusual from that of common practice except in so far as special machinery and equipment was necessary for the particular duty of the vessel.

CONCRETE CONSTRUCTION.

A few years ago the layman would have ridiculed the idea of building ships of reinforced concrete, but within the past year the public has seen illustrations of vessels built of concrete, or "stone," as some choose to call it, and has read of their performance. The building of ships of reinforced concrete in this country is an entirely new art, although its elements are old, and was occasioned by the immediate critical need of ships as a result of the war.

At the beginning of the war the ability of the shipyards equipped to build vessels of wood was limited, and the excessive demand for steel for war-making equipment and for the building of large vessels led the Construction Section into the field of concrete vessel construction. Although handicapped by lack of time and facilities for the complete study of the problems of design and construction, and with an organization of but a few men, plans were completed and the building of auxiliary craft for the Army was undertaken, using concrete for hull material. This work was carried on abreast of the development by others of the concrete ship, and although the vessels built were of small tonnage the department is entitled to considerable part of the credit for what has been done in this novel field.

On June 29, 1918, a contract was made with the Great Northern Shipbuilding Co. of Vancouver, Wash., who established a new yard for the building of five 100-foot concrete water tank boats, followed shortly by the letting of a contract to the Newport Shipbuilding Co. for nine 130-foot concrete river vessels in a new yard at Newbern, N. C. On September 6, 1918, a contract was awarded to the L. B. Harrison Shipyards (Inc.) at Athens, N. Y., for six 265-foot concrete car floats, and on October 3, 1918, the Liberty Shipbuilding & Transportation Co. of Cleveland, Ohio, undertook to build six 265-foot concrete car floats. Each of these contractors established new yards for this construction.

The lines of the water boats have sufficient curving to present a good appearance but are not particularly complicated in form. In the general shaping of the hull of the river steamers very little change was made from the curves of the standard steel ship as a concession to the use of concrete. The midship section is practically square for about 25 per cent of its length, with surfaces curved in more than one direction forward and aft of the midship section. The car floats follow the rectangular shape of section with a small curve at bilge and with raked ends.

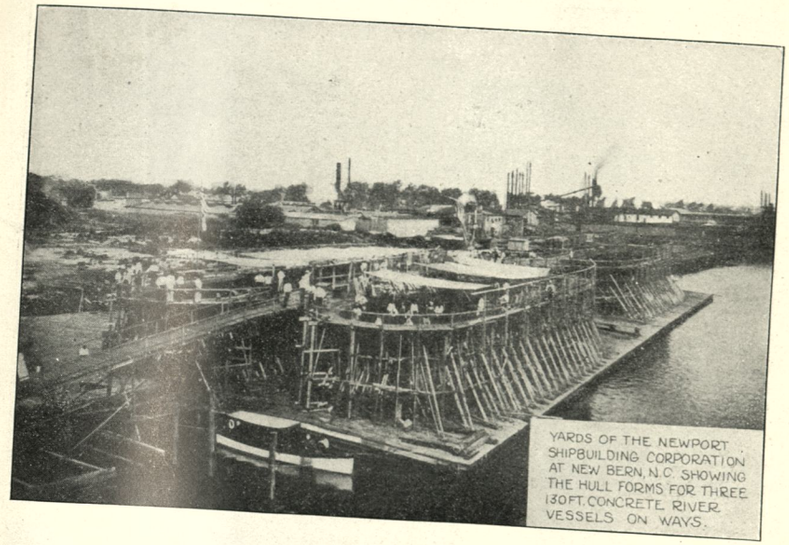
In the design of the shell and framing practically the same method of procedure of analysis was adopted as for the steel ships, with the usual assumption as to size and form of wave. A study of all stresses in these vessels to take care of conditions in the open sea was made in so far as they were determinable.

The weight of the concrete vessel is in excess of the weight of a steel vessel of equal carrying capacity, and requires a careful consideration of framing and arrangement to gain a maximum strength with a minimum volume or weight of material. This is especially important in the proper positioning of both concrete and reinforcing steel to take care of longitudinal stresses induced by the vessel in hogging and sagging conditions. The midship section of the car floats furnishes an excellent example of the effective placing of concrete and steel at points both above and below the sides and longitudinal bulkheads, this material being located where it can most economically and efficiently take longitudinal stresses.

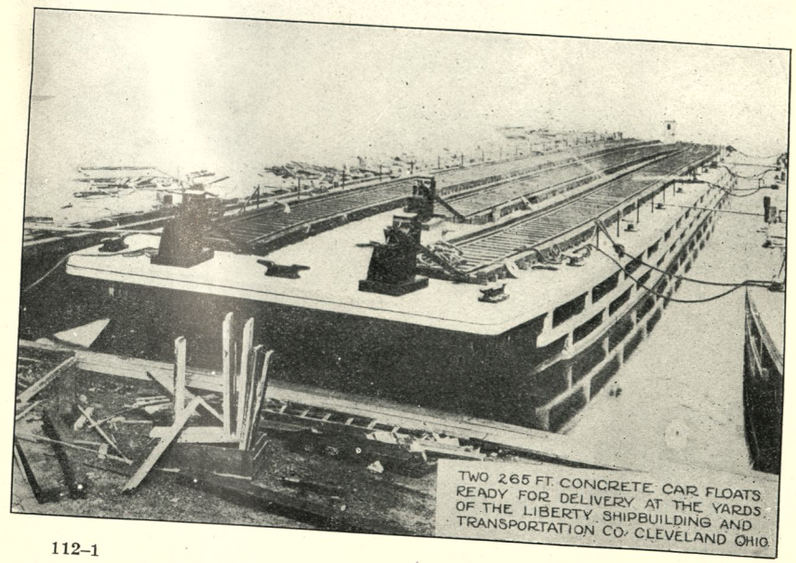
The original design of the car float was along the lines adopted by other engineers in concrete construction as regards steel reinforcing in the extreme ends. Few marine architects have endeavored to reduce the amount of steel reinforcing at the ends of the vessel in proportion to the sagging and hogging stresses, but, owing to the curvature of the vessel and the converging of the developed sides, it was found that the steel reinforcing was actually greater at the ends than at midship. The Construction Section entered upon a new departure in the construction of the concrete car float by reducing the steel after ends and also reducing the thickness of the deck and bulkheads at the ends, so as to conform more nearly in strength with the stresses which would be developed. A very careful study was made of the strength members of the vessel with a view to obtaining the maximum strength with the minimum weight, and, as a result, the final design and the one on which the last 10 vessels were constructed is stronger than the first and reduces the weight of the hull by approximately 18 per cent.

Special effort was made in the designs to follow a simple system of reinforcing to facilitate ease and rapidity of construction. The use of bars of few sizes was adopted and sharp turns and complicated bends avoided.

In the actual construction innumerable difficulties were encountered, but these were overcome successfully without appreciable delay. The forms for practically the entire ship had to be placed before concreting started, to permit a continuous pouring to avoid construction joints. This required forms to be arranged to allow free access inside the boat during pouring and to permit a ready method of stripping to avoid injury to concrete and to preserve, in

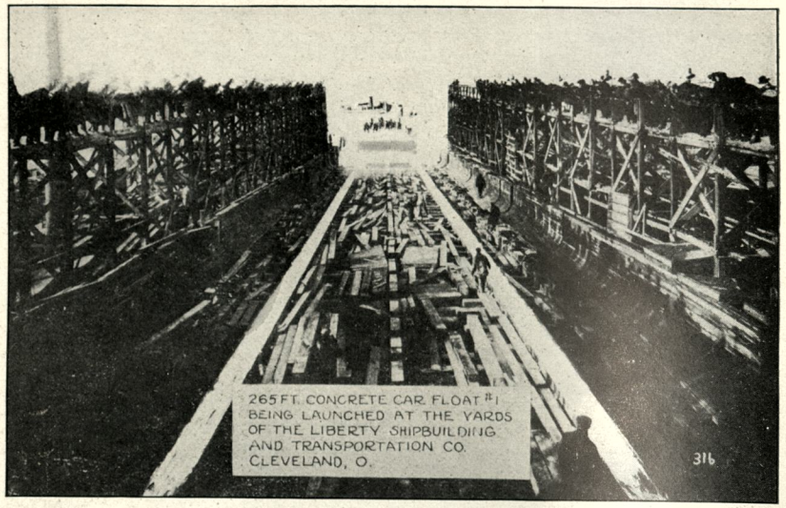


YARDS OF THE NEWPORT SHIPBUILDING CORPORATION AT NEW BERN, N.C. SHOWING THE HULL FORMS FOR THREE 130 FT. CONCRETE RIVER VESSELS ON WAYS.



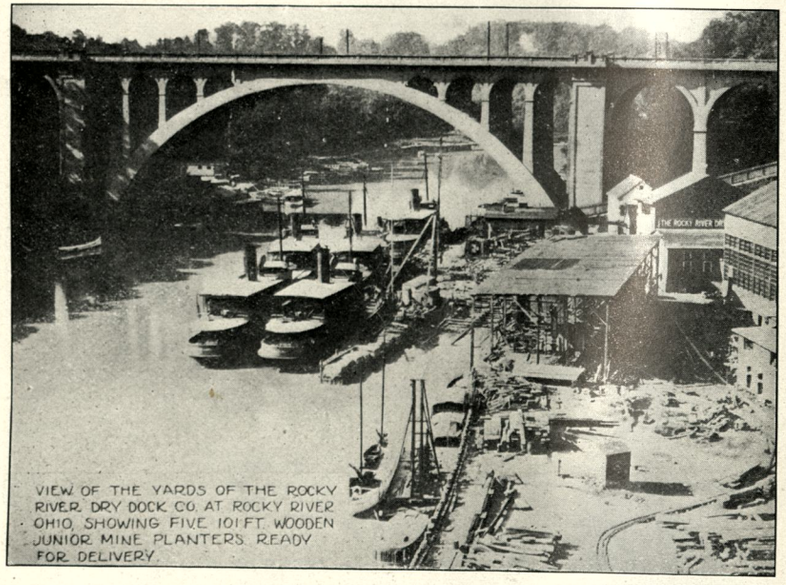
TWO 265 FT. CONCRETE CAR FLOATS READY FOR DELIVERY AT THE YARDS OF THE LIBERTY SHIPBUILDING AND TRANSPORTATION CO. CLEVELAND OHIO.

112–1

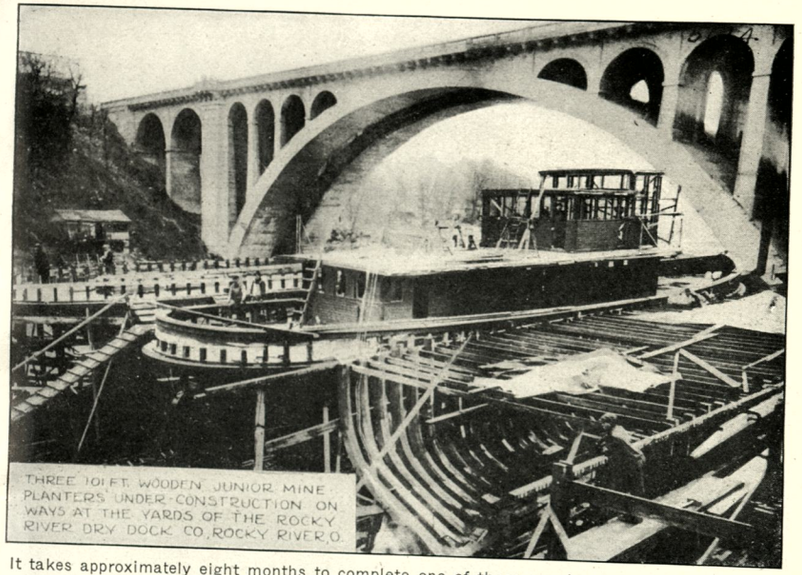


265 FT. CONCRETE CAR FLOAT #1 BEING LAUNCHED AT THE YARDS OF THE LIBERTY SHIPBUILDING AND TRANSPORTATION CO. CLEVELAND, O.

316

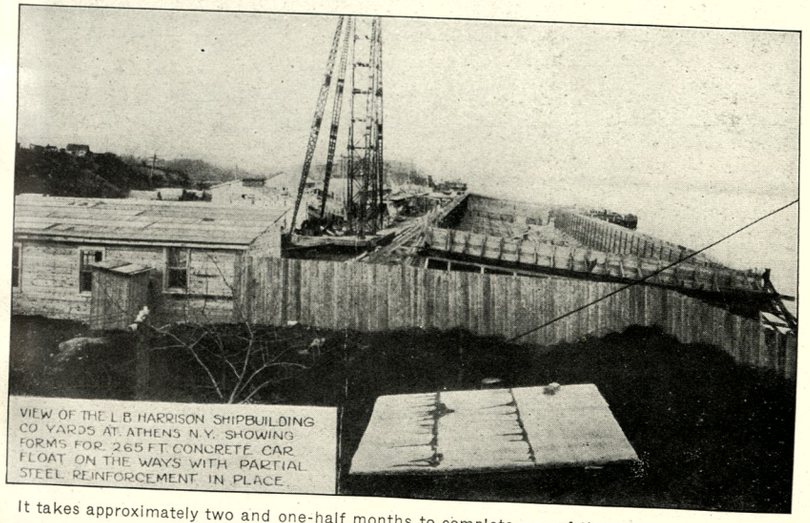


VIEW OF THE YARDS OF THE ROCKY RIVER DRY DOCK CO. AT ROCKY RIVER OHIO, SHOWING FIVE 101 FT. WOODEN JUNIOR MINE PLANTERS READY FOR DELIVERY.



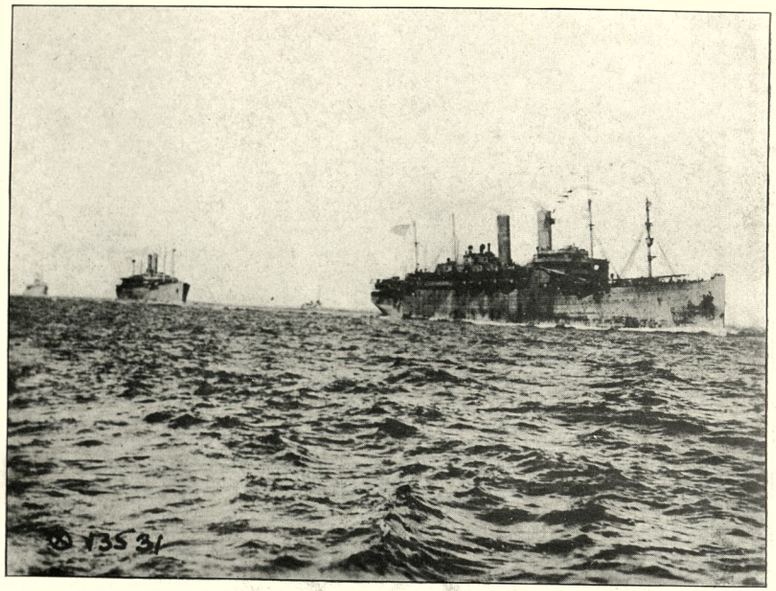
THREE 101 FT. WOODEN JUNIOR MINE PLANTERS UNDER CONSTRUCTION ON WAYS AT THE YARDS OF THE ROCKY RIVER DRY DOCK CO., ROCKY RIVER, O.

It takes approximately eight months to complete one of these wooden junior mine planters.



VIEW OF THE L.B. HARRISON SHIPBUILDING CO. YARDS AT ATHENS N.Y. SHOWING FORMS FOR 265 FT. CONCRETE CAR FLOAT ON THE WAYS WITH PARTIAL STEEL REINFORCEMENT IN PLACE.

It takes approximately two and one-half months to complete one of these concrete car floats.



A CONVOY.



AMERICAN TROOPS WERE RUSHED TO EUROPE AT THE RATE OF 10,000 A DAY. HERE IS A STREAM OF THEM, JUST LANDED AT A SEAPORT IN ENGLAND, POURING THROUGH THE STREET ON THEIR WAY TO A TROOP TRAIN. MORE THAN 2,000,000 WERE ALREADY OVERSEAS.

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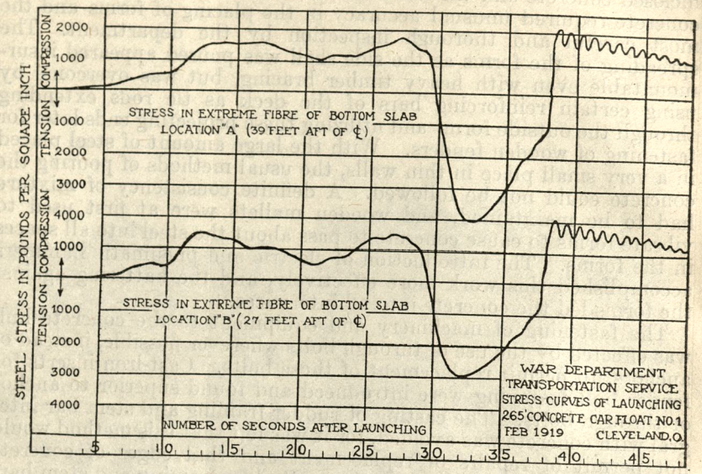
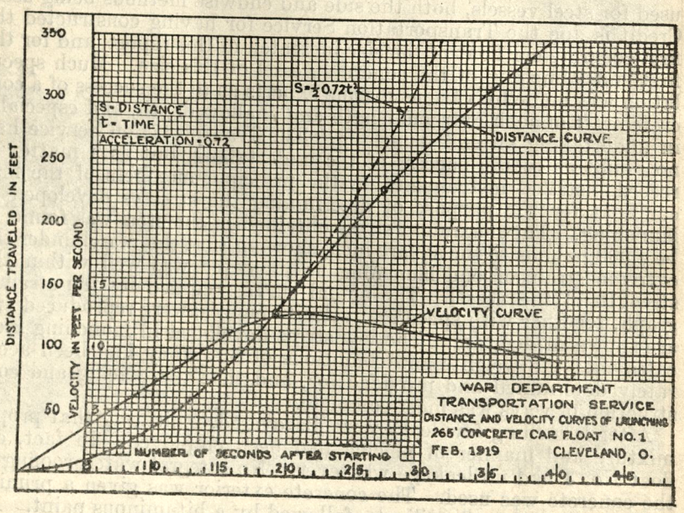
so far as possible, the forms for subsequent use. The thickness of inclosed concrete and the small thickness of covering of steel by the concrete required unusual accuracy in the placing of forms and the most careful and thorough inspection by the department. The spreading of the forms as the side shell was poured appeared insurmountable even with heavy timber bracing, but was overcome by using certain reinforcing bars of the deck as tie rods extending through the outside forms and utilizing these projecting ends later for fastening of wooden fenders. With the large amount of steel placed in a very small place in thin walls, the usual methods of pouring the concrete could not be followed. A definite consistency of mixture had to be maintained, and wooden mallets were at first used to vibrate forms to cause concrete to pass about the steel into all spaces in the forms. The introduction of electric and pneumatic hammers accomplished this work more effectively, and the battering against the forms led the concrete into all interstices.

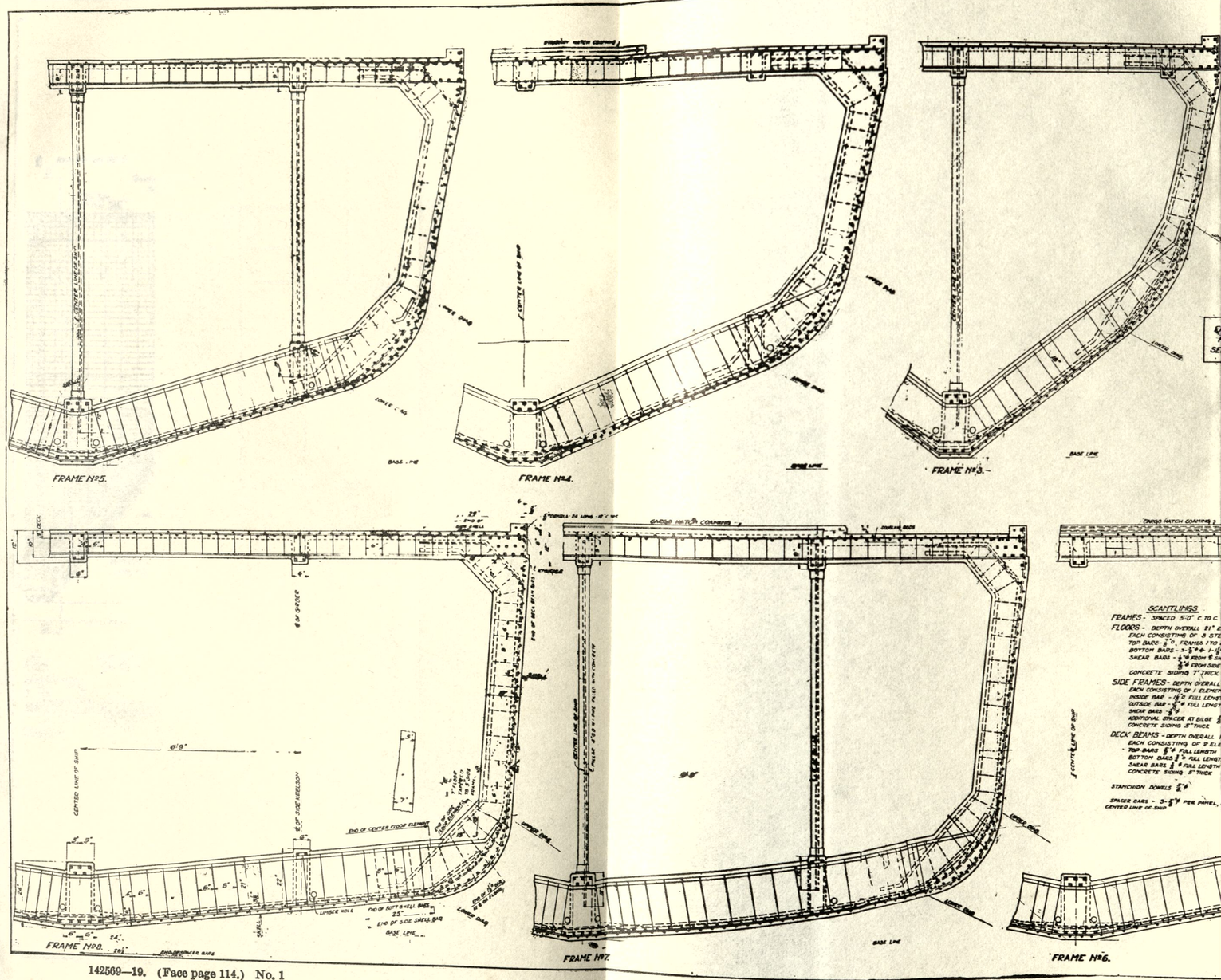
The fastening of machinery and equipment to the concrete hull was effected by the use of through bolts wherever possible, instead of anchors, to permit replacement of these bolts. Cast-iron inserts for fender bolt fastening were introduced and found superior to anchor or through bolts. The casting of rudder framing and stem bar integral with concrete was avoided, for it was felt that this method would not permit of repairs or replacement and that edges of concrete would be subject to disintegration. Rudder framing and stem bars were therefore fastened to hull by means of bolts and inserts, and were not an integral part of the hull.

The manner of launching the concrete vessels was similar to that used for steel vessels, both the side and endwise methods being used. Credit is due the Transportation Service for having constructed the first concrete car float of the size indicated in this report, and for the first end launching of the concrete vessel of this size. Much speculation was made by various marine experts as to the success of a concrete craft of such extreme length and shallow depth, and especially in undertaking an end launching. The Transportation Service had no doubt as to the success of the undertaking, but as a matter of record installed instruments on the principal members of the first car float for the purpose of determining the stresses developed in launching. The maximum stress obtained in the steel was found to be 4,000 pounds to the square inch, showing that the vessel under the extreme strain of end launching as indicated was well within the strength of the vessel. The actual curve recorded by the strainagraph, together with speed and velocity curves, were reproduced and are shown in diagram. The low stress developed in launching indicates that the weights and conditions of buoyancy had been accurately determined and provided for, and that the placing and construction of ways was most complete.

After launching few leaks were discovered, indicating that proper mixture and manner of placing had been employed. In fact, car float No. 3 had no leakage whatever. No integral waterproofing in the concrete was used. The concrete exterior was given a priming coat of magnesium fluosilicate, followed by a bituminous paint. An antifouling mixture was applied to the underwater parts and a boat topping paint to the upper portion. With this treatment of the







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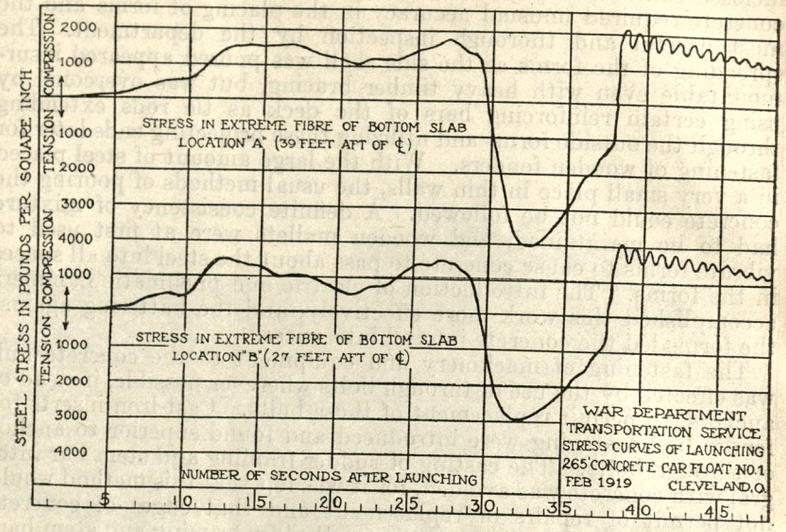

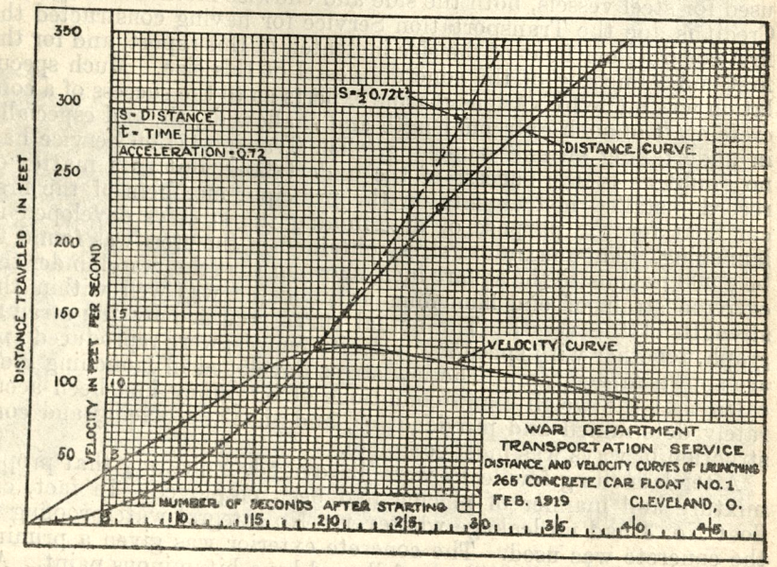

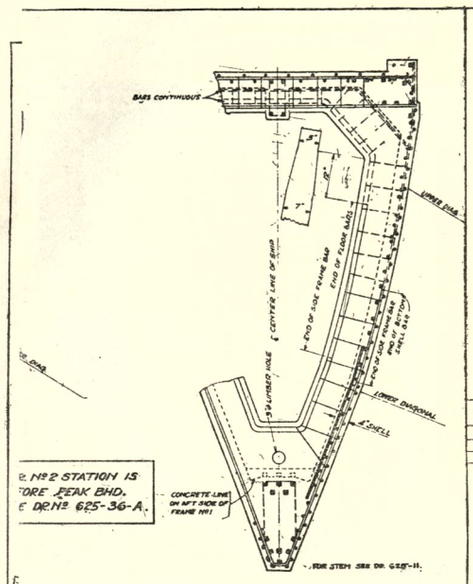

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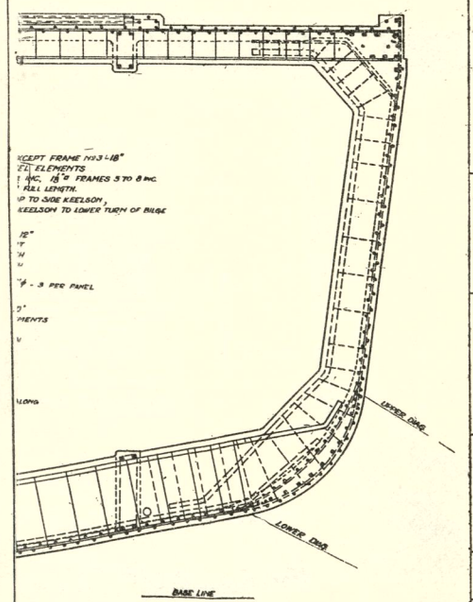


NOTES.

ALL FRAMES SHOWN STARBOARD SIDE LOOKING FORWARD FOR SECTIONS OF FLOORS, SIDE FRAMES AND DECK BEAMS, SEE DR. No. 625-7. DIMENSIONS ON FRAMES SIMILAR TO FRAME No. 8 EXCEPT AS NOTED.

DATE	ITEM	ALTERATIONS	APPROVED
MAR 14 1919		POSITIONS OF DECK SIDE STRINGER BARS CHANGED	
" " "		SIDE FRAME & FLOOR BARS TO CONFORM WITH FORWARD SECTION	
" " "		SCANTLINGS MADE TO CONFORM WITH MIDSHIP SECTION	

DIMENSIONS

LENGTH OVERALL = 130'-0" DEPTH MOULDED = 12'-6"
" W.L. = 128'-6" DRAFT = 9'-0"
BEAM MOULDED = 28'-6"
SCALE 1" = 1 FOOT

FRAMES 1 TO 8 INCL.
130 FT. CONCRETE - STEAMER.
TYPE RIVER VESSEL
FOR
EMBARKATION SERVICE.
WATER TRANSPORT BRANCH
WAR DEPARTMENT, WASHINGTON, D.C.

BUILDERS
NEWPORT SHIPBUILDING Co.
WASHINGTON, D.C. & NEWBERN, N.C.

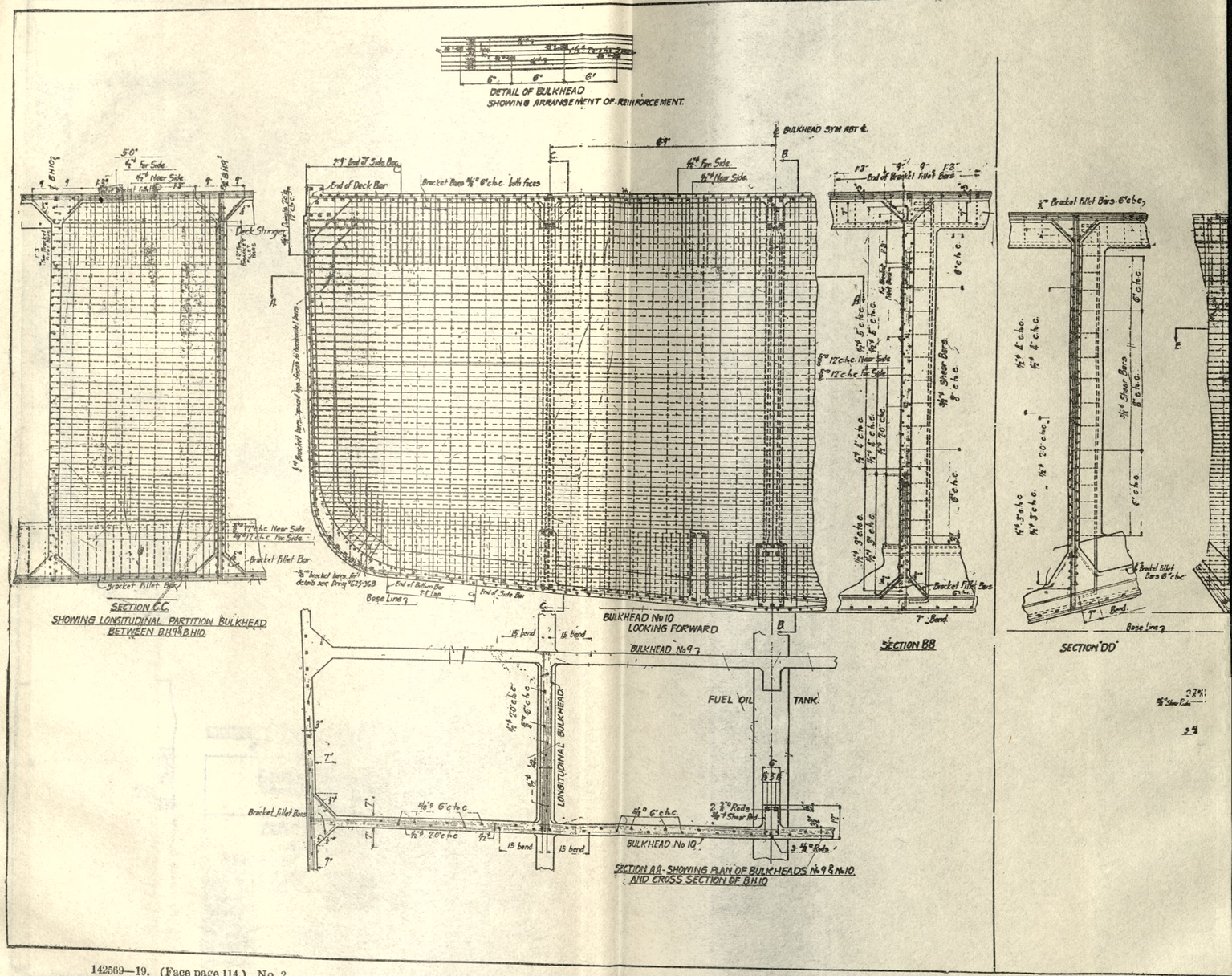
WHITTELSEY & WHITTELSEY
NAVAL ARCHITECTS & ENGINEERS
17 BATTERY PLACE, NEW YORK.

FOR NEWPORT SHIPBUILDING Co.

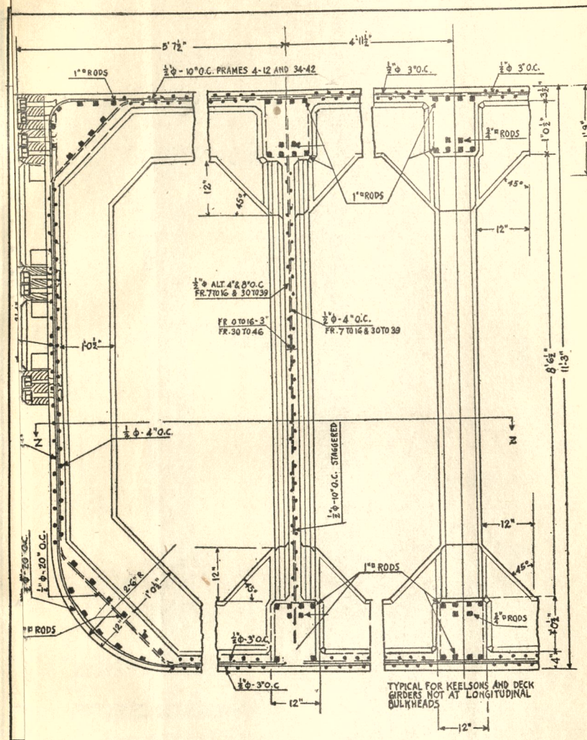
DELIN. J.A.
TRACE. J.A.
CHECK. R.J.
APPROVED.

DATE APRIL 15 1919

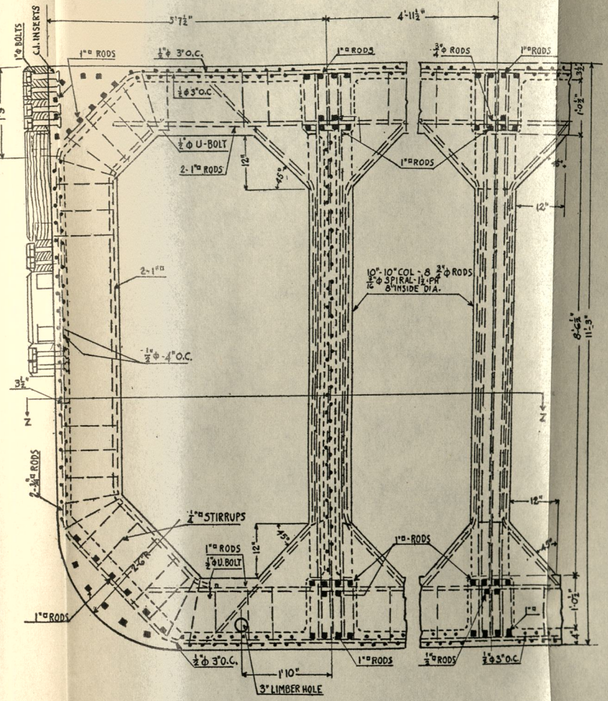
DR. No. 625-21

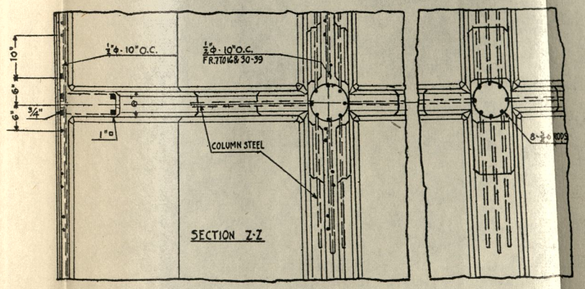


142569—19. (Face page 114.) No. 2

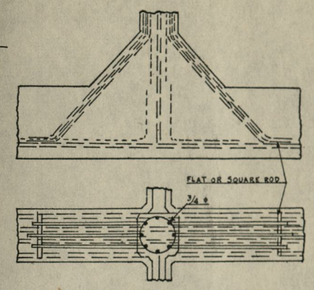


SECTION D-D TYPICAL BETWEEN FRAMES 7-12 & 34-39





SECTION E-E TYPICAL BETWEEN FRAMES 7-12 & 34-39



SECTIONS SHOWING OPTIONAL ARRANGEMENT AT ENDS OF COLUMN STEEL

NOTES
CHAMFERING OF ALL OUTSIDE CORNERS OF COLUMNS DECK BEAMS DECK GIRDERS FLOORS FRAMES AND KEELSONS OPTIONAL
ALL INSIDE CORNERS FILLETED.

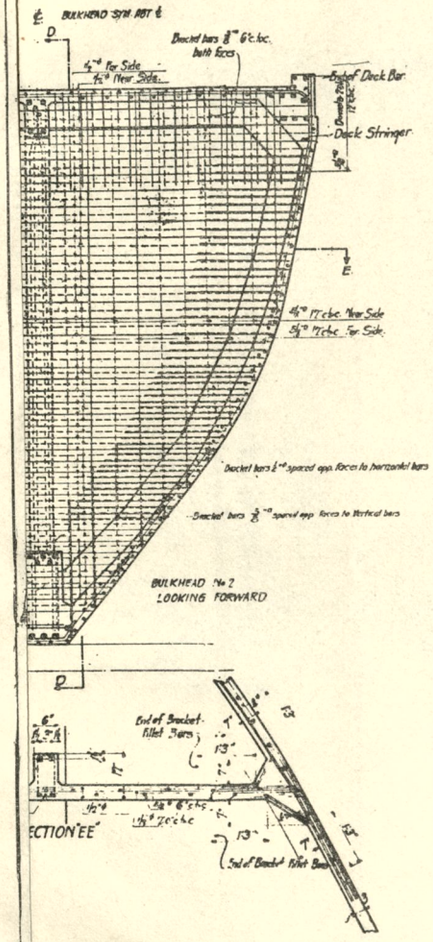
0 1 2 3 4 5 FT.

EMBARKATION SERVICE
CONSTRUCTION AND MAINTENANCE SECTION
- WAR DEPARTMENT -
BRIG. GENL. F.T. MINES - DIRECTOR

265 FT CONCRETE - CAR - FLOAT
- DETAILS OF REINFORCEMENT -

SCALE 1-IN = 1-FT DATED FEB. 28. 1919

DRAWN BY	J.A. PEDRO	SUPERVISED & CHECKED BY	C.E.	SERIAL No. 1
TRACED BY	J A P	COMPUTED & CHECKED BY	C.H.F.	JOB: LIBERTY B & T Co. NO 1
REVISED SHEET No				
REDESIGNED & APPROVED BY	R.M. Anderson MAJ. QMC U.S. ARMY			PLAN NO 4
APPROVED BY	W.W. Hicks LT COL. C.A. U.S. ARMY			NO SHEETS 7



NOTES

DATE	ALTERATIONS ITEM.	APPROVED.

DIMENSIONS

LENGTH OVERALL = 130'-0" DEPTH MOULDED = 12'-0"

WL = 128'-6" DRAFT = 9'-0"

BEAM MOULDED = 28'-0"

SCALE 1" = 1'-0"

BULKHEADS

130FT CONCRETE STEAMER
TYPE "RIVER VESSEL"
FOR
EMBARKATION SERVICE
WATER TRANSPORT BRANCH
WAR DEPARTMENT, WASHINGTON, D.C.

BUILDERS

NEWPORT SHIPBUILDING Co.
WASHINGTON, D.C. & NEW BERN, N.C.

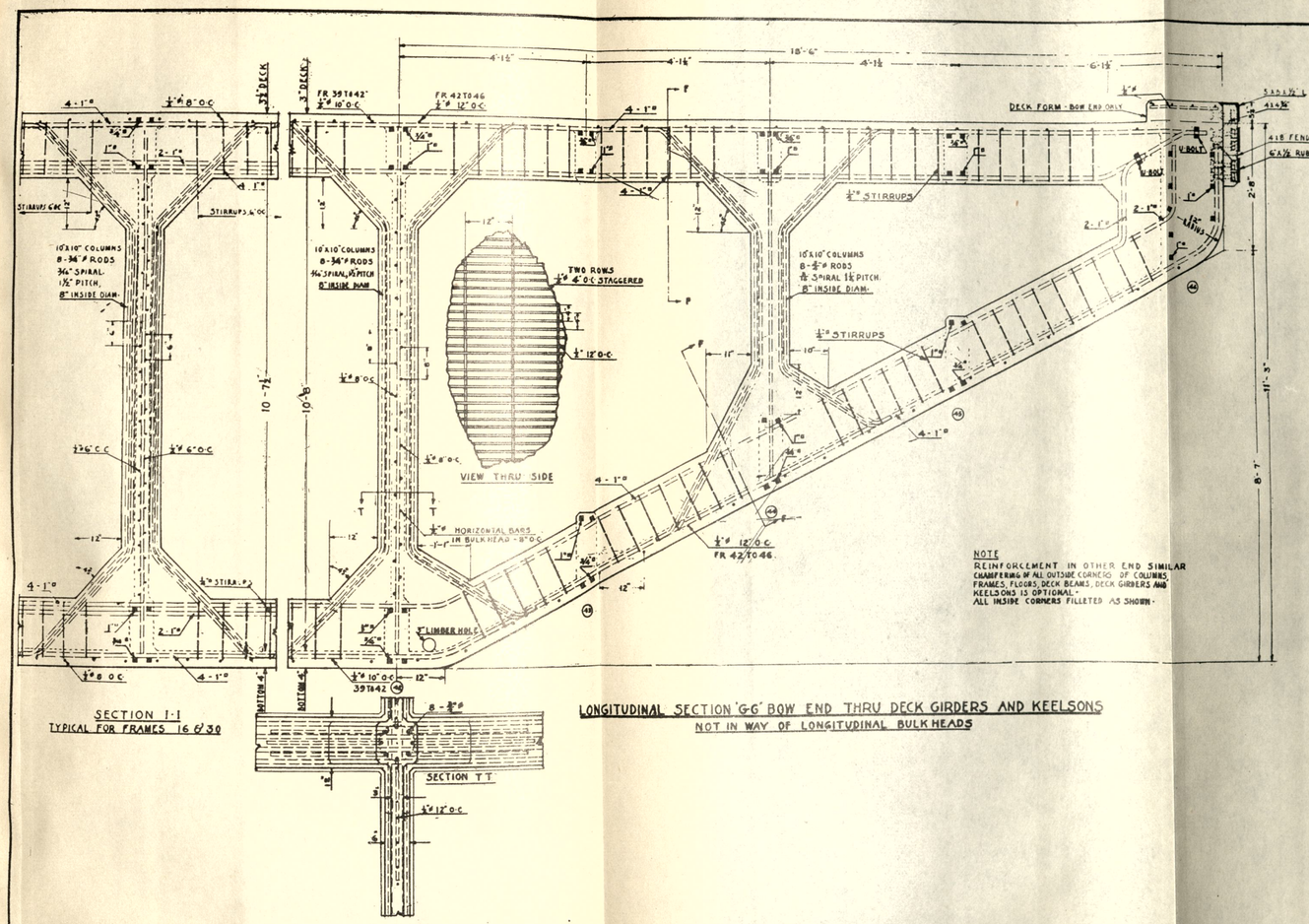
WHITTELSEY & WHITTELSEY
NAVAL ARCHITECTS & ENGINEERS
17 BATTERY PLACE NEW YORK

FOR NEWPORT SHIPBUILDING Co.

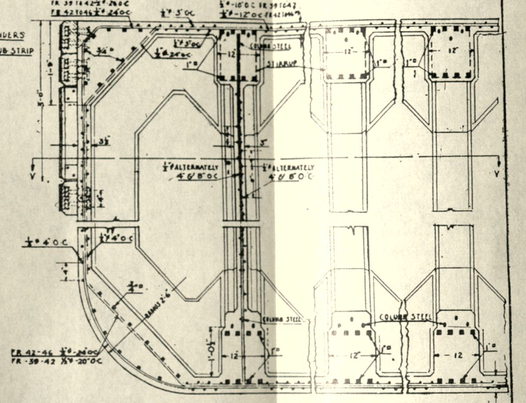
DELIN. J F B
TRACE. J F B
CHECK G H D
APPROVED [illegible]

DATE APRIL 14th 1918.

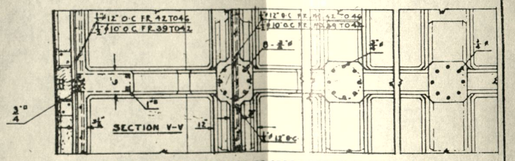
DR. No 625-36A



NOTE
REINFORCEMENT IN OTHER END SIMILAR CHAMFERING OF ALL OUTSIDE CORNERS OF COLUMNS, FRAMES, FLOORS, DECK BEAMS, DECK GIRDERS AND KEELSONS IS OPTIONAL.
ALL INSIDE CORNERS FILLETED AS SHOWN.



TRANSVERSE SECTION BETWEEN FRAMES AT F-F



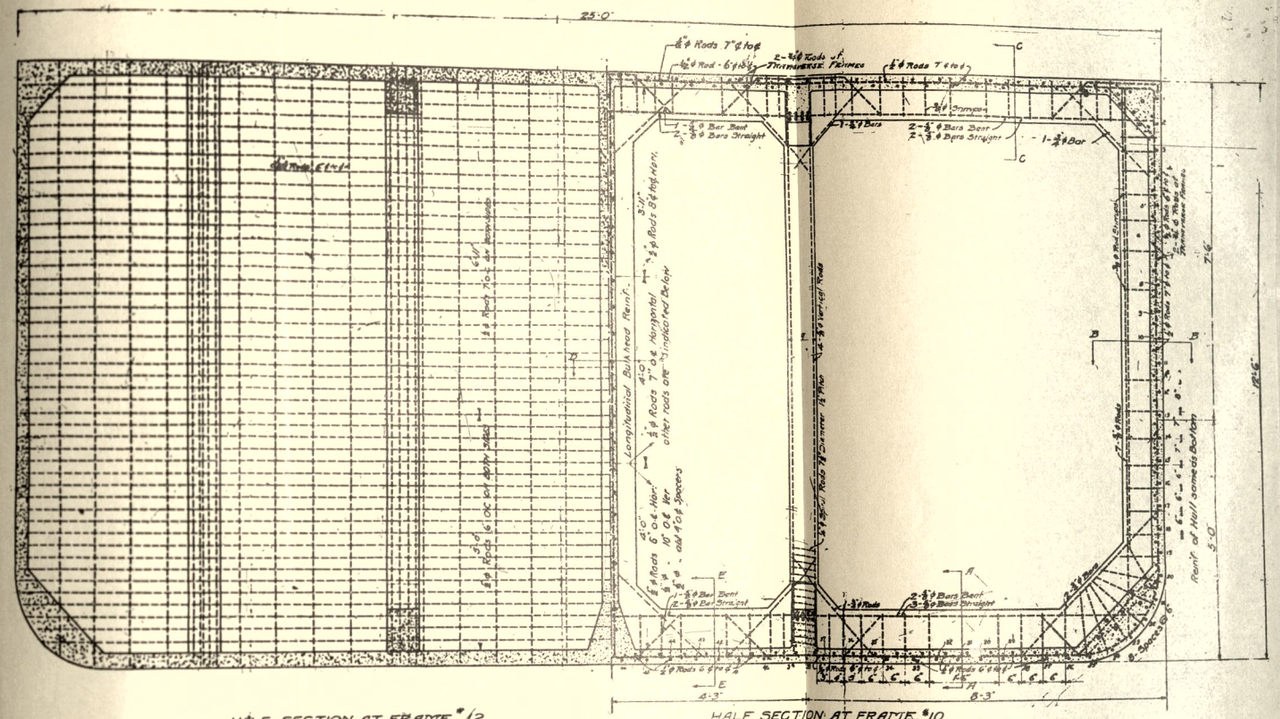
NOTE - SIZE AND SPACING OF STEEL SHOWN IS SIMILAR FOR FRAMES NO. 39 TO 42.

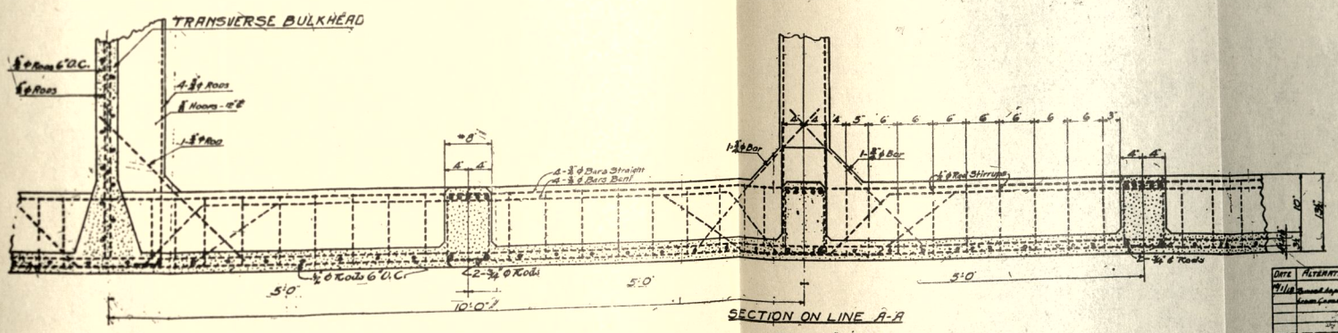
0 1 2 3 4 5 FEET

EMBARKATION SERVICE
CONSTRUCTION AND MAINTENANCE SECTION
WAR DEPARTMENT
BRIG. GENL. F.T. HINES - DIRECTOR

265 FOOT CONCRETE CAR-FLOAT
DETAILS OF REINFORCEMENT
SCALE 1"=1FT
DATED FEB 28-1919

DRAWN BY	SUPERVISED OR CHECKED BY	SERIAL NO 1
TRACED BY	COMPUTED OR CHECKED BY	
REVISED SHEET NO		JOB NO 1
RECOMMENDED BY	MAJ. G.L.C. U.S. ARMY	PLAN NO 3
APPROVED BY	LT COL C.A.U.S. ARMY	NO SHEETS 7





APPROVAL RECOMMENDED.
U.S.A.

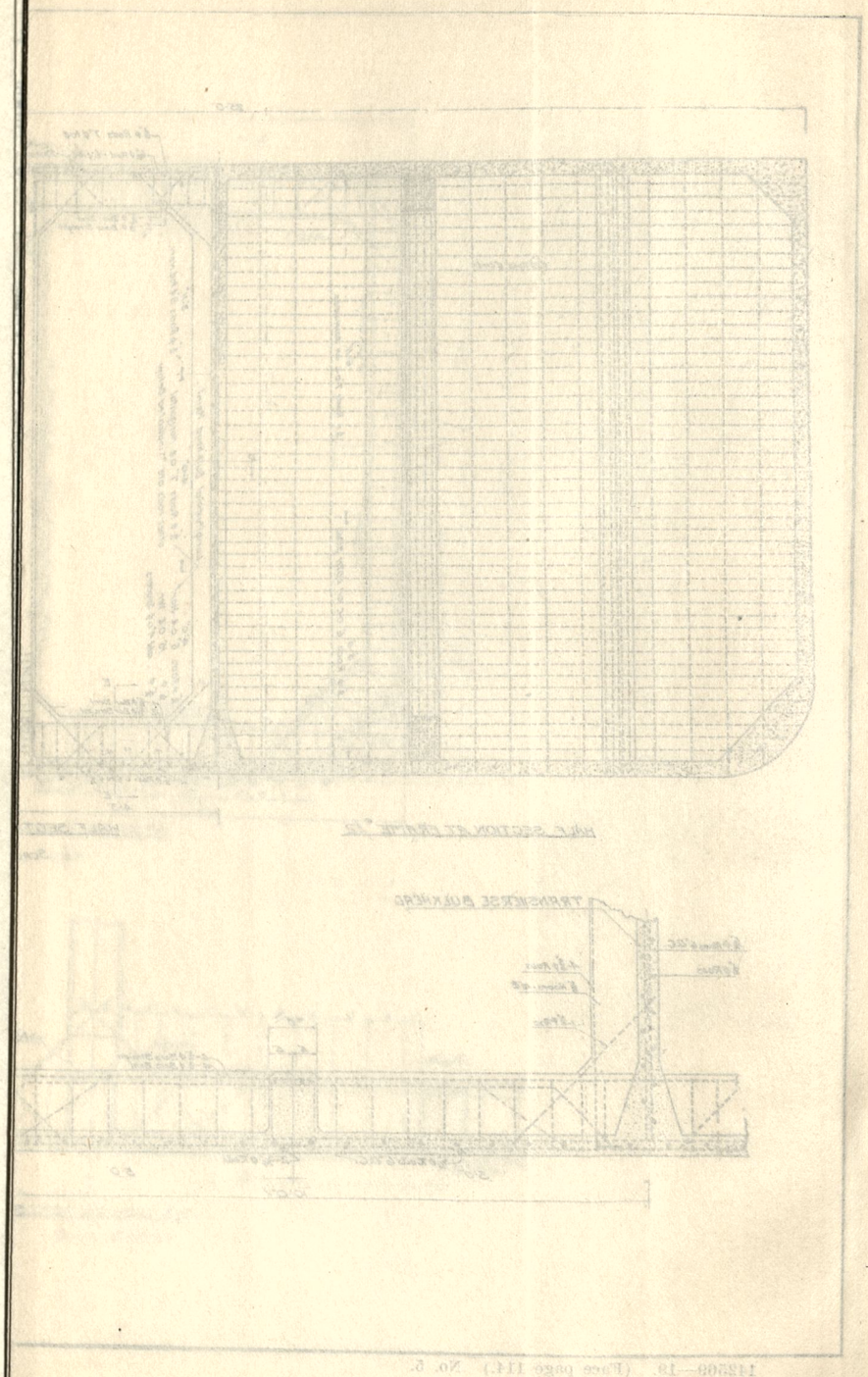
DATE	ALTERATIONS	APP.
7/1/18	Issued for Approval	
	Issued for Construction	

CONSTRUCTED FOR
GREAT NORTHERN CONCRETE SHIPBUILDING COMPANY
VANCOUVER-WASH.

DATE	POINTS INDICATED	BY
5/11	Effect of Tests	
7/1	Corr.	

DESIGN OF REINFORCING FOR CONCRETE
TANK BOAT
100 FT WATER TANK BOAT

DATE Aug 31 1918 — SCALE 1"=1 Foot
DRAWN BY T.A.T. — APPROVED BY
TRACED BY R.L.P. — CHECKED BY — DRWG NO 1



exterior surfaces, no chemical disintegration is anticipated, except where the hull may be seriously abraded. There is at least three-fourths inch of concrete protecting all reinforcement from sea action. A mixture of 1–1–2 was used on all concrete construction. The sand was coarse but of a size that would pass through a one-eighth inch mesh sieve, and the gravel was screened over a one-eighth inch mesh and through a three-eighths inch mesh sieve. Only natural sand and gravel and standard grade Portland cement has been used.

NEW DEVELOPMENTS IN CONCRETE CONSTRUCTION.

In futher development of the concrete craft as a cargo carrier, the Construction Section has developed a barge constructed with a cellular bottom of a hollow-tile and concrete reinforcement, rendering the craft practically puncture proof and reducing the weight beyond that which can be accomplished with a solid bottom. The hollow-tile cellular-bottom construction as developed presents a number of novel features, in that it reduces to a minimum the amount of form work required, and by the use of ordinary building tile, with closed ends, the weight is reduced to a minimum, only such concrete being used as is necessary to support the steel in its strength members, the heavy keelsons and frames being substituted by small keelsons and frames by the tiling in a modified form of hollow-tile building construction.

A barge design with framing of keelsons and floors of concrete would have required the placing of nailing strips or other provisions to take a wood-plank floor. The necessity of a smooth and even floor for either hand shoveling of coal, grain, or other commodities, or the use of a power shovel, is apparent. The cellular floor permits a top dressing of concrete which gives an even surface from which to shovel, with no projecting members of any kind. This top dressing will be suitably reinforced with a wire mesh, and in placing will be thoroughly troweled and hardened to produce a surface as permanent as the vessel itself. Should any damage be effected to this surface as the result of careless handling of buckets, or for other reasons, the surface can be renewed by common labor and at a very low cost.

The side walls of this barge have been formed vertically, permitting the power shovel to operate over the entire floor, and the inclosing side walls form longitudinal bulkheads. A small space will exist between the outer shell and the longitudinal bulkhead, providing comparatively small compartments. This design was adopted due to the severe usage which a coal barge receives and to the liability of penetration of this outer shell and partial flooding. This flooding will be limited to only a small compartment and will in no way endanger the stability of the barge.

PROPELLING MACHINERY USED.

The propelling machinery installed in the various boats covers a wide range of types. Compound steam engines were used in the larger vessels, while semi-Diesel oil burners and internal-combustion engines using distillate were chosen for the smaller classes. The steel river steamers being built at Milwaukee are to be equipped with twin surface condensing engines, whereas the steamers of the same type of concrete, being built at New Bern, N. C., are to be equipped with semi-Diesel engines. An interesting comparison of performances of

these engines in vessels of the same size and service will be obtainable.

While in no case has the size of the vessel involved the installing of propelling units of great size, the special and distinctive service duty of the vessel and the desire to insure economical operation has necessitated the use of units of various types.

RADIO EQUIPMENT.

In selecting the radio equipment for the mine planters and junior mine planters, advantage was taken of the immense amount of prewar research work. Apparatus was specified of 1 kw. capacity with spark transmitters for the mine planters with receivers for either spark or arc signals. The transmitter is of a 3-wave type with an operating range of 100 miles. Smaller units of the same type were selected for the junior mine planters with an operating range of 75 miles. The mine planters have emergency storage batteries located well above water line. This enables communication to be maintained as long as the ship is afloat.

REPORTS OF PROGRESS.

The progress of all construction is reported weekly to the Washington office with detailed estimates of percentage of completion of each vessel. The wooden vessels have either been completed or are undergoing minor adjustments for final acceptance. Six concrete car floats and five concrete water boats are in the water. Two of the floats are in transit to the port of New York, being towed by tugs built by this division in the Lakes district. Satisfactory progress is being made on the remaining vessels and delivery is expected at an early date.

MAINTENANCE SECTION.

The signing of the armistice and the consequent cessation of hostilities necessitated the prompt return of the American Expeditionary Forces to the United States for demoblization. In addition to the return of these forces, the necessary supplies for the maintenance of the forces abroad had to be transported across the Atlantic.

Prior to the signing of the armistice a large proportion of the American Expeditionary Forces was transported in vessels of foreign registry. When the peak of the emergency had been passed, the various allied Governments withdrew a large part of their tonnage to meet their own demobilization problems. The question as to whether or not the personnel of the American Expeditionary Forces could be more economically and expeditiously returned to the United States in vessels of foreign registry or in vessels of American registry was not a deciding factor. It was a question of getting tonnage wherever possible.

The transportation of the Army personnel, by ocean-going steamships, requires special installation other than is found on the major portion of commercial vessels. The port of New York was selected as the place for the accomplishment of the conversion on account of the large number of commercial shipyards located there.

Various vessels were converted into troop carriers, entailing minor changes of arrangement and installation of troop berths in the large ex-German passenger vessels or the entire reconstruction of the interior

arrangements. The latter class of conversion presented problems that at first appeared insurmountable when the time factor is taken into consideration. No conversion work of this magnitude had ever before been attempted in this country. American ingenuity and enterprise, however, overcame the many obstacles and in the short space of 5 months and 26 days 56 vessels had been converted into troop carriers.

In general, the following brief outline indicates the various steps of the work of conversion:

The designated ship was surveyed and plans and specifications prepared, the governing factors being "troop capacity and time required for conversion." Proposals were then issued and bids invited. The abstract of bids received, together with the recommendations, were telephoned and later forwarded to the office of the Chief of Transportation, Water Transport Branch, Washington, D. C. After review the necessary authority was then granted and the contract awarded. During the conversion, changes, other than those appearing in the main specifications, would become necessary and supplemental contracts would be entered into.

Delays in the execution of the original and supplemental conversion contracts were often caused by the abnormal conditions under which the work was carried on. In general, though, the schedule of completion was not seriously retarded.

All conversion work was under the immediate supervision of the New York office of the transportation service.

In order that an intelligent analysis of the various phases of the conversion of these vessels into troop carriers can be readily made, the following tables, graphic charts, and photographs are presented:

Table No. 1 (3 sheets).—Names of vessels, the contractors and conversion costs, troop-carrying capacity, and other additional data.

Chart No. 1.—Indicates graphically the status of the contracts as related to the money value of said contracts, at any time during the period of conversion.

Chart No. 2.—Indicates graphically the status of the contracts, as related to the gross tonnage under contract, at any time during the period of conversion.

Chart No. 3.—Indicates the troop-carrying capacity of the vessels, as delivered, during the period of conversion.

Chart No. 4.—Indicates the gross tonnage of the vessels, as delivered, during the period of conversion.

Chart No. 5.—Indicates the registry and gross tonnage before entering the military service; also data relative to ownership of the converted vessels.

TABLE No. 1.

Vessel.	Where converted.	Nature of conversion.	Contractor.	Total original and supplemental contracts proposed, deductions not made.	Work started.	Actual date of completion.	Passenger capacity.		Owners of vessel.	Manned by—	Charter.	Date commissioned as troops transport.
							Officers.	Enlisted men.				
						1919.						
Alaskan	Port of New York.	Cargo to troopship.	W. & A. Fletcher Co.	$158,998.28	Dec. 19, 1918	Feb. 21	23	2,104	American-Hawaiian Steamship Co.	Navy	B. B.	Dec. 14, 1918
Amphion	do	do	Weehawken Dry Dock & Railway Co.	120,200.00	Apr. 4, 1919	May 14	73	2,390	United States	do	B. B.	Apr. 12, 1919
Ancon	do	Second class to troopship.	Morse Dry Dock & Repair Co.	136,650.00	Mar. 26, 1919	May 7	40	3,016	Pennsylvania Railroad Co.	do	B. B.	Mar. 28, 1919
Arcadia	do	Cargo to troopship.	W. & A. Fletcher Co.	92,904.00	Dec. 14, 1918	Jan. 15	34	1,012	United States Shipping Board.	do	B. B.	Jan. 20, 1919
Arizonan	do	do	Morse Dry Dock & Railway Co.	188,369.00	Dec. 19, 1918	Feb. 27	29	2,431	American-Hawaiian Steamship Co.	do	B. B.	Dec. 17, 1918
Artemis	do	Animal to troopship.	W. & A. Fletcher Co.	155,030.00	Mar. 15, 1919	Apr. 18	93	3,800	United States Shipping Board.	do	B. B.	Apr. 8, 1919
Black Arrow	do	Interned passenger to troopship.	Morse Dry Dock & Railway Co.	170,938.00	Jan. 17, 1919	Mar. 15	85	1,510	do	do	B. B.	Jan. 27, 1919
Buford	do	Army transport to troopship.	Empire Pipe Co	67,727.30	Dec. 13, 1918	Jan. 11	55	1,535	United States	do	B. B.	Jan. 14, 1919
Callao	do	Passenger to troopship.	Morgan Engineering Co.	118,575.00	Apr. 25, 1919	May 12	107	2,262	United States Shipping Board.	do	B. B.	Apr. 26, 1919
Cape May	do	Cargo to troopship.	do	173,250.00	Feb. 10, 1919	Mar. 29	30	1,907	do	do	B. B.	Jan. 29, 1919
Dakotan	do	do	W. & A. Fletcher Co.	142,176.00	Dec. 21, 1918	Feb. 7	25	1,660	American-Hawaiian Steamship Co.	do	B. B.	Do
Edg. Luckenbach	do	do	Tietjen & Lang Dry Dock Co.	191,360.00	Dec. 31, 1918	Feb. 28	30	2,330	Luckenbach Steamship Co.	do	B. B.	Dec. 30, 1918
Edw. Luckenbach.	do	do	Jas. Shewan & Sons Co.	208,057.00	Dec. 27, 1918	Mar. 14	17	2,244	do	do	B. B.	Dec. 18, 1918
El Oriente	do	do	Weehawken Dry Dock Co.	127,500.00	Apr. 15, 1919	June 7	45	1,980	Southern Pacific Co.	do	B. B.	Apr. 11, 1919
El Sol	do	do	do	119,500.00	Apr. 12, 1919	June 4	45	1,778	do	do	B. B.	Apr. 15, 1919
Eten	do	do	W. & A. Fletcher Co.	144,000.00	Apr. 29, 1919	May 28	80	1,761	United States Shipping Board.	do	B. B.	May 1, 1919
Eurana	do	do	Morgan Engineering Co.	123,045.00	Apr. 4, 1919	May 9	43	1,766	Nafra Co	do	B. B.	Mar. 1, 1919
F. J. Luckenbach	do	do	Tietjen & Lang Dry Dock Co.	130,195.00	Mar. 4, 1919	Apr. 5	25	2,309	Luckenbach Steamship Co.	do	B. B.	Feb. 21, 1919
Floridian	do	do	W. & A. Fletcher Co.	165,635.00	Jan. 31, 1919	Mar. 15	28	1,774	American-Hawaiian Steamship Co.	do	B. B.	Jan. 28, 1919

Freedom	do	Interned passenger to troopship.	Jas. Shewan & Sons Co.	195,390.00	Dec. 24, 1918	Mar. 25	26	1,625	United States Shipping Board.	do	B. B.	Jan. 24, 1919
General Goethals	do	do	W. & A. Fletcher Co.	139,550.00	Feb. 13, 1919	Mar. 31	34	1,388	Panama Railroad	do	B. B.	Mar. 10, 1919
General Gorgas	do	do	American Standard Ship Fitting Co.	165,991.00	Feb. 25, 1919	Apr. 14	40	1,048	do	do	B. B.	Mar. 8, 1919
Iowan	do	Cargo to troopship.	Morgan Engineering Co.	169,000.00	Dec. 26, 1918	Feb. 5	35	1,767	American-Hawaiian Steamship Co.	do	B. B.	Jan. 24, 1919
Julia Luckenbach.	do	do	Tietjen & Lang Dry Dock Co.	189,655.00	Jan. 18, 1919	Mar. 10	22	2,692	Luckenbach Steamship Co.	do	B. B.	Jan. 7, 1919
Kat. Luckenbach	do	do	Hamilton Ship Fitting Co.	196,872.00	Dec. 23, 1918	Feb. 19	15	2,255	do	do	B. B.	Dec. 14, 1918
Kentuckian	do	do	Thos. F. Meehan Sons.	201,948.00	Dec. 29, 1918	Mar. 1	28	1,100	American-Hawaiian Steamship Co.	do	B. B.	Jan. 28, 1919
K. I. Luckenbach	do	do	Morgan Engineering Co.	201,077.00	Dec. 31, 1918	Feb. 28	15	2,394	Luckenbach Steamship Co.	do	B. B.	Dec. 21, 1918
Lancaster	do	do	Morse Dry Dock & Repair Co.	223,552.00	Dec. 24, 1918	Mar. 4	30	2,250	United States Shipping Board.	do	B. B.	Dec. 18, 1918
Liberator	do	do	W. & A. Fletcher Co.	206,110.00	Jan. 3, 1919	Feb. 26	29	2,482	do	do	B. B.	Dec. 27, 1918
Mexican	do	do	Morgan Engineering Co.	192,000.00	Dec. 21, 1918	Jan. 22	35	3,447	American-Hawaiian Steamship Co.	do	B. B.	Dec. 16, 1918
Minnesotan	do	do	American Standard Ship Fitting Co.	199,598.00	Feb. 4, 1919	Mar. 20	25	2,032	do	do	B. B.	Jan. 7, 1919
Montpelier	do	do	Morse Dry Dock & Repair Co.	118,261.00	Mar. 12, 1919	Apr. 20	25	2,081	United States Shipping Board.	do	B. B.	Feb. 13, 1919
Nansemond	do	Animal to troopship.	Tietjen & Lang Dry Dock Co.	185,768.43	Dec. 14, 1918	Jan. 31	153	5,140	do	do	B. B.	Jan. 20, 1919
Ohioan	do	Cargo to troopship.	W. & A. Fletcher Co.	109,747.00	Dec. 19, 1918	Feb. 3	26	1,605	American-Hawaiian Steamship Co.	do	B. B.	Dec. 14, 1918
Otsego	do	Interned passenger to troopship.	do	144,000.00	Jan. 15, 1919	Mar. 3	28	984	United States Shipping Board.	do	B. B.	Feb. 8, 1919
Panaman	do	Cargo to troopship.	Morse Dry Dock & Repair Co.	146,201.00	Dec. 19, 1918	Feb. 11	25	2,174	American-Hawaiian Steamship Co.	do	B. B.	Dec. 14, 1918
Paysandu	do	Interned passenger to troopship.	W. & A. Fletcher Co.	173,360.00	Jan. 5, 1919	Mar. 1	25	1,390	Uruguayan Government.	do	B. B.	Jan. 29, 1919
Peerless	do	Cargo to troopship.	Morgan Engineering Co.	128,990.00	Mar. 1, 1919	Apr. 12	31	2,350	Standard Transportation Co.	do	B. B.	Feb. 25, 1919
Philippines	do	Third class to troopship.	W. & A. Fletcher Co.	226,815.00	Apr. 23, 1919	May 28	86	3,940	United States	do	B. B.	May 1, 1919
Radnor	do	Cargo to troopship.	do	122,488.00	Mar. 22, 1919	Apr. 22	37	1,900	United States Shipping Board.	do	B. B.	Mar. 16, 1919
Santa Barbara	do	do	Tietjen & Lang Dry Dock Co.	142,522.00	Feb. 21, 1919	Mar. 29	26	1,549	Grace & Co	do	B. B.	Feb. 21, 1919
Santa Ana	do	First class to troopship.	W. & A. Fletcher Co.	134,700.00	Dec. 26, 1918	Feb. 20	89	1,418	do	do	B. B.	Feb. 11, 1919
Santa Cecilia	do	Cargo to troopship.	do	158,775.00	Mar. 4, 1919	Apr. 5	18	2,036	Nafra Co	do	B. B.	Mar. 10, 1919

TABLE No. 1—Continued.

Vessel.	Where converted.	Nature of conversion.	Contractor.	Total original and supplemental contracts proposed, deductions not made.	Work started.	Actual date of completion.	Passenger capacity.		Owners of vessel.	Manned by—	Charter.	Date commissioned as troops transport.
							Officers.	Enlisted men.				
Santa Clara	Port of New York.	Cargo to troopship.	W. & A. Fletcher Co.	$169,470.00	Feb. 3, 1919	1919. Mar. 15	18	1,741	Atlantic & Pacific Steamship Co.	Navy	B. B.	Jan. 7, 1919
Santa Paula	do	do	do	143,483.00	Feb. 15, 1919	Mar. 21	26	1,984	Grace & Co.	do	B. B.	Jan. 28, 1919
Santa Rosa	do	do	do	169,585.00	Feb. 13, 1919	Mar. 20	46	1,920	do	do	B. B.	Mar. 10, 1919
Santa Olivia	do	do	do	150,778.00	Dec. 26, 1918	Feb. 14	32	1,825	do	do	B. B.	Dec. 20, 1918
Scranton	do	do	Tietjen & Lang Dry Dock Co.	136,170.00	Feb. 15, 1919	Mar. 21	30	1,810	American-Hawaiian Steamship Co.	do	B. B.	Feb. 5, 1919
Shoshone	do	Interned passenger to troopship.	American Standard Ship Fitting Co.	159,526.00	Feb. 13, 1919	Apr. 10	42	1,375	Shoshone Navigation Co.	do	B. B.	Feb. 18, 1919
South Bend	do	Cargo to troopship.	do	176,684.00	Mar. 31, 1919	Apr. 23	40	2,211	United States Shipping Board.	do	B. B.	Mar. 10, 1919
Suwanee	do	Animal to troopship.	Thos. F. Meehan Sons.	150,078.48	Apr. 7, 1919	May 14	56	1,939	United States	do	B. B.	Apr. 11, 1919
Texan	do	Cargo to troopship.	Empire Ship Fitting Co.	192,134.00	Jan. 28, 1919	Mar. 22	32	2,208	American-Hawaiian Steamship Co.	do	B. B.	Jan. 7, 1919
Tiger	do	Animal to troopship.	Morse Dry Dock & Repair Co.	116,235.00	Mar. 18, 1919	Apr. 26	36	2,800	Standard Transportation Co.	do	B. B.	Dec. 23, 1918
Troy	do	First class to troopship.	W. & A. Fletcher Co.	297,500.00	Mar. 1, 1919	May 1	138	5,880	Atlantic Transportation Co.	do	B. B.	Feb. 27, 1919
Virginian	do	Cargo to troopship.	do	203,198.00	Jan. 24, 1919	Mar. 19	54	4,091	American-Hawaiian Steamship Co.	do	B. B.	Feb. 1, 1919
W. A. Luckenbach	do	do	Tietjen & Lang Dry Dock Co.	179,040.00	Dec. 21, 1918	Feb. 13	28	2,500	Luckenbach Steamship Co.	do	B. B.	Dec. 14, 1918
Total				9,050,361.49			2,388	122,900				

NOTE.—The total original and supplemental contracts represent the amounts as authorized by the office of the Chief of Transportation Service, Water Transportation Division, up to and including June 30, 1919. Anticipated deductions not shown.

Data relative to a composite ship as derived from above table.

Dimensions:		
Length between perpendiculars	feet	429.4
Beam	do	54.7
Depth	do	32.2
Gross tons		7,252.5
Net tons		4,757.9
Speed in knots per hour		11.9
Refrigeration—		
Chill room	cubic feet	2,094
Meat room	do	4,335
Floatage in—		
Lifeboats	persons	413
Life rafts	do	2,541
Personnel:		
Army passenger capacity—		
Officers		42
Enlisted men		2,194
Naval operating personnel—		
Officers		24
Chief petty officers		15
Men		185
Hospital accommodations—		
Sick bay		43
Isolation wards		19
Conversion costs:		
Cost of conversion per gross ton		$22.28
Cost of conversion per passenger transported (one trip)		$72.24
Actual time of conversion	week days	41.3
Total cost of conversion (authorized June 30, 1919)		$161,613.59

Photograph No. 1.—Steamship *Freedom*, ex-*Iroquois*, ex-*Wittekind* (German), United States Shipping Board. Undergoing conversion repair by Jas. Shewan & Sons, Port of New York, December 24, 1918, to March 25, 1919.

Photograph No. 2.—American Hawaiian Steamship Co., Steamship *Panama* docking at an American port with returning members of the American Expeditionary Forces.

Photograph No. 3.—Steamship *Ohioan*, American Hawaiian Steamship Co.

Photograph No. 4.—Steamship *Ohioan*, American Hawaiian Steamship Co., showing troop berth installation (folding stander berths).

Photograph No. 5.—Steamship *Ohioan*, American Hawaiian Steamship Co., showing hospital installation (stander hospital berths).

Photograph No. 6.—Steamship *Ohioan*—American Hawaiian Steamship Co., showing hospital installation (dispensary).

Photograph No. 7.—Steamship *Nansemond*, United States Shipping Board, showing troop messing installation (mess table and benches.)

Photograph No. 8.—Steamship *Ohioan*, American Hawaiian Steamship Co., showing troop galley installation (steam jacketed kettles).

Photograph No. 9.—Steamship *Nansemond*, United States Shipping Board, showing troop galley installation (steam presses and jacketed kettles).

Photograph No. 10.—Steamship *Nansemond*, United States Shipping Board, showing troop lavatory installation (showers).

Photograph No. 11.—Steamship *Nansemond*, United States Shipping Board. showing troop lavatory installation (latrine).

Photograph No. 12.—Steamship *Nansemond*, United States Shipping Board, showing troop lavatory installation (wash basins).

REPAIR SECTION.

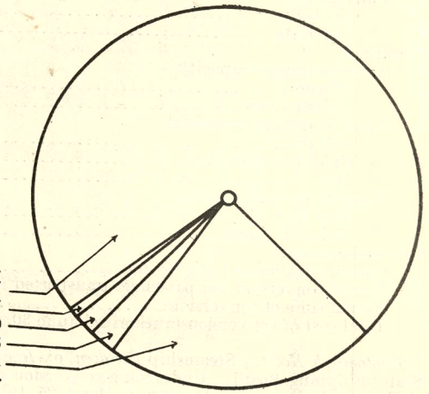
The functions of this section cover the examination, supervision, and the authorization of repairs to transports and harbor boats, as submitted by the port and department transportation officers, under whose jurisdiction the vessels are maintained. Payment for such repairs is provided for under "General Appropriation, Quartermaster Corps, 1919."

Repairs are made by entering into contracts with commercial firms, or performed by the marine repair shop unit at Hoboken, N. J.,

V.—MAINTENANCE SECTION—REGISTRY AND GROSS TONNAGE DATA RELATIVE TO THE CARGO VESSELS CONVERTED INTO TROOP SHIPS DURING THE PERIOD OF CONVERSION, DECEMBER 13, 1918, TO JUNE 7, 1919.

STATUS OF REGISTRY BEFORE ENTERING THE MILITARY SERVICE.

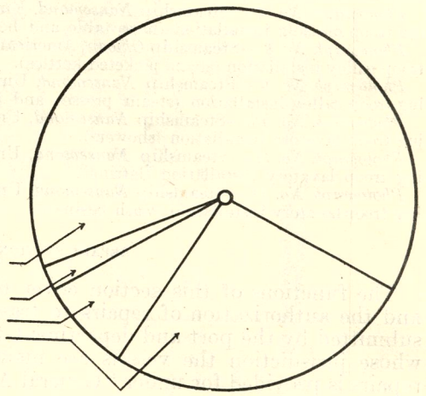
[Number of vessels and gross tons.]



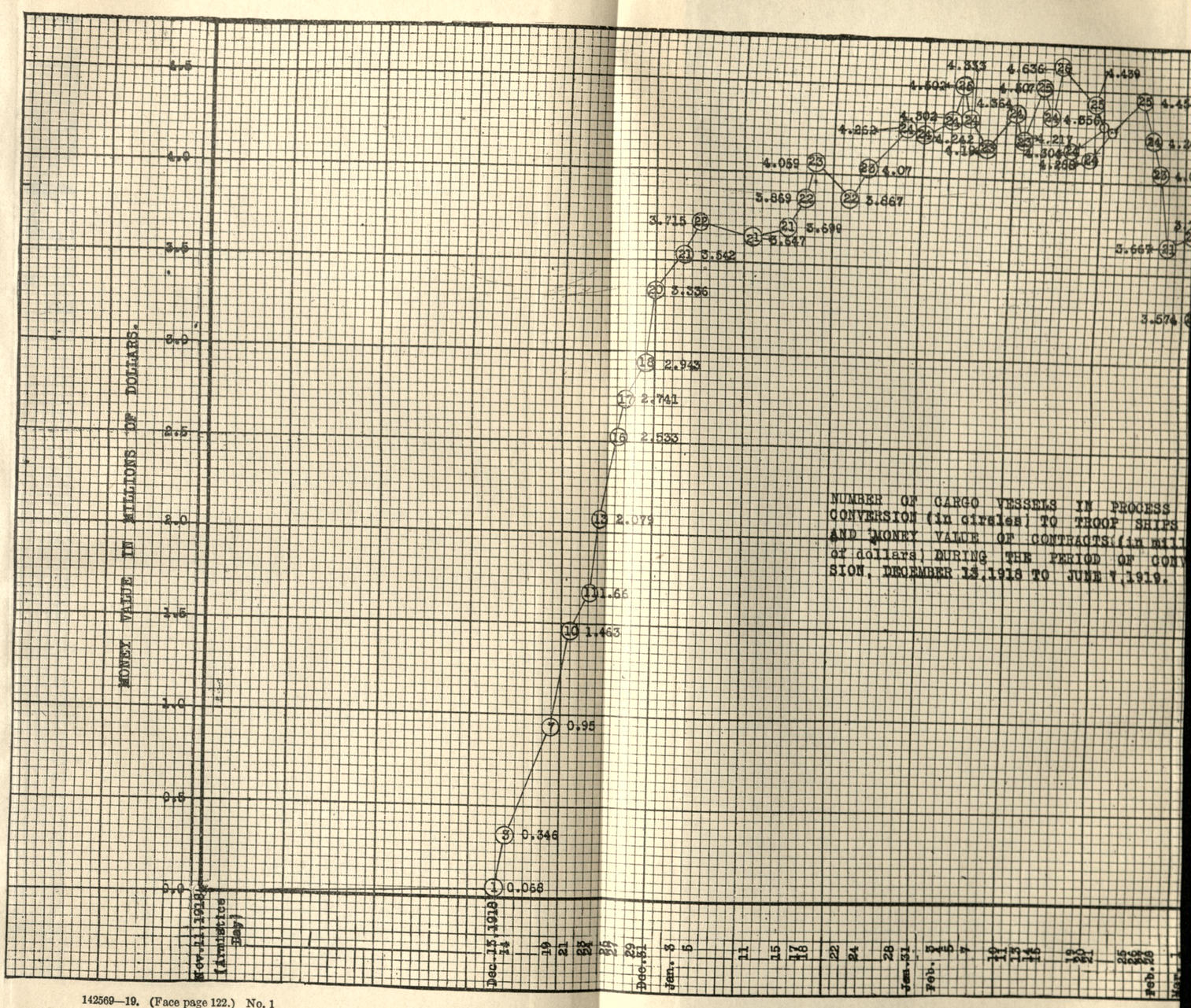
Registry.	No. of vessels.	Gross tons.
United States	40	296,447
Uruguayan	1	4,817
British	1	5,640
Austrian	1	6,493
German	13	92,741
Total	56	406,138

TITLE VESTED IN.

[Number of vessels and gross tons.]



Title.	No. of vessels.	Gross tons.
Private	35	260,188
U. S. Shipping Board	15	106,171
U. S. Government	4	30,382
Panama Railroad	2	9,397
Total	56	406,138

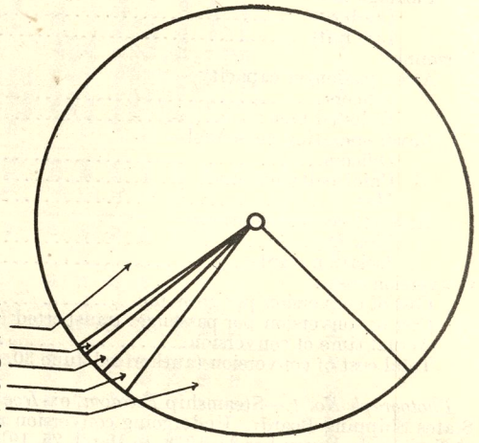


142569—19. (Face page 122.) No. 1

V.—MAINTENANCE SECTION—REGISTRY AND GROSS TONNAGE DATA RELATIVE TO THE CARGO VESSELS CONVERTED INTO TROOP SHIPS DURING THE PERIOD OF CONVERSION, DECEMBER 13, 1918, TO JUNE 7, 1919.

STATUS OF REGISTRY BEFORE ENTERING THE MILITARY SERVICE.

[Number of vessels and gross tons.]



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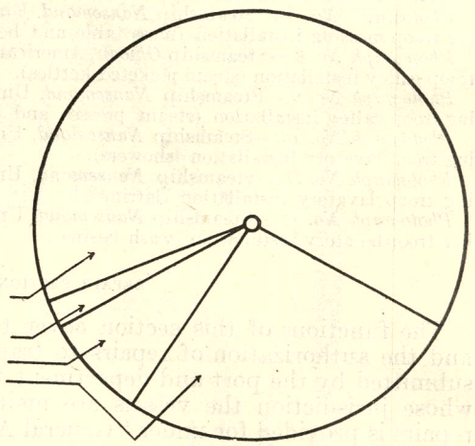

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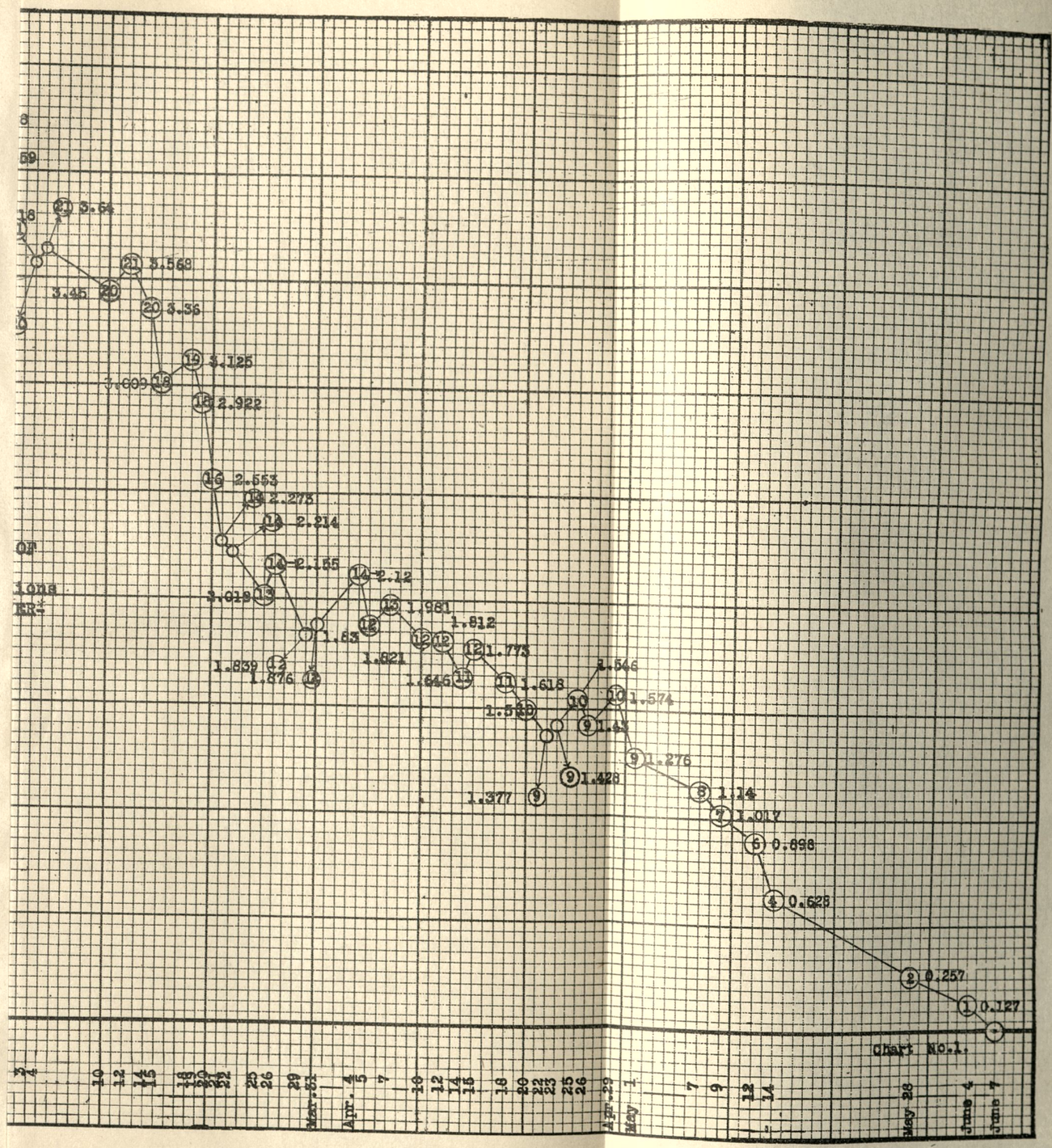
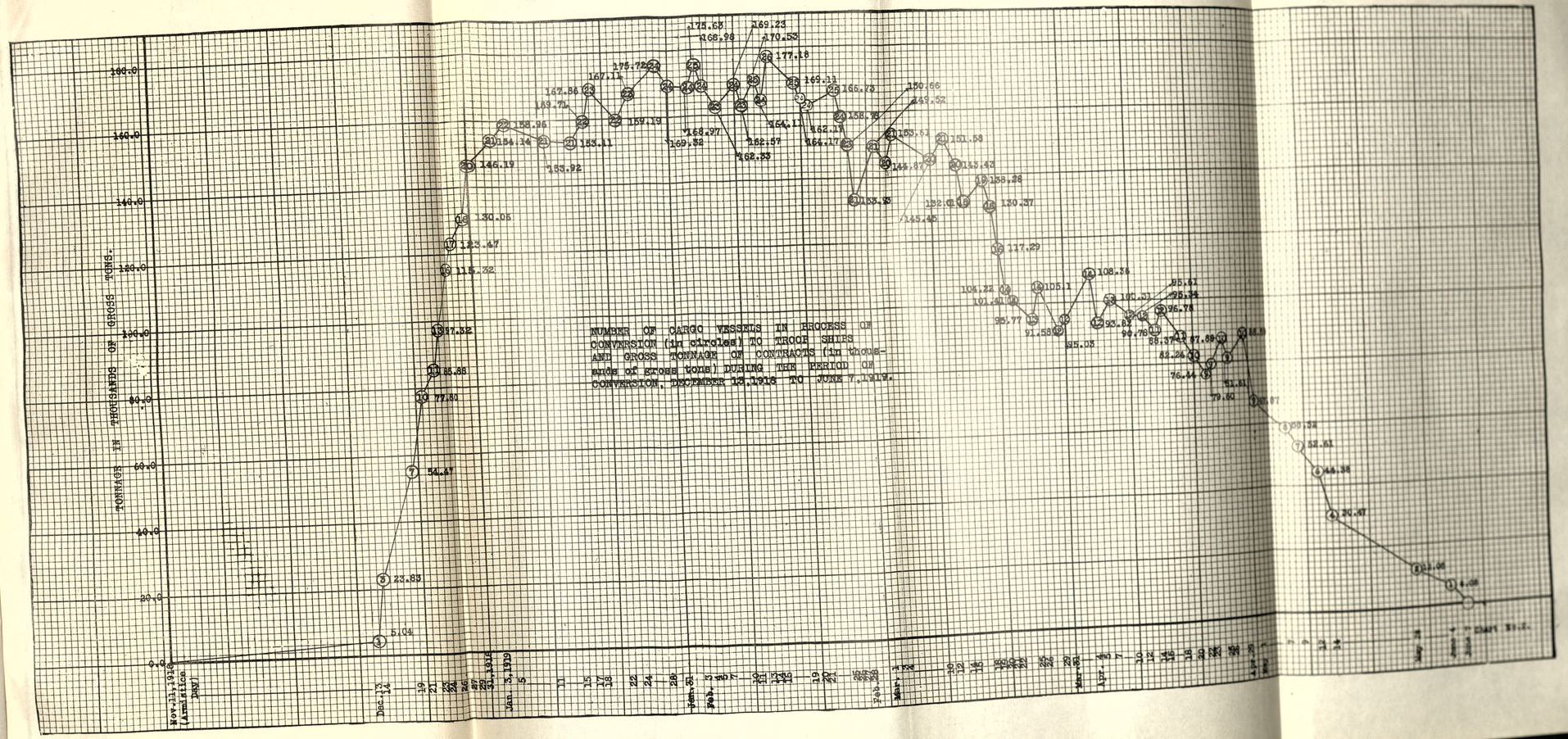
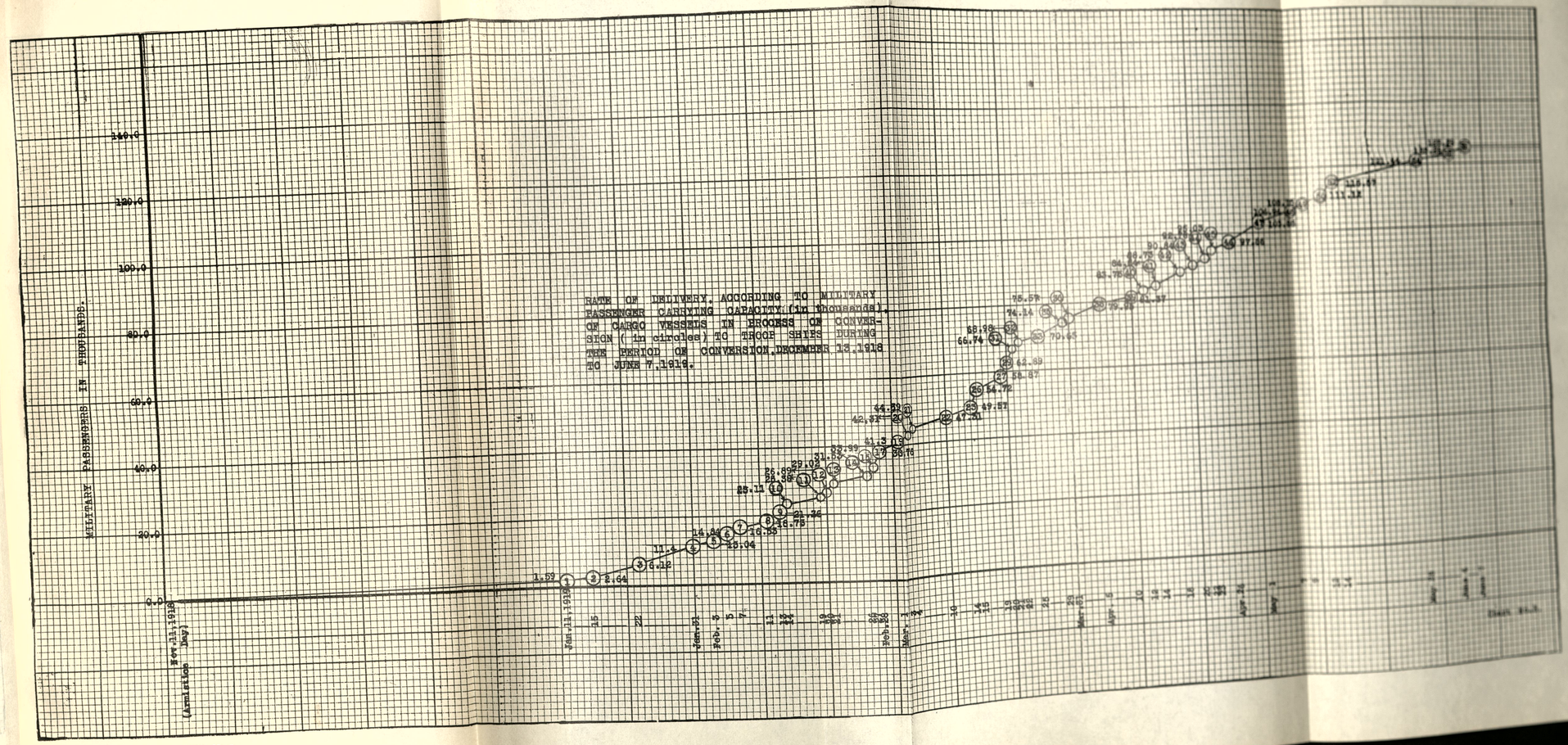


Chart No. 1.



142569—19. (Face page 122.) No. 2



142569—19. (Face page 122.) No. 3

which shop is under the jurisdiction of the army. Repairs were made also by the Navy Department for Army account on the transports which were turned over to that department for operation. The bills for such repairs made by the Navy are submitted to the Transportation Service for approval and reimbursement, and as it requires time for the statements on these repairs to be submitted, a large amount of the work accomplished during the year has necessarily not been reported to date and is therefore in addition to the amounts given herein.

The repairs reported to date for the period from July 1, 1918, to June 30, 1919, include nine Government-owned transports, 219 chartered transports and 281 harbor boats, or a total of 509 vessels, at a cost of $2,827,551.48, divided as follows:

Repairs to United States Army transports:		
By commercial firms	$204,585.74	
By navy yards	18,653,91	
By the Army marine repair shop	1,677.55	
Total, (9 vessels)		$224,917.20
Repairs to chartered transports:		
By commercial firms	1,210,112.31	
By navy yards	173,910.62	
By the Army marine repair shop	85,303.65	
Total, (219 vessels)		1,469,326.58
Repairs to harbor boats:		
By commercial firms	1,060,024.59	
By navy yards	605.53	
By the Army marine repair shop	72,677.58	
Total (281 vessels)		1,133,307.70
Grand total (509 vessels)		2,827,551.48

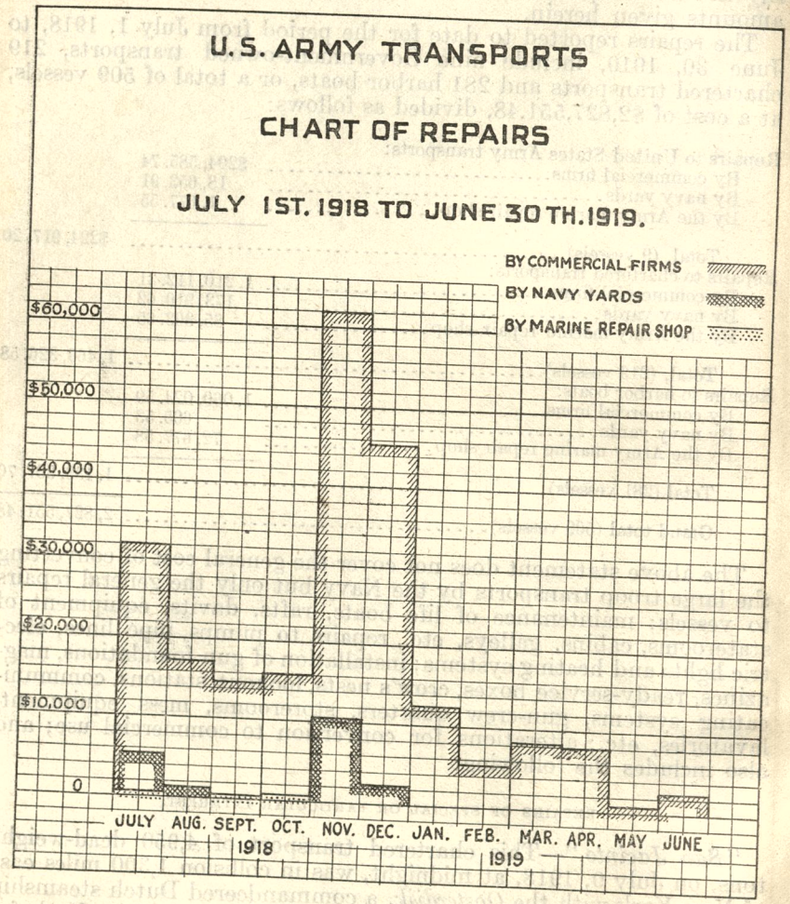
The above statement does not cover the general cost of converting the large troop transports by the Navy but only the general repairs to vessels; maintenance of life boats, rafts, davits, equipment of staterooms, cabins, galleys, etc., repairs to pumps, pipe lines, electric lights and heating systems; installation of gun foundations, magazines, ready-service boxes, crow's nests, lookout stations, communicating systems, gun-crew quarters, storerooms, mess equipment, lavatories, etc.; alterations for conversion to commercial use; and also includes the following:

REPAIRS OF SPECIAL OR PARTICULAR INTEREST.

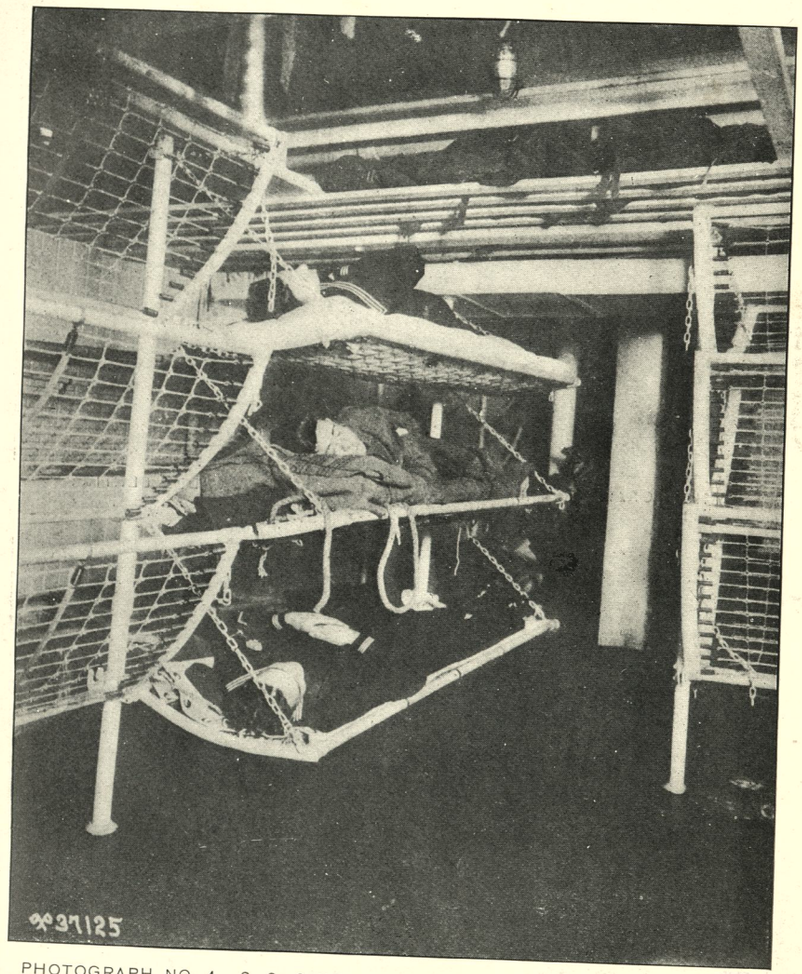
"*San Jacinto.*"—This chartered transport of 4,950 dead-weight tons, on July 9, 1918, at midnight, was in collision 1,300 miles east of New York with the *Oosterdijk*, a commandeered Dutch steamship of 11,900 dead-weight tons, both vessels having left New York for France July 4, 1918. The bow of the *San Jacinto* was badly damaged, and the *Oosterdijk* sank the following day. Repairs were made to the *San Jacinto* by Tietjen & Lang Dry Dock Co., Hoboken, N. J., in the amount of $86,540.70. Subsequently this vessel was refitted for commercial use in accordance with agreement for return to the owners at a cost of $35,570.

"*Dix.*"—The *Dix*, a Government-owned transport, at midnight of April 24, 1918, lost her propeller when 800 miles out from Honolulu

en route to Manila, P. I. She communicated with Honolulu by wireless, and the Steamer *Manoa* of the Matson Navigation Co., was ordered to her assistance and towed her back to Honolulu. The *Dix* not only lost her propeller, but the tail shaft was broken off near the hub, all necessitating extensive repairs. A new propeller, tail shaft, cone cap for propeller nut, and stern tube bushing were made by the Heffernan Engine Works, Seattle, Wash., at a cost of $22,894.

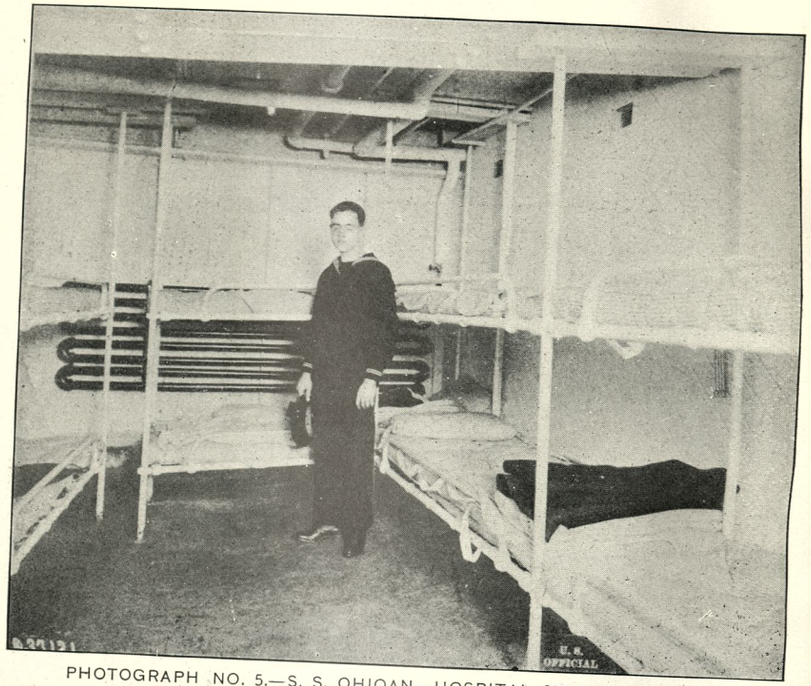


"Major l'Enfant."—When this passenger and freight steamer was purchased for use on the Potomac River between Washington, Fort Washington, and Fort Hunt, it was known that extensive repairs were necessary to place her in proper condition for service. Owing to the immense amount of work under way at the shipbuilding plants, difficulty was encountered in finding a firm to undertake these repairs; but finally the Spedden Shipbuilding Co. of Baltimore, Md., consented to receive the vessel and she was placed in their hands for the accomplishment of the work, which cost $67,867.33

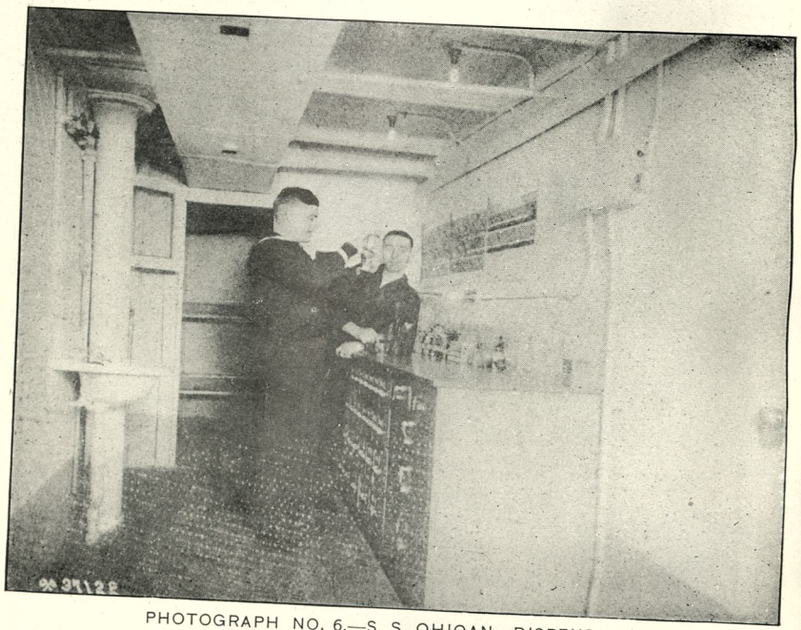


PHOTOGRAPH NO. 4.—S. S. OHIOAN—FOLDING TROOP STANDEE BERTHS.

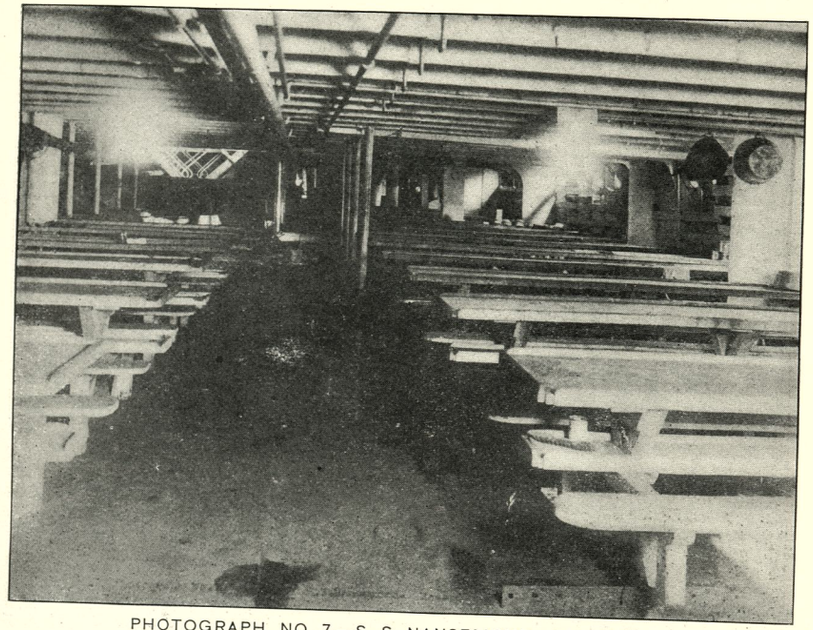
124-1



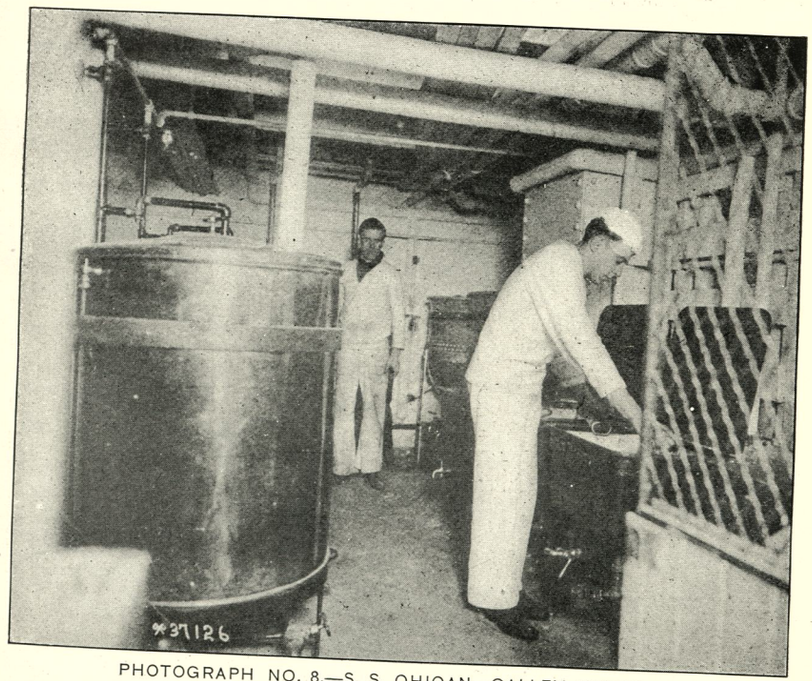
PHOTOGRAPH NO. 5.—S. S. OHIOAN—HOSPITAL STANDEE BERTHS.



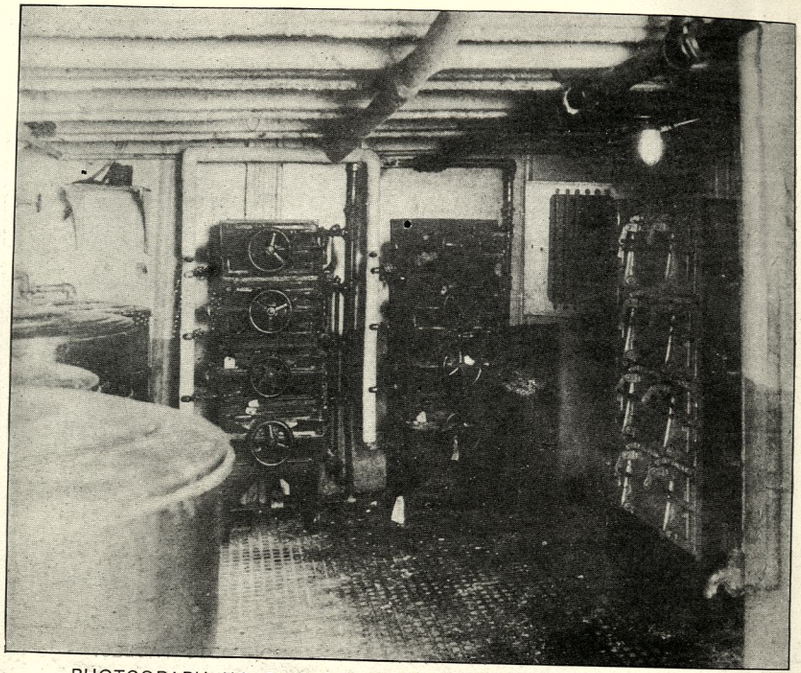
PHOTOGRAPH NO. 6.—S. S. OHIOAN—DISPENSARY.



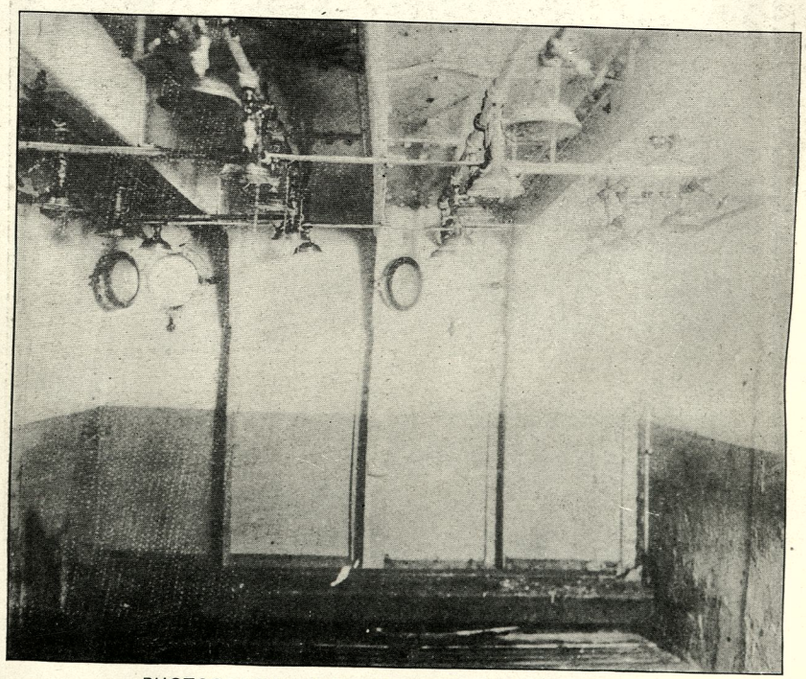
PHOTOGRAPH NO. 7.—S. S. NANSEMOND—MESS TABLES.



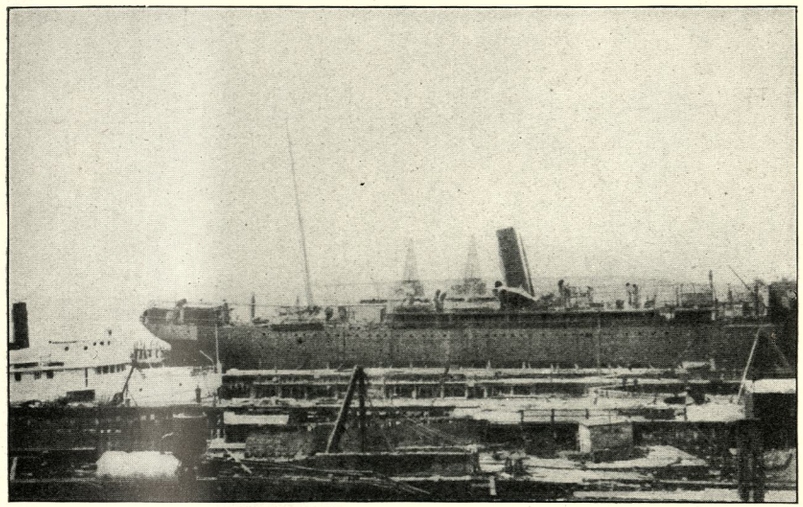
PHOTOGRAPH NO. 8.—S. S. OHIOAN—GALLEY INSTALLATION.

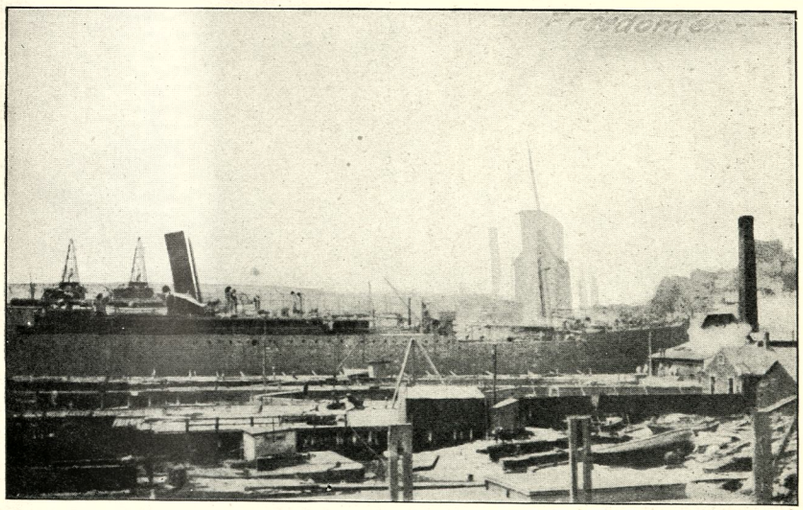


PHOTOGRAPH NO. 9.—S. S. NANSEMOND—GALLEY INSTALLATION.

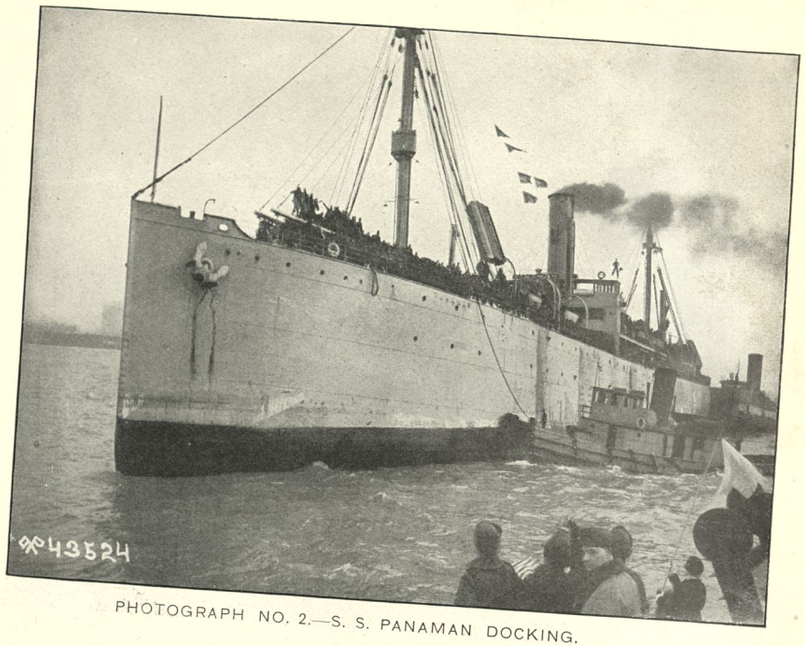


PHOTOGRAPH NO. 10.—S. S. NANSEMOND—SHOWERS.





PHOTOGRAPH NO. 1.—S. S. FREEDOM UNDERGOING CONVERSION REPAIRS.

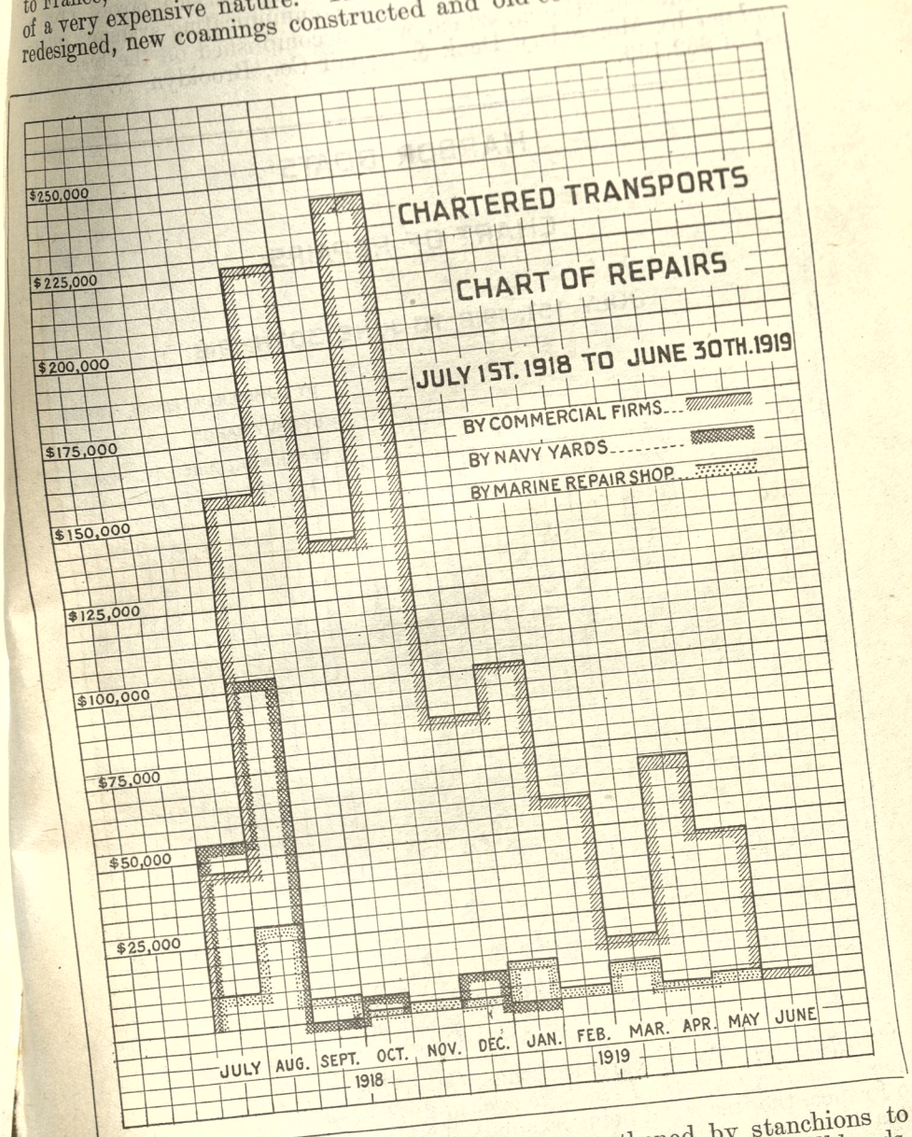


PHOTOGRAPH NO. 2.—S. S. PANAMAN DOCKING.



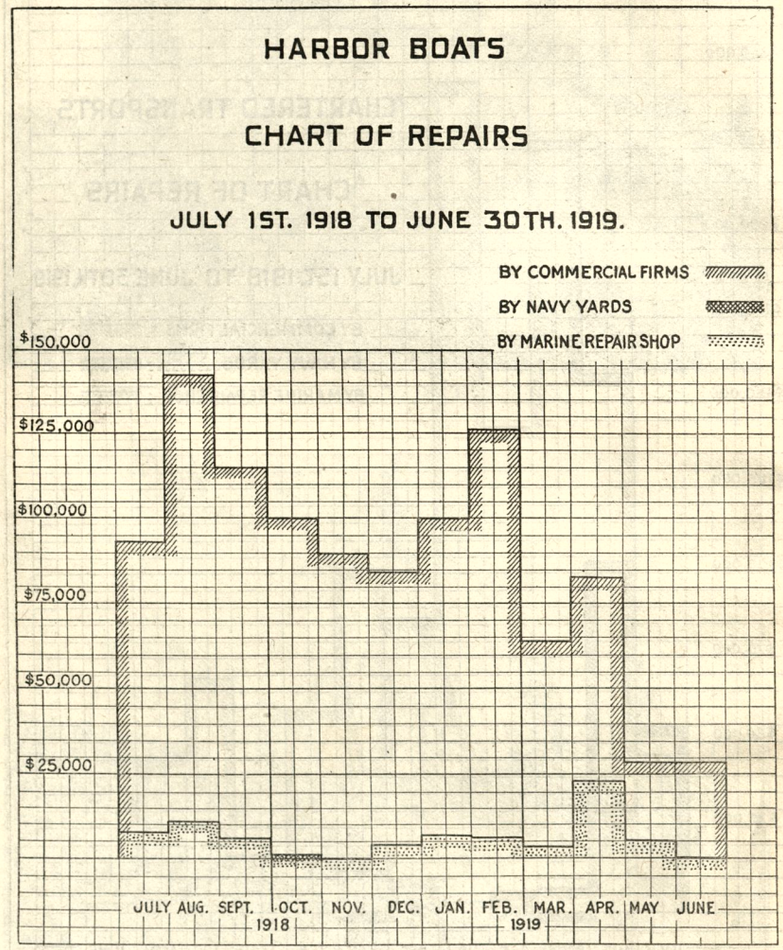
PHOTOGRAPH NO. 3.—S. S. OHIOAN.

"Sewells Point."—In October, 1918, the hatches of this transport were enlarged for the purpose of loading locomotives for shipment to France, which required changes in the construction of the ship of a very expensive nature. The deck was cut away, deck beams redesigned, new coamings constructed and old coamings reinforced,

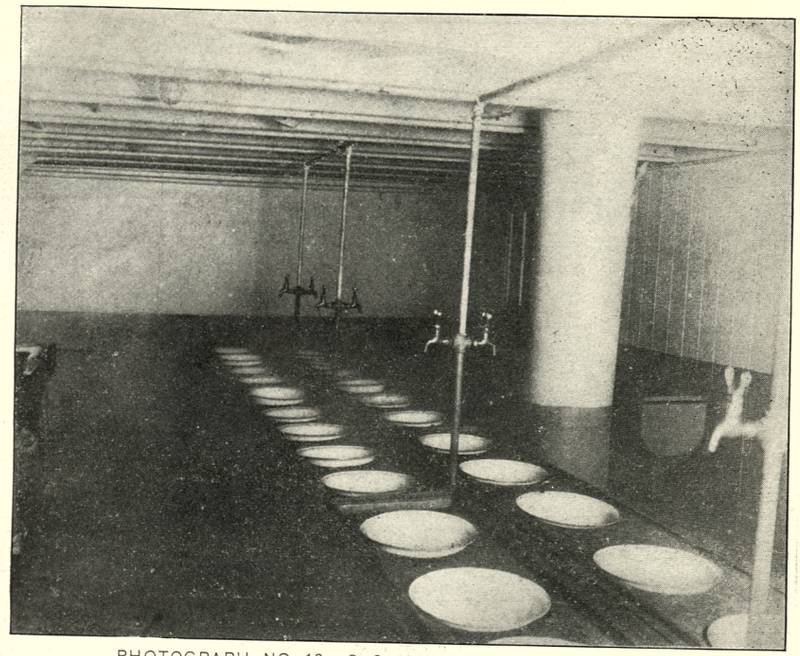


frames stiffened, decks underneath strengthened by stanchions to replace the support which had been given by the removed bulkheads, new hatch covers made and new tarpaulins supplied. The alterations were made at a cost of $68.189.

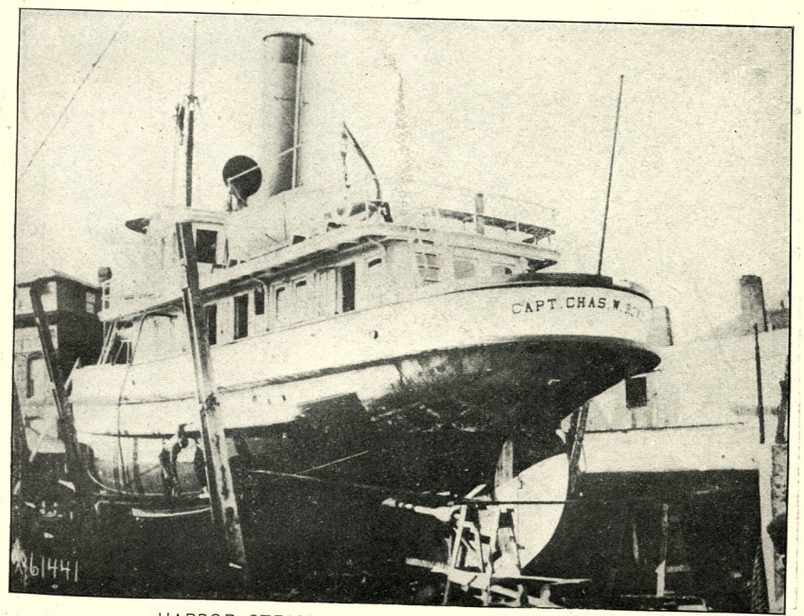
"*Samland.*"—Arranging for the mounting of guns and for the accommodations of the armed guard, to provide protection against submarines, necessitated the work of installing gun foundations, working platforms, lookout stations, ready service boxes, crow's nest, magazines, armory storerooms, communicating systems, quarters for the guard, etc., which were accomplished on the transport *Samland* by Morse Dry Dock & Repair Co., Brooklyn, N. Y., at a cost of $62,149.



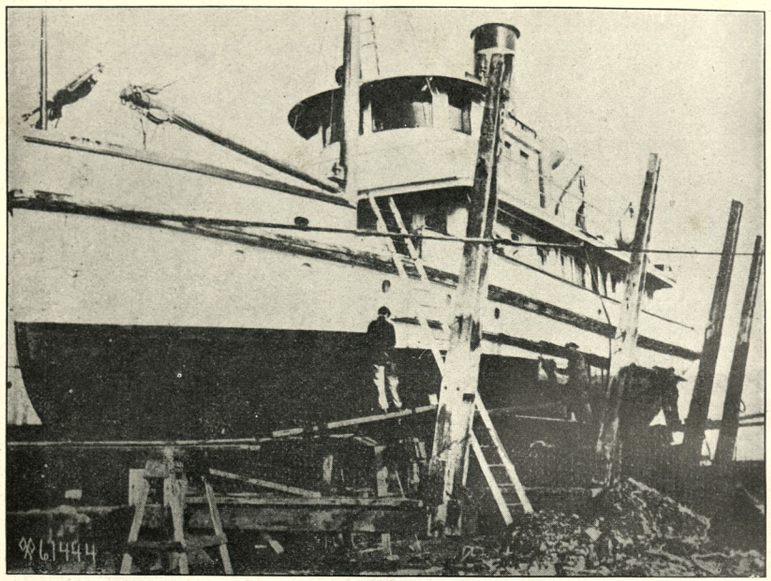
Turtlebacks.—To prepare the tugs *Cuba, Printer, Tacony, Richmond, Gwalia, Gypsum Princi, Iowan,* and *Boswell* for safe voyage to France, the freeboard being so small, turtlebacks were constructed at a total cost for the eight vessels of $28,034. These turtlebacks were to prevent the flooding of the vessels by inclosing the sides and overhead of the main deck from the bow to near the aft end of the deck housing.



PHOTOGRAPH NO. 12.—S. S. NANSEMOND - WASH ROOM.

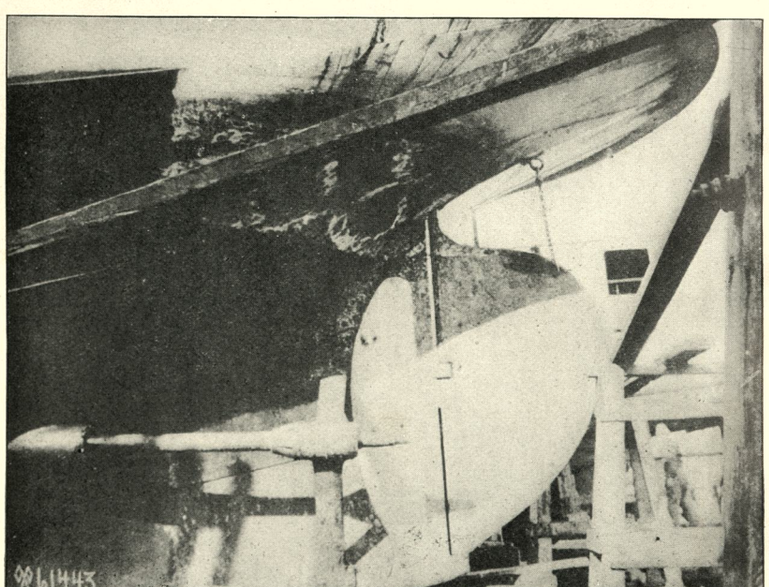


HARBOR STEAMER CAPT. CHAS. W. ROWELL.
Underwater repairs.



HARBOR STEAMER CAPT. CHAS. W. ROWELL.

Hull painting.



HARBOR STEAMER CAPT. CHAS. W. ROWELL.

Underwater repairs.

MARINE REPAIR SHOP.

The marine repair shop at Hoboken, N. J., was organized by the Army about 18 months ago, and has proved its usefulness to the Government by a reduction in the cost of repairs and by handling small jobs when it was difficult to have such work done elsewhere. The outside firms, being rushed with construction and repairs on a large scale, could not find it to their interests to accept small work, and it became a problem at some ports to determine what should be done to accomplish the needed small repairs. At New York the question was solved by the marine repair shop being in a position to handle this work, and it was found to be to the best interests of the Government to send vessels there from other ports where the distance would warrant. The marine repair shop has improved gradually since its inauguration in efficiency and enlargement of its equipment until most of the above-water repairs on harbor boats, as well as many repairs to transports, can be performed there. During the last year the work accomplished to vessels by this shop amounted to $159,658.78.

The attached charts represent graphically the cost of repairs each month during the year for United States Army transports, chartered transports and harbor boats, as performed by commercial firms, navy yards, and the marine repair shop, the money values being indicated vertically and the months horizontally.

The cost of repairs has been unusually high owing to war time conditions, material and labor being greatly advanced, and on account of the emergency—all haste being necessary to prepare the vessels for return voyage—overtime was required which greatly enhanced the cost, as the men were not only paid double time but their work would necessarily be slow, having already performed a day's labor of eight hours. Nevertheless, by competent supervision and investigation—all items being carefully checked and analyzed, and none passed without proper consideration—the expenditures have been brought down to a minimum and a large saving secured that otherwise would have been lost.

REQUISITIONS—CHARACTER, METHOD OF HANDLING, ETC.

Character of supplies.—All supplies incident to the physical upkeep and maintenance of United States Army-owned vessels operated in the military service. This covers:

United States Army-owned transports.

Vessels of the Quartermaster Corps used for harbor service and mine planting.

Vessels of the Coast Artillery Corps used for harbor service and mine planting.

Vessels of other corps of the Army that are operated in the military service, except engineer vessels engaged in river and harbor work.

Requisitions were filled during the fiscal year of 1919 from the stocks held in the various storage depots or by purchase. If a purchase was made it then became necessary to secure the authorization of the Chief of Transportation Service before payment could be made. This control of the expenditures of the so-called "transportation fund" was in accordance with the act of Congress that pooled certain appropriations, including "Transportation of the Army and its Supplies," under one general fund entitled "General Appropriation, Quartermaster Corps, 1919."

Coal and fuel oil furnished to vessels operated in the military service by 9 of the principal ports in the continental United States.

Port.	Coal.			Fuel oil.		
	How secured.	Tons (short) supplied.	Average cost per ton.	How secured.	Barrels (42 gallons) supplied.	Average cost per barrel.
Boston, Mass.	From Navy	12,277	$7.79	From Navy	37,189	3.125
New York, N. Y.	Direct contract (for harbor boats).	[1] 13,645	7.03	From July 1, 1918, to Dec. 31, 1918, by contract through the fuel branch of office Quartermaster Corps from Jan. 1, 1919, to June 30, 1919, by direct contract.	468,990	2.38
	Through U. S. Fuel Administration from July 1, 1918, to Mar. 26, 1919, and by direct contract from Mar. 27, 1919, to June 30, 1919.	[2] 804,209	5.13			
Philadelphia, Pa.	Open market purchases.	21,259	4.8875	Direct contract and open market purchase.	29,789	3.00
Baltimore, Md.	Through the U. S. Fuel Administration.	41,990	4.714	Direct contract	26,474	3.064
Newport News, Va.	do	123,103	4.38	do	302,788	3.08
	Direct contract and open market purchases.	7,238	4.53			
Charleston, S. C.	From Navy	29,036	6.2468	From Navy	3,046.4	2.4402
New Orleans, La.	Direct contract	6,451	7.49	Open market purchases.	25,444	1.83
San Francisco, Calif.	Open market purchases.	4,367	7.06	Direct contract	19,102	1.63
	Direct contract and open market purchases.	25,290	[3] 11.42			
Seattle, Wash.	None			do	7,837	1.91

[1] Anthracite. [2] Bituminous. [3] Plus $0.38 for overtime.

Method of handling.—The method of handling requisitions briefly is as follows:

(*a*) Routine requisitions calling for nontechnical supplies.

(*b*) Requisitions calling for technical supplies.

Class (*a*) requisitions were of two classes, viz, routine supplies and emergency supplies.

Routine supplies.—Requisitions calling for supplies of this class were forwarded, through prescribed military channels, to the office of the Director of Purchase and Storage. Such items as were available from stock were then furnished. Extracted requisitions, calling for such items as had to be purchased, were forwarded to the Chief of Transportation Service. These extracted requisitions were then forwarded to the selected zone supply officer, through the nearest zone transportation officer, with the authority to supply from stock or by purchase. If a purchase was made this office was then notified and the necessary authorization for payment was granted.

Emergency supplies.—Requisitions of this type were filled in conformity with existing orders. Authorizations for the payment of the funds obligated were secured from the office of the Chief of Transportation Service in the usual manner.

Class (*b*) requisitions were divided into two classes, viz, routine technical supplies and emergency technical supplies.

Routine technical supplies.—Requisitions calling for supplies of this class were forwarded direct from transportation officers to the Chief of Transportation Service. After review the requisitions were forwarded to the selected zone supply officer through the nearest zone transportation officer for purchase. The proper authority for the payment of the funds obligated would then be granted upon

receipt of request for same. If the items called for were held in stock in any of the transportation depots, the items called for would be issued.

Emergency technical supplies.—Special authorities, ranging from $500 to $5,000 per month, were granted transportation officers at the various ports. Under these authorities obligations were incurred but payments were not made until authorized by this office

PROCUREMENT OF COAL AND FUEL OIL.

The procurement and supply of coal and fuel oil for the fiscal year 1919, at the various ports in the continental United States, to vessels operated in the military service, was, like the various other phases of the operation of the vast military establishment that was built up, subject to the many economic influences that the World War fathered. The question of "supply and demand" resolved itself into "demand, delivery, and supply." Each port had to work out its own peculiar problems, the governing factors being the number of tons of coal or barrels of oil required to meet the demands of the shipping calling there, transportation facilities to carry the fuel to the port from the points of production, and the production.

During the first half of the fiscal year the procurement of fuel was under the general direction of the Fuel Administration. Various methods of procurement were devised and put into operation, notably the Shipping Board pool at Baltimore and the Tidewater Exchange at Norfolk. At certain ports the Navy supplied a great portion of the fuel, while at others direct contracts were entered into. As stated above, the methods put in force at each port were in accordance with the governing conditions.

At the end of the first half of the fiscal year the Fuel Administration ceased its supervision over the fuel deliveries to the various ports. The economic conditions governing the supply and transportation of fuel had become so adjusted as to permit of the Water Transportation Division of the Transportation Service assuming definite control of its own procurement of fuel. Under date of January 28 this office directed the transportation officials at Boston, New York, Philadelphia, Baltimore, Newport News, Charleston, New Orleans, and San Francisco (covering the Pacific coast) to invite bids and enter into contracts for the necessary fuel to meet its requirements for the remainder of the fiscal year. Local conditions at certain of the ports made it inadvisable to follow this method of procedure and, in consequence, additional instructions were later issued as the occasion demanded.

TRANSPORT WORKERS BATTALION.

An important organization of troops developing out of the Water Transport Branch was the regiments of military stevedores. On getting ready for sea the first convoy of ships for France, the officers of the French commission, then in Washington, reported that these vessels would with difficulty be unloaded in the ports of France, as the only stevedoring labor available there was women and children and a few German prisoners.

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The problem was assigned to the supervising marine engineer to have 500 stevedores ready in five days and on board ships of the first convoy ready for France. Without precedent or previous organization he formed a so-termed transport workers battalion, composed entirely of colored stevedores from the South, there being at the time of formation a stevedore strike going on in the northern ports, and it was undesirable and impracticable to glean any of this class of labor from any northern city.

These men were gathered in units of 50 each from ports between Baltimore and New Orleans. With white officers acting as foremen and superintendents, these units were gathered in their respective cities and in from two to three days were all on board train for New York. All these units or companies of colored stevedores were timed to arrive in Jersey City at the same hour on the day assigned to the departure of the convoy fleet. On arrival, as the vessels were not all ready for their reception, due to certain delays of the Navy in the formulation of convoy details, these newly gathered stevedores were transported by Army vessels to Governor's Island, to be held together until the vessels of the convoy were in readiness. That afternoon at Governor's Island was seen the unusual spectacle of almost 500 colored stevedores assembled on the main parade and actually being put through drill as the very first appearance of the transport workers battalion. The organization was then but five days old and just patched together from all sorts of material from all over the Southern coast. They were civilians but placed under a military contract for a year's service. That same afternoon they were issued military clothing, and henceforth at least looked like soldiers and generally comported themselves as such. That night and the next days they were placed on transports.

On arrival in France of the convoy the first Americans to land were not the much praised Marines as the "first to land and to fight," but rather these colored Americans of the First Transport Workers Battalion. It is understood that Gen. Pershing and staff were on hand to see the arrival and at once made note of these first colored men who handled ship lines and gear like old professionals as they were. As these men looked like soldiers and behaved like soldiers and appeared under discipline, he thereupon cabled to the effect: "Send immediately 800 more of these stevedores, but as they look like and behave as soldiers, therefore make them such." The sending of the next group as soldiers was not performed in five days, however, nor in five weeks, for here all the proper machinery of recruitment and enlistment must be started.

From one regiment this grew into four and finally on representations from the Engineer Corps that stevedoring functions in France properly pertained to the Corps of Engineers rather than to the Quartermaster Corps or Embarkation, this organized body of military stevedores was thereupon transferred in France to the Engineer Corps.

Stevedoring is essentially a part of ship operation and should be in the control of those experts who handle ships and shipping as an essential portion of the Transportation Service.

STEVEDORING.

Stevedoring at the different ports of Army cargo floated during the fiscal year 1919 was accomplished by contract with the exception of the port of San Francisco, where the labor was under the direction and supervision of the port and zone transportation officer. At the ports of New York, Hampton Roads, Boston, Philadelphia, Baltimore, Newport News, and New Orleans the work was done under a general stevedoring contract, with one or more firms contracting at each port. Two methods of contract were in vogue. First, that of paying the contractor a definite sum per ton loaded by his organization; second, that of paying the contractor a small percentage per ton on cargo loaded to compensate for furnishing and supervising the labor, the Government paying all accounts at rates defined by the National Adjustment Commission and assuming damages under the Workmen's Compensation Act.

The total tonnage loaded from the most important ports during the fiscal year is as follows:

New York	2,857,314
Hampton Roads	1,028,394
Baltimore	474,969
Philadelphia	399,062
New Orleans	171,065
Boston	73,734
San Francisco	62,385

The average stevedoring rate per ton at these ports is as follows:

New York	$2.3441
Hampton Roads	2.011
Baltimore	1.505
Philadelphia	1.8962
New Orleans	.70919
Boston	1.7842
San Francisco	.77

The general average of the cost per ton for stevedoring from all ports is $1.57 per ton.

HARBOR FLOATING EQUIPMENT.

Since July 1, 1918, there has been in use in the various activities of the Transportation Service, in connection with the handling of ships arriving at and sailing from the various ports of embarkation and debarkation, and also with the loading and unloading of troops on and from these ships, and dispatching to and from various points within the ports of embarkation and debarkation, and also distributed through the seven territorial departments to meet the needs of the service, a total of 1,608 crafts of all types known officially as the harbor floating equipment of the Transportation Service.

Of the total number referred to above 852 are owned by the War Department and 756 were chartered crafts. All of these boats were kept in active service day and night until October 1, 1918, and during the month of October it was found that a number of chartered boats could be returned to their owners without crippling the requirements of the service; therefore, a gradual decrease in the chartered equipment commenced and was continued during the following months up to and including June 30, 1919, having on that date only six harbor craft under charter, the owned equipment of the War Department being able to handle the remaining work of the service. The follow-

ing shows the number of chartered boats, under the jurisdiction of the port transportation officer, that were released and returned to their owners:

October, 1918	67
November, 1918	153
December, 1918	108
January, 1919	33
February, 1919	94
March, 1919	109
April, 1919	166
May, 1919	4
June, 1919	16

A total of 750 harbor boats were returned to their owners through a period of nine months. Of the total number of boats under charter during the fiscal year just closed, and under the jurisdiction of port transportation officers, six crafts only remain under charter.

The above figures do not include the chartering of coal boats used in connection with the coaling of the troop and cargo transports in the port of New York for the reason that these coal boats were on short-time charters, hired and released from day to day. The number of coal boats required from time to time, used for supplying coal only, depended on the number of ships in port. As many as 108 coal boats have been used in one day. This number has been decreased to 14, under charter June 30, 1919. The rapid decrease in chartered equipment in the port of New York, without crippling the needs of the service, was partly accomplished by the transfer of owned equipment to the port of New York from other ports where the activities had decreased and their crafts no longer needed, and also by quicker dispatch in the unloading of cargo lighters and barges at the various Army bases in New York. The following shows the number of different types of harbor equipment under charter during the fiscal year 1919 at the ports of embarkation and debarkation:

Tugs	41
Passenger steamers	5
Launches	5
Barges, open	269
Dumpers	3
Scows, open	411
Lighters, covered	8
Derrick lighters	13
Mud scows	1

THE UNITED STATES SHIPPING BOARD.

Close cooperation has existed between the War Department's Transportation Service and the United States Shipping Board during the past year. The demands for tonnage made upon the United States Shipping Board during the fall of 1918 were such that they could not promptly be met.

The construction program of the Emergency Fleet Corporation of the United States Shipping Board was very much delayed for reasons unknown to the department, and the delivery of ships to the War Department's service was not as rapid as originally anticipated. During the month of October, when heavy shipments were being made abroad and approximately every vessel suitable for trans-Atlantic service was withdrawn and allocated to the War Department, the need for additional cargo tonnage was most urgent.

Some difficulty was had with new vessels assigned to the War Department from the Emergency Fleet and some faulty construction discovered. The greatest difficulty was had with the Luckenbach vessels, as some of these vessels spent more time in port undergoing repairs than in actual operation, the greatest difficulty being due to the main gearing.

Early in April, 1918, the chairman of the United States Shipping Board was furnished a summary of the tonnage needs of the War Department, for which demands had been made from time to time, commencing in September, 1917. The following is an extract from letter referred to:

The estimated troop movement from April 1 to December 31, 1918, will be approximately as follows:

Troops in France April 1, 1918	362,000
On United States tonnage	700,000
On British ships assigned for use of United States	145,000
On other British tonnage operated commercially and specifically for the transportation of American troops abroad	1,157,000
On French liners	11,000
Total	2,375,000

The program for 1919 contemplates that provision be made for a total effective force abroad by December 31 of that year of 4,000,000. This would require a monthly movement, therefore, of—

During January, 1919:	
Reinforcements	135,500
Minimum replacements	71,250
Total	206,750
During December, 1919:	
Reinforcements	135,500
Minimum replacements	120,000
Total	255,500

From the foregoing it will be seen that the movement of troops abroad, indicated above, will be largely in tonnage other than that belonging and controlled by the United States. It is considered essential that before the end of 1919 the United States provide sufficient tonnage of its own to meet the monthly requirements indicated for December, 1919.

To do this, it would mean, in new ships, the following additional tonnage:

For January, 1919:	
Total required movement	206,750
Present troop capacity	80,000
Deficit	126,750

Summary of new construction required before Dec. 31, 1918.

94 troop transports	dead-weight tons	1,128,000
98 animal transports	do	882,000
878 cargo transports [1]	do	7,024,000
20 refrigeration ships	cubic feet	4,200,000
4 hospital ships	do	40,000
8 tankers	do	80,000

[1] Allowance made for cargo capacity in animal and troop transports as follows:

	Dead weight tons.
Troop, 94 at 3,000 tons	282,000
Animal, 50 per cent of total dead weight	695,000
	977,000

Attention is invited to the fact that replacements are figured at 3 per cent per month. This is the minimum that may be expected; after the troops become engaged increase replacements from 10 per cent to 50 per cent may be expected. This will have the effect during certain periods of reducing the reinforcements in the event that additional tonnage is not provided for.

When the ideal troop transport is one capable of carrying 3,000 troops and 7,500 tons of cargo with a speed of 16 knots, the urgency of placing in service at the earliest date possible additional tonnage, justifies the selection of a suitable type of construction which can be produced the quickest. The speed of troop and hospital ships must not, however, be reduced below 12½ knots under all conditions of weather, and all other classes should have a minimum speed of 8½ knots.

THE PLANNING AND DESIGNS FOR NEW ARMY TRANSPORTS.

It was early appreciated by the War Department that there would be a great shortage of troop transports to transport the American troops to Europe, and this was recognized even before the draft law was enacted which would surely result in accentuating this shortage. These facts were urgently presented for the consideration of the United States Shipping Board. The suggestion first was to ask conversion of a few ships already requisitioned by the Shipping Board. On examination of the plans of most of these ships it developed that they were totally unsuited for alteration as transports, due either to the fact that they had insufficient speed or were inadequately supplied with decks suited for troops.

Two ships, however, were found admirably adapted for conversion, the steamers *Orizaba* and *Oriente* (later named *Siboney*) then nearing completion at the Cramp shipyard in Philadelphia, having been started on orders from the New York and Cuba Mail, the Ward Line. Two other ships had been planned and the material ordered at the Harlan & Hollingsworth plant at Wilmington, Del., of the Bethlehem Steel Corporation, for the Ocean Steamship Co., of Savannah.

The plans of these four ships were carefully analyzed by the marine designers of this office and it was determined that the Cramp boats with their 18 knots would be especially suited for transports, and Army plans were therefrom drawn up and the Cramp Co. proceeded with the work as thus rearranged and hurried the two vessels to completion.

The plans of the two unnamed boats at Harlan & Hollingsworth at Wilmington, Del., were not so well arranged, as their speed and power were deficient, and following a couple of conferences on the part of the supervising marine engineer of this department with the naval architect of the Wilmington plant, it was decided to lengthen these vessels and to install a more powerful engine and boiler plant and thus get the speed up to a possible 16 knots. Before, however, these plans could be proceeded with, the Shipping Board decided to inaugurate plans for the eventual design of a large number of troop ships to be constructed in groups in one of the larger yards or in one of the newly organized fabricated ship plants.

The Shipping Board was daily urged to this action by continual pressure being exerted by the War Department. The first year and a half of the Shipping Board's existence had so far been concentrated on the designs for a huge fleet of commercial vessels. The consideration and construction of transports, they hoped, could be deferred or that the War and Navy Departments could construct their own as needed.

The growing American Army made consideration of the troopship construction of prime importance, for if the war could not be decisively won, or if the Navy could not crush the German submarine power, there would be small need for any American mercantile marine, and to fight the Germans American troopships must be rushed across, not singly or in pairs, but in whole fleets. The Shipping Board was in the meantime creating shipbuilding yards, by edict, by subsidy, and other means, so that it was apparent, with their organization for a colossal shipbuilding program, that they could well undertake the additional building of required troopships.

The Shipping Board thereupon mapped out a large program which it was thought would meet the requirements of the growing Army, and presenting this program before Congress obtained the appropriations thereon. This program, while ambitious as to numbers and speed of production, was in fact never realized except in a most minute degree. The war was over before any of these Shipping Board intended troop transports were ever completed.

The planning and negotiations for this range of Shipping Board built transports required most constant attention from the technical staff of this office, necessitating almost daily conferences with the naval architects and marine designers of both branches of the Government. Later the Navy also awoke to the interest to be developed in the transport ship, and their naval constructors were also brought into the conferences. The groups of these ships designed range as follows:

No.	Group.	Length.	Breadth.	Speed.	Tonnage, dead weight.	Troop capacity.	Remarks.
1	535 feet, Camden class	535	72	18	10,000	3,446	5 started.
17	500 feet, Camden class	502	62	14	8,500	2,700	Not started.
70	Hog Island, B class	448	58	14	8,000	2,300	11 started.

The Chief of Embarkation saw early in 1918 that the Shipping Board's promises and rates of execution of new contracts could not be met, not so much through faults of their administration, but due to the grave lack of essential shipbuilding materials, ship steel, and trained ship labor.

It was then a very serious question of getting troops across as quickly as they could be trained and sent to the embarkation points. American troop ships were every one in use which had 14 knots or more of speed. Anything of less speed was only loaded with troops in the greatest emergency, as it was not to be expected that a ship of slow speed could cope with a submarine. This was solved by the Allies placing at the disposal of the United States Government a large number of foreign passenger ships, which with but minor alterations were adopted as troop transports for American soldiers.

Immediately upon the signing of the armistice on November 11, 1918, the problem was as quickly reversed, but with the difference that the ships of the Allies were not available, as they must perforce be used in the transportation back to their distant homes of their own nationals. Hence, at once was organized the American plan of rapidly converting freight ships into troop ships. As the submarine menace was now nonexistent, ships of less than 18 knots could be considered, even though their speed might be but 10 or 12 knots.

This work of rapid conversion of freighters to troopers was mainly carried on at New York, some 56 ships all told being hurriedly altered and made suitable for this new use. The cost was, of course, high, as the number of repair firms in New York Harbor has never been equal to its normal field of work, and in these times of congestion it was necessary to even force work upon may firms to get them to undertake it at all.

In the Philadelphia region some seven vessels nearing completion as freighters were likewise altered before final delivery, so that effective troop ships could be developed from them. These vessels were mainly under the direct cognizance of this office in order to relieve New York from the pressure of its larger program of alterations. These ships were then changed to troopers under the designs supplied by this office.

These ships by name were:

	Length.	Breadth.	Speed.	Tonnage, dead-weight.	Troops.
	Feet. In.	*Feet.*	*Knots.*		
Santa Malta (Cramp shipyard)	404 0	54	12	9,500	1,900
Santa Eliza (Camden)	360 0	51½	13½	10,600	1,500
Santa Lenora (Camden)	360 0	51½	13½	10,600	1,500
Marica (Sun Co., Chester)	473 7	60	12	12,000	2,200
South Bend (Sun Co., Chester)	473 7	60	12	12,000	2,200
Sol Navis (Sun Co., Chester)	473 7	60	12	12,000	2,200
Edellyn (Sun Co., Chester)	473 7	60	12	12,000	2,200

These ships are now all completed and are at sea returning troops, with the exception of the last two, which it is expected will be delivered at any day.

TRANSPORTS BUILDING AT CAMDEN YARD.

In view of the fact that the War Department desired as many transports as possible with greater speed than 14 knots—something which should be equal to 17 or 18—the Shipping Board early in 1918 took in hand the design of a special class of transports to be equipped specially with high speed and to make at least 17½ or 18 knots; and as originally intended there were to be 19 of these built at the Camden yard and 8 at the Bethlehem Shipbuilding Corp. at Baltimore and 2 at Newport News.

These vessels were of special type and followed out the very best marine practice in all points of design in order to make ships of a design satisfactory for transports or for high-class passenger service. These vessels were 535 feet long, 72 feet beam, and 10,000 deadweight tons. Conferences were had, first with the designers in Washington and later with the naval architects at the shipyards works in Camden.

On account of the large shipyard at Camden being completely full of other heavy work for the Navy it was necessary for the Shipping Board to allow the shipyard corporation to acquire additional land and to erect thereon a number of additional launching ways. It therefore was many months before the Camden shipyard people were able to even lay the first keel, this occasion not occurring until after the armistice was signed. Since then, however, the Camden company has pushed the work of construction and has launched one of these

vessels, while the second is ready for launching, but has had trouble with settlement of the ways, and the third vessel will be ready in a month. These first three ships are now known as the *Wenatchee*, the *Sea Girt*, and the *Koda*.

In the last few days information has come to hand that the Shipping Board has changed the plans on these vessels and has issued instructions that they should proceed to completion, as high-grade passenger ships suited to South American trade, rather than as troop transports, as originally designed. The desire of the War Department, as previously expressed, was that the first five of these vessels should be completed as transports for the permanent Army service, and that the remainder, or such portion of them as the Shipping Board intended to complete, should proceed in whatever type of construction the board desired. It is not anticipated that the first three of these, of the transport class, should be completed before December or January.

While designs were being prepared of the above-mentioned Camden transports, this same yard, under instructions from the Emergency Fleet, was pushing the design of seven vessels of less speed, about 14 knots and 502 feet long by 62 feet beam. As these plans were for transports no more speedy than the Hog Island class, their design work was therefore not pushed by the Emergency Fleet, and so far little has been done regarding them, and the Army has not put in any request for their assignment as permanent transports. Hence, for all purposes these can be dismissed as offering no special object for the War Department's consideration, and if built they will probably be duly assigned by the Shipping Board to combination passenger and freight work.

TRANSPORTS BUILDING AT HOG ISLAND.

This yard, which was established for the purpose of fabricating ships in quantities greater than the world had ever heretofore contemplated, had been started in the fall of 1917, and it was expected at the outset that this Hog Island plant would produce a vessel of only one type, this being the 7,500 ton, 11½ knot cargo ship, 400 feet long and 54 feet wide, and all the original plans and estimates for both the yards and the ships were estimated on this basis; but in the spring of 1918 a second order was given to the building corporation by the Emergency Fleet for the construction of a type of ship known as the B class, suitable for combined troop and cargo purposes. These ships, the B class, were to be 8,000 ton, 15 knot, 450 feet long, and 48 feet wide, and the plans called for the eventual construction of 70 of these ships.

On this decision by the Emergency Fleet Corporation the War Department's supervising engineer was called into conference with the naval architects of the Emergency Fleet Corporation and with the naval architect, Mr. A. H. Rigg, of the New York Shipbuilding Co., at Camden, as this latter company was supplying the original designs on which these ships of the B class were to be built by the Hog Island Corporation. These conferences extended over a number of weeks until plans had been elaborated which should be deemed satisfactory to the War Department and yet be of service for after use as commercial freight and passenger ships.

The first plans as drawn out called for the introduction of washrooms and sanitary features on the main decks immediately below the weather deck, thus cutting off valuable space which would be used for the berthage of troops or carrying of cargo, and the design was therefore modified to bring these features upon the main weather deck by filling in part of the well deck, fore and aft, with more extended forecastle and aftercastle.

Certain minor features were adopted to extend special facilities for handling greatly increased number of lifeboats and for using reduced masts and cutting down height of smokestack, as well as making the vessel similar in contour at both ends. These features all being necessitated by the exactions of the submarine campaign.

Many eliminations of usual ship fittings were permitted in order to speed up delivery and reduce expense; these being the nonuse of all side ports which were undesirable in the then dangers of the submarine zone, the reduction of wooden decking to only the upper passenger decks, and extending the requirements for forced ventilation in the troop spaces.

Interesting points in the original design of these vessels, which have not been changed in any respect, were the abandonment of the use or consideration of ship's sheer, deck camber, tumble-home, rake, dead-rise, pintleless rudder, no deadwood, and similar features which vastly aided the problems of fabrication and simplified the whole interior construction. Thus in the matter of the purchase and installation of interior fittings all these can be made from standard furniture, standard piping, etc., all of which is made on the straight instead of the curved surfaces to fit ships with sheer and camber.

When these designs for the "B" ships were being laid off, the Hog Island Yard was still in the formative stage. Of the 50 ways proposed, only a few of them actually had ship work proceeding thereon, and the first ship was not launched until August 5, 1918. However, as an enormous number of men were engaged in the completion of the yard, the facilities for shipbuilding were being daily augmented, and each visit of the Army representative indicated a great amount of progress in the yard construction.

The whole 50 ways were not completed until late in the year 1918, and the general tendency of the yard was to be very greatly behind in the whole ambitious program which had been mapped out for it.

The first keel for the "B" ship was not laid until December, and as the armistice had gone into effect, orders had been issued by the Emergency Fleet to reduce greatly all character of work, and henceforth no extra time, holidays, or double time was allowed on any construction. In the next few following months keels for only 11 B class boats had been laid out of the proposed 70. In January the corporation reduced the number of possible B class boats from 70 to 35, then later made a reduction to 20. It was then decided to stop at the 11 keels already laid, and during the month of March practically no work whatever was done on any of these 11 keels, all work being temporarily suspended pending the decisions on the whole shipbuilding program in the United States. Since then, work has been restarted on these 11 keels, and it is assured that all these vessels will be pushed to completion.

As the exigencies of war-time transportation of troops is now over, it was thereupon decided by the War Department that it would be

necessary to request from the Shipping Board only six of these B class transports to be completed and to be eventually assigned as permanent transports for replacement of various old craft of the Army transport fleet, which were acquired during the Spanish-American War.

On this same occasion of requesting these six B class transports, the department went on record as desiring five vessels then building as transports at the Camden shipyard, which were not only designated as transports, but were being designed for 18 knots speed and considered especially available for permanent transports on the long runs required on the Pacific Ocean.

Of the vessels of the B class now under way at Hog Island, it is anticipated that two or three may possibly be completed during this calendar year, while three more will follow early in the year 1920.

The relative stage of progress shown in the construction of these ships is indicated by the attached photographs of the steamship *Mount Wolf*, the first ship laid down of the B class.

New Shipping Board tonnage for delivery in 1919.

Hull No.	Yard.	January, troop.		February, troop.		March, troop.		April, troop.	
		Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.
669	American International Shipbuilding Corporation	8,000	2,000						
670	do	8,000	2,000						
671	do	8,000	2,000						
672	do	8,000	2,000						
673	do	8,000	2,000						
674	do			8,000	2,000				
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698	do					8,000	2,000		
699	do					8,000	2,000		
1012	New York Shipbuilding Corporation					8,000	2,000		
700	American International Shipbuilding Corporation					10,000	2,500		
701	do							8,000	2,000
702	do							8,000	2,000
703	do							8,000	2,000
704	do							8,000	2,000
705	do							8,000	2,000
706	do							8,000	2,000
707	do							8,000	2,000
708	do							8,000	2,000
709	do							8,000	2,000
710	do							8,000	2,000
711	do							8,000	2,000
713	do							8,000	2,000

New Shipping Board tonnage for delivery in 1919—Continued.

Hull No.	Yard.	January, troop.		February, troop.		March, troop.		April, troop.	
		Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops
1013	New York Shipbuilding Corporation							10,000	2,500
712	American International Shipbuilding Corporation								
714	....do								
715	....do								
716	....do								
717	....do								
718	....do								
719	....do								
720	....do								
721	....do								
722	....do								
723	....do								
724	....do								
725	....do								
726	....do								
727	....do								
728	....do								
729	....do								
730	....do								
731	....do								
732	....do								
733	....do								
1164	Bethlehem, Md. Plant								
734	American International Shipbuilding Corporation								
735	....do								
736	....do								
737	....do								
1014	New York Shipbuilding Corporation								
738	American International Shipbuilding Corporation								
1165	Bethlehem, Md. Plant								
		40,000	10,000	104,000	26,000	114,000	28,500	114,000	28,500

Hull No.	Yard.	May, troop.		June, troop.		July, troop.		August, troop.	
		Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops
669	American International Shipbuilding Corporation								
670	....do								
671	....do								
672	....do								
673	....do								
674	....do								
675	....do								
676	....do								
677	....do								
678	....do								
679	....do								
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690	....do								
691	....do								
692	....do								
693	....do								
694	....do								
695	....do								
696	....do								
697	....do								

New Shipping Board tonnage for delivery in 1919—Continued.

Hull No.	Yard.	May, troop.		June, troop.		July, troop.		August, troop.	
		Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.	Tons dead-weight.	Troops.
698	American International Shipbuilding Corporation								
699	....do								
1012	New York Shipbuilding Corporation								
700	American International Shipbuilding Corporation								
701	....do								
702	....do								
703	....do								
704	....do								
705	....do								
706	....do								
707	....do								
708	....do								
709	....do								
710	....do								
711	....do								
713	....do								
1013	New York Shipbuilding Corporation								
712	American International Shipbuilding Corporation	8,000	2,000						
714	....do	8,000	2,000						
715	....do	8,000	2,000						
716	....do	8,000	2,000						
717	....do	8,000	2,000						
718	....do	8,000	2,000						
719	....do	8,000	2,000						
720	....do	8,000	2,000						
721	....do	8,000	2,000						
722	....do	8,000	2,000						
723	....do	8,000	2,000						
724	....do			8,000	2,000				
725	....do			8,000	2,000				
726	....do			8,000	2,000				
727	....do			8,000	2,000				
728	....do			8,000	2,000				
729	....do			8,000	2,000				
730	....do			8,000	2,000				
731	....do			8,000	2,000				
732	....do			8,000	2,000				
733	....do			8,000	2,000				
1164	Bethlehem, Md. Plant			10,000	2,500				
734	American International Shipbuilding Corporation					8,000	2,000		
735	....do					8,000	2,000		
736	....do					8,000	2,000		
737	....do					8,000	2,000		
1014	New York Shipbuilding Corporation					10,000	2,500		
738	American International Shipbuilding Corporation							8,000	2,000
1165	Bethlehem, Md. Plant							10,000	2,500
		88,000	22,000	90,000	22,500	50,000	10,500	18,000	4,500

RECAPITULATION.

	Number steamers.	Tons dead-weight.	Troops.
January	5	40,000	10,000
February	13	104,000	26,000
March	14	114,000	28,500
April	14	114,000	28,500
May	11	88,000	22,000
June	11	90,000	22,500
July	5	50,000	10,500
August	2	18,000	4,500
	75	618,000	152,500

Statement showing overseas steamer tonnage position of the main maritime countries of the world (excluding enemy countries).

I. PREWAR AND AT 30TH JUNE, 1918.

	United Kingdom and colonies.	United States of America, including Lakes.	France.	Japan.	Italy.	Russia.	Greece.	Norway.	Holland.	Sweden.	Spain.	Denmark.	Other countries.	Total.
Tonnage position, August, 1914	18,393,000	3,284,000	2,120,000	1,023,000	1,589,000	670,000	564,000	2,595,000	976,000	899,000	806,000	761,000	1,207,000	34,887,000
Net loss during war	3,293,000	.....	522,000	.....	515,000	213,000	333,000	1,205,000	183,000	137,000	153,000	181,000	.....	2,513,000
Net gain during war	.....	3,379,000	.....	550,000	.....	.....	.....	.....	.....	.....	.....	.....	293,000	.....
Tonnage position, June, 1918	15,100,000	6,663,000	1,598,000	1,573,000	1,074,000	457,000	231,000	1,390,000	793,000	762,000	653,000	580,000	1,500,000	32,374,000
Percentage of variation	−18	+103	−25	+54	−32	−32	−59	−46	−19	−15	−19	−24	+24	−7

II. ANALYSIS OF GAINS.

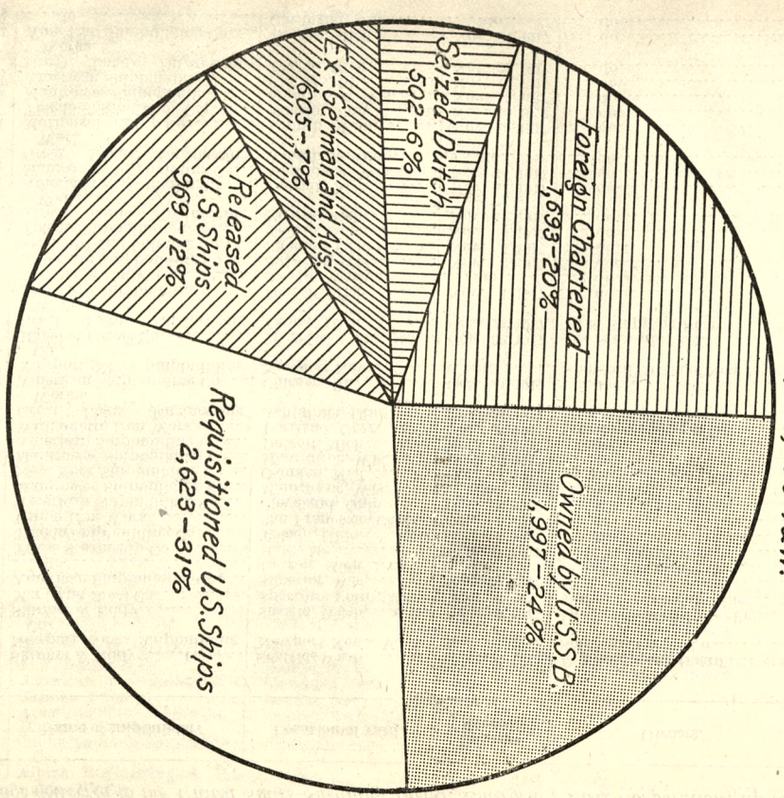
New construction, August, 1914, to June, 1918	4,100,000	2,680,000	152,000	810,000	157,000	.....	.....	197,000	531,000	91,000	32,000	130,000	57,000	8,937,000
Tonnage captured, etc	690,000	703,000	243,000	.....	181,000	100,000	.....	.....	.....	.....	.....	.....	582,000	2,499,000
Gained by transfer and purchase	1,057,000	705,000	65,000	33,000	30,000	63,000	44,000	46,000	6,000	19,000	8,000	6,000	35,000	.....
Total gains	5,847,000	4,088,000	460,000	843,000	368,000	163,000	44,000	243,000	537,000	110,000	40,000	136,000	674,000	11,436,000

III. ANALYSIS OF LOSSES.

Enemy action (excluding fishing)	7,228,000	290,000	845,000	106,000	831,000	183,000	330,000	1,133,000	199,000	185,000	157,000	226,000	179,000	11,892,000
Interned in enemy ports	184,000	.....	5,000	.....	.....	11,000	.....	.....	.....	.....	.....	.....	10,000	210,000
Marine risk	1,017,000	229,000	79,000	59,000	51,000	40,000	33,000	119,000	60,000	46,000	35,000	34,000	45,000	1,847,000
Transfers and sales	711,000	190,000	53,000	128,000	1,000	142,000	14,000	196,000	461,000	16,000	1,000	57,000	147,000	.....
Total losses	9,140,000	709,000	982,000	293,000	883,000	376,000	377,000	1,448,000	720,000	247,000	193,000	317,000	381,000	13,949,000

Data prepared by British Admiralty and furnished by Allied Maritime Transport Council.
The American lake tonnage included in the table amounts to slightly more than 2,000,000 gross tons.
Note that the data are secret.

TDW OF UNITED STATES CONTROLLED STEAMERS, BY FORM OF CONTROL, SEPTEMBER 1, 1918.



The total does not include steamers engaged in traffic on the Great Lakes, but does include one and one-half million tons of tankers. The foreign charters do not run later than four months after the termination of the war.

Allocation of new tonnage delivered to the United States Shipping Board, Emergency Fleet Corporation, up to June 6, 1918.

Name of vessel.	Dead-weight.	Speed.	Name of shipbuilder.	Location of yard.	Date de-livered.	Owners.	Assigned to—
	Tons.	*Knots.*					
Jeannette Skinner	8,800	11½	Skinner & Eddy	Seattle, Wash	Sept. 16, 1917	U. S. Shipping Board	Army.
El Capitan	7,650	11	Newport News Shipbuilding Co.	Newport News, Va	Sept. 17, 1917	Southern Pacific Co	Do.
Lieut. Demissiessy	8,694		Skinner & Eddy	Seattle, Wash	Sept. 19, 1917	Messagerie Maritimes, Fr	Allied foreign owners.
Walter D. Munson	5,500	12	Maryland Steel Co	Sparrows Point, Md	Sept. 20, 1917	Munson Steamship Line	Army.
Lake Champlain	3,100	9	American Shipbuilding Co	Superior, Wis	Sept. 22, 1917	U. S. Shipping Board	Navy.
War Song	4,100		do	Detroit, Mich	do	Cunard Steamship Co	Allied foregin owners.
Maine	9,325	10½	Texas Steamship Co	Bath, Me	Sept. 27, 1917	U. S. Shipping Board	Allied Governments.
Lake Shore	3,000	10	Toledo Shipbuilding Co	Toledo, Ohio	Oct. 1, 1917	do	Navy.
Wilhelm Jebson (T)	10,475	10½	Union Iron Works	San Francisco, Calif	Oct. 2, 1917	do	Allied Governments.
Lakeport	3,100	9	American Shipbuilding Co	Cleveland, Ohio	Oct. 8, 1917	do	Navy.
Lake Oneida	3,613	9	Manitowoc Shipbuilding Co	Manitowoc, Wis	do	do	Allied Governments.
Deepwater	12,420	10½	New York Shipbuilding Co	Camden, N. J	Oct. 4, 1917	do	Navy.
Lake Mohonk	3,513	9	Manitowoc Shipbuilding Co	Manitowoc, Wis	Oct. 20, 1917	do	Coal trade.
Lake Placid	4,200	9	American Shipbuilding Co	Detroit, Mich	Oct. 22, 1917	do	Allied Governments.
War Viceroy	8,800		Williamette Iron Works	Portland, Oreg	Oct. 23, 1917	do	Coal trade.
Lake City	4,000	9	Great Lakes Engineering Works.	Ashtabula, Ohio	Oct. 25, 1917	Cunard Steamship Co	Navy.
Lake Worth	3,100	9	American Shipbuilding Co	Chicago, Ill	Oct. 31, 1917	U. S. Shipping Board	Allied foreign owners.
O. B. Jennings (T)	14,962	10½	Newport News Shipbuilding Co.	Newport News, Va	do	do	Owners (phosphate).
Feltore	11,300	10	Maryland Steel Co	Sparrows Point, Md	Oct. 30, 1917	Standard Oil Co. of New Jersey	Navy.
Florence H	5,500	11	Great Lakes Engineering Works.	Ecorse, Mich	Oct. 24, 1917	Ore Steamship Co	Owners (Trans-Atlantic).
Lake Erie	3,100	9½	American Shipbuilding Co	Detroit, Mich	Nov. 1, 1917	U. S. Shipping Board	Army.
Western Front	8,800	11½	Skinner & Eddy	Seattle, Wash	do	do	Sunk or destroyed.
Lakeside	3,100	9	American Shipbuilding Co	Superior, Wis	Nov. 2, 1917	do	Navy.
Jupiter	7,115	10	Standard Shipbuilding Co	Shooters Island, N. Y	Nov. 5, 1917	do	Army.
Lake Superior	3,000	10	Toledo Shipbuilding Co	Toledo, Ohio	Nov. 6, 1917	do	Navy.
Lakeland	4,000	9	Great Lakes Engineering Works.	Ecorse, Mich	Nov. 11, 1917	do	Allied Governments.
Lakewood	3,100	9½	American Shipbuilding Co	Detroit, Mich	Nov. 14, 1917	do	Navy.
Lake Ontario	3,323	10½	Manitowoc Shipbuilding Co	Manitowoc, Wis	Nov. 15, 1917	do	Do.
Lake George	4,000	10	Great Lakes Engineering Works.	Ashtabula, Ohio	do	do	Owners (West India sugar)
Lakemoor	3,500	10½	McDougal-Duluth Co	Duluth, Minn	Nov. 19, 1917	do	Navy.
Lake Bridge	3,000	10	Toledo Shipbuilding Co	Toledo, Ohio	Nov. 16, 1917	do	Do.
Lakeview	3,323	10½	Manitowoc Shipbuilding Co	Manitowoc, Wis	Nov. 17, 1917	do	Owners (N. E. coal).
Lake Huron	3,100	9½	American Shipbuilding Co	Chicago, Ill	Nov. 19, 1917	do	Sunk or destroyed.
Lake Dunmore	4,000	10	Great Lakes Engineering Works.	Ecorse, Mich	Nov. 22, 1917	do	Navy.
Lake Forest	3,100	9½	American Shipbuilding Co	Detroit, Mich	Nov. 24, 1917	do	Do.
Lake Michigan	3,100	9½	do	Cleveland, Ohio	do	do	Do.
F. J. Luckenbach	11,555	13	Fore River Shipbuilding Co	Quincy, Mass	Nov. 28, 1917	Luckenbach Co	Army.
William Isom (T)	5,000	10	Baltimore Shipbuilding & Dry Dock Co.	Baltimore, Md	Dec. 1, 1917	U. S. Shipping Board	Navy.
Lake Tahoe	5,500	11½	Great Lakes Engineering Works.	Ecorse, Mich	do	do	Do.
Woonsocket	9,530	11	Texas Shipbuilding Co	Bath, Me	do	do	Army.
Hisko (T)	9,000	10½	Chester Shipbuilding Co	Chester, Pa	Dec. 6, 1917	do	Navy.
Munindies	7,330	11	Newport News Shipbuilding Co.	Newport News, Va	Dec. 6, 1917	Munson Steamship Line	Army.
W. H. Tilford (T)	8,255	10½	Harlan & Hollingsworth	Wilmington, Del	Dec. 28, 1917	Standard Oil Co. of New Jersey	Allied Governments.
Mount Shasta	7,100	10½	Moore & Scott	Oakland, Calif	Dec. 7, 1917	U. S. Shipping Board	Department of Agriculture.
Fred. W. Weller (T)	14,900	10½	Union Iron Works	San Francisco, Calif	do	Standard Oil Co. of New Jersey	Allied Governments.
Hatteras	7,500	10	Bethlehem Steel Co	Sparrows Point, Md	Dec. 21, 1917	U. S. Shipping Board	Army.
Westhaven	8,619	11½	Skinner & Eddy	Seattle, Wash	Dec. 27, 1917	do	Owners (nitrates).
Westland	8,800	11½	Williamette Iron Works	Portland, Oreg	Dec. 28, 1917	do	Army.
Chester Sun (T)	12,582	11	Sun Shipbuilding Co	Chester, Pa	Dec. 29, 1917	Sun Co	Allied Governments.
Sylvan Arrow (T)	10,300	10½	New York Shipbuilding Co	Camden, N. J	Jan. 2, 1918	Standard Transportation Co	Owners (Trans-Atlantic).
Munaires	7,300	11	Newport News Shipbuilding Co.	Newport News, Va	Jan. 8, 1918	Munson Steamship Co	Army.
J. E. O'Neill (T)	10,475	11	Union Iron Works	San Francisco, Calif	Jan. 10, 1918	Atlantic Refining Co	Owners (Gulf).
Seattle	8,571	10½	Skinner & Eddy	Seattle, Wash	Jan. 15, 1918	U. S. Shipping Board	Army.
Coronado	9,400	10½	Moore & Scott	Oakland, Calif	Jan. 16, 1918	do	Do.
Santa Ana	4,986	14	Cramp & Sons Shipbuilding Co	Philadelphia, Pa	Jan. 18, 1918	W. R. Grace & Co	Owners (nitrates).
West Point	8,800	11	J. F. Duthie & Co	Seattle, Wash	Jan. 21, 1918	U. S. Shipping Board	Allied Governments.
J. C. Donnell (T)	14,800	10½	Newport News Shipbuilding Co.	Newport News, Va	Jan. 22, 1918	Atlantic Refining Co	Owners (Gulf).
Snug Harbor	3,500	9½	Staten Island Shipbuilding Co	Point Richmond, N. Y	do	U. S. Shipping Board	Coal trade.
Sacramento	7,500	10½	Seattle Construction & Dry Dock Co.	Seattle, Wash	Jan. 28, 1918	do	Department of Agriculture.
Lake Lillian	2,875	10½	American Shipbuilding Co	Cleveland, Ohio	Jan. 31, 1918	do	Army.
Trontolite (T)	9,000	10½	Skinner & Eddy	Seattle, Wash	Feb. 1, 1918	Standard Oil Co. of N. J	Owners (Oil-West Coast S. A.).
K. I. Luckenbach	11,555	13	Fore River Shipbuilding Co	Quincy, Mass	Feb. 3, 1918	Luckenbach Co	Army.
West Wind	8,800	10½	Williamette Iron Works	Portland Oreg	Feb. 4, 1918	U. S. Shipping Board	Food Administration.
Yosemite	9,400	11	Moore & Scott	Oakland, Calif	do	do	Army.
Redondo	6,000	10	Union Iron Works	San Francisco, Calif	Feb. 6, 1918	do	Department of Agriculture.
Westerner	8,800	10½	J. F. Duthie & Co	Seattle, Wash	Feb. 4, 1918	do	Army.
Absaroka	8,521	10½	Skinner & Eddy	do	Feb. 12, 1918	do	Food Administration.
Lake Duane	2,875	10½	American Shipbuilding Co	Detroit, Mich	Feb. 14, 1918	do	Coal trade.
Lake Conway	2,875	10½	do	do	do	do	Do.
A. C. Bedford (T)	14,975	10½	Union Iron Works	San Francisco, Calif	do	Standard Oil Co. of N. J	Owners (Gulf).
Westerly	8,800	10½	Ames Shipbuilding & Dry Dock Co.	Seattle, Wash	Feb. 16, 1918	U. S. Shipping Board	Sunk or destroyed.
Fairmont	8,753	10½	New York Shipbuilding Co	Camden, N. J	Feb. 15, 1918	Coastwise Transportation Co	Army.
Westfield	8,654	10½	J. F. Duthie & Co	Seattle, Wash	Feb. 22, 1918	U. S. Shipping Board	Food Administration.
Lake Otisco	2,875	9½	American Shipbuilding Co	Cleveland, Ohio	Feb. 25, 1918	do	Army.
West Arrow	8,567	10½	Skinner & Eddy	Seattle, Wash	Feb. 26, 1918	do	Do.
Lake Butler	2,875	10	American Shipbuilding Co	Detroit, Mich	Feb. 27, 1918	do	Coal trade.
Saetia	4,500	9½	Harlan & Hollingsworth	Wilmington, Del	Mar. 1, 1918	do	Army.
Westward Ho	8,700	10½	Columbia River Shipbuilding Co.	Portland, Oreg	Mar. 4, 1918	do	Do.
Point Loma	3,300	9	Albina Engineering & Machine Works.	do	Mar. 7, 1918	do	Owners (Hawaiian).

Allocation of new tonnage delivered to the United States Shipping Board, Emergency Fleet Corporation, up to June 6, 1918—Continued.

Name of vessel.	Dead-weight.	Speed.	Name of shipbuilder.	Location of yard.	Date delivered.	Owners.	Assigned to—
	Tons.	*Knots.*					
Herbert L. Pratt (T)	10,475	11	Union Iron Works	San Francisco, Calif	Mar. 1, 1918	Atlantic Refining Co	Owners (Gulf).
Sudbury	7,300	11	Chester Shipbuilding Co	Chester, Pa	Mar. 5, 1918	Shawmut Steamship Co	Army.
Westlake	8,575	10½	Skinner & Eddy	Seattle, Wash	Mar. 9, 1918	U. S. Shipping Board	Food Administration.
S. M. Spaulding (T)	10,475	11	Union Iron Works	San Francisco, Calif	Mar. 11, 1918	Petroleum Transportation Co	Owners (Gulf).
Broad Arrow (T)	12,650	11	New York Shipbuilding Co	Camden, N. J	Mar. 12, 1918	Standard Transportation Co	Navy.
Westwood	8,800	10½	Ames Shipbuilding & Dry Dock Co.	Seattle, Wash	do	U. S. Shipping Board	Swiss Government.
Chestnut Hill (T)	7,000	11	Pennsylvania Shipbuilding Co	Gloucester, N. J	Mar. 14, 1918	do	Navy.
Sutherland	7,500	10½	Seattle Construction & Dry Dock Co.	Seattle, Wash	Mar. 16, 1918	do	Department of Agriculture.
Westchester	8,800	10	Williamette Iron Works	Portland, Oreg	Mar. 17, 1918	do	Army.
Elinor	6,200	10	Baltimore Shipbuilding & Dry Dock Co.	Baltimore, Md	Mar. 20, 1918	do	Do.
Canoga	8,548	10½	Skinner & Eddy	Seattle, Wash	Mar. 23, 1918	do	Owners (nitrate).
Western King	8,800	11½	J. F. Duthie & Co	do	Mar. 26, 1918	do	Food Administration.
Sewells Point	8,600	10½	New York Shipbuilding Co	Camden, N. J	Mar. 28, 1918	do	Department of Agriculture.
West Eagle	8,688	10½	Ames Shipbuilding & Dry Dock Co.	Seattle, Wash	Mar. 29, 1918	do	Food Administration.
Sabine Sun (T)	10,300	10½	Sun Shipbuilding Co	Chester, Pa	Mar. 28, 1918	Sun Co	Owners (Gulf).
Westbrook	8,800	10½	Columbia River Shipbuilding Co.	Portland, Oreg	Mar. 30, 1918	U. S. Shipping Board	Swiss Government.
Point Arena	3,300	9½	Albina Engineering & Machine Works.	do	do	do	Owners (Hawaiian).
Santore	11,300	10	Bethlehem Steel Corporation	Sparrows Point, Md	Mar. —, 1918	Ore Steamship Co	Owners (Cuban ore).
Freeman	5,535	10½	New York Shipbuilding Co	Camden, N. J	Apr. 3, 1918	Pocahontas Fuel Co	Coal trade.
Guaro	4,500	10	Harl. & Hollingsworth	Wilmington, Del	Apr. 4, 1918	U. S. Shipping Board	Owners (nitrate).
Siboney	4,500	17	Cramp Shipbuilding Co	Philadelphia, Pa	Apr. 8, 1918	do	Navy.
Westover	8,800	11½	J. F. Duthie & Co	Seattle, Wash	Apr. 12, 1918	do	Army.
Ossineke	8,571	10½	Skinner & Eddy	do	Apr. 13, 1918	do	Owners (Food Pacific to Atlantic).
West Shore	8,800	10	Williamette Iron Works	Portland, Oreg	Apr. 15, 1918	do	Food Administration.
Lake Crescent	2,875	10½	American Shipbuilding Co	Chicago, Ill	Apr. 19, 1918	do	Army.
Lake Charles	2,875	9½	do	Lorain, Ohio	Apr. 23, 1918	do	Coal trade.
Lake Como	2,875	9½	do	do	Apr. 22, 1918	do	Do.
Yellowstone	9,400	10½	Moore & Scott	Oakland, Calif	do	do	Owners (nitrate).
Westgate	8,800	11½	Columbia River Shipbuilding Co.	Portland, Oreg	Apr. 23, 1918	do	Food Administration.
Overbrook (T)	9,000	10½	Chester Shipbuilding Co	Chester, Pa	Apr. 26, 1918	do	Navy.
Western Queen	8,800	11½	Skinner & Eddy	Seattle, Wash	Apr. 25, 1918	do	Food Administration.
Bremerton	7,530	10½	Seattle Construction & Dry Dock Co.	do	Apr. 23, 1918	do	Army.
Westgrove	8,800	11½	Columbia River Shipbuilding Co.	Portland, Oreg	Apr. 27, 1918	do	Do.
Westboro	8,800	11½	J. F. Duthie & Co	Seattle, Wash	do	do	Food Administration.
Lake Sunappee	3,000	10	Toledo Shipbuilding Co	Toledo, Ohio	Apr. 30, 1918	do	Army.
Lake Arthur	2,875	9½	American Shipbuilding Co	Detroit, Mich	do	do	Do.
Lake Western	2,875	9½	do	do	do	do	Do.
Lake Tulare	2,875	9½	do	do	do	do	Do.
Lake Ogden	2,875	9½	do	Superior, Wis	do	do	Coal trade.
Lake Jessup	2,875	9½	do	Lorain, Ohio	do	do	Do.
Lake Elizabeth	2,400	9½	do	do	do	do	Army.
Lake St. Clair	3,300	9½	Great Lakes Engineering Works.	Ecorse, Mich	do	do	Do.
Lake St. Regis	3,300	9½	do	do	do	do	Do.
Lake Houghton	3,300	9½	do	Ashtabula, Ohio	do	do	Coal trade.
Lake Pewaukee	3,500	9½	do	Ecorse, Mich	do	do	Army.
Lake Traverse	3,300	9½	Manitowoc Shipbuilding Co	Manitowoc, Wis	do	do	Do.
Lake Sterling	2,875	9½	McDougal Duluth Co	Duluth, Minn	do	do	Coal trade.
W. M. Irish (T)	10,475	11	American Shipbuilding Co	Detroit, Mich	do	do	Owners.
Paul H. Harwood (T)	10,475	11	Union Iron Works	San Francisco, Calif	do	Atlantic Refining Co	Owners (Gulf).
West Lianga	8,800	12½	do	do	May 1, 1918	Petroleum Transport Co	Owners (Food Pacific to Atlantic).
Ampetco	11,350	10½	Skinner & Eddy	Seattle, Wash	May 3, 1918	U. S. Shipping Board	Owners (French).
Lake Clear	2,875	9½	Bethlehem Steel Co	Sparrows Point, Md	May 6, 1918	do	Army.
Lake Winnona	3,300	10	American Shipbuilding Co	Chicago, Ill	do	do	Coal trade.
John M. Connelly (T)	7,000	11	Great Lakes Engineering Works.	Ecorse, Mich	do	do	Navy.
Piqua	4,000	10	Pennsylvania Shipbuilding Co	Gloucester, N. J	May 7, 1918	do	Owners (Cuban).
Muscatine (refrig.)	7,300	10½	Pusey & Jones Co	Wilmington, Del	May 8, 1918	do	Army.
Lake Owens	3,300	10	Standard Shipbuilding Co	Shooters Island, N. Y	May 9, 1918	do	Do.
Lake Lemando	3,550	9½	Great Lakes Engineering Works.	Ecorse, Mich	May 10, 1918	do	Owners (Army Transport, Channel).
Pasadena	9,400	11	American Shipbuilding Co	Cleveland, Ohio	May 11, 1918	do	Navy.
Radnor	10,000	10½	Moore & Scott Iron Works	Oakland, Calif	do	do	Owners (nitrate).
Westhampton	8,800	11¼	Sun Shipbuilding Co	Chester, Pa	May 13, 1918	do	Owners (food, Pacific to Atlantic).
Lake Crystal	3,300	10	Williamette Iron Works	Portland, Oreg	May 14, 1918	do	Coal trade.
Tuckahoe	5,500	10½	Great Lakes Engineering Works.	Ecorse, Mich	May 15, 1918	do	Owners (N. E. coal).
Lake Shawano	3,500	10¼	New York Shipbuilding Co	Camden, N. J	do	do	Coal trade.
Lake Maurepas	3,300	10	Manitowoc Shipbuilding Co	Manitowoc, Wis	May 16, 1918	do	Do.
Silverado	3,000	9	Great Lakes Engineering Co	Ashtabula, Ohio	do	do	Owners (Hawaiian).
West Durfee	8,800	11½	Craig Shipbuilding Co	Long Beach, Calif	do	do	Owners (food, Pacific to Atlantic).
Katrina Luckenbach	11,150	13	Skinner & Eddy Corporation	Seattle, Wash	do	do	Army.
Santa Luisa	4,986	14	Fore River Shipbuilding Co	Quincy, Mass	do	Ed. F. Luckenbach	Owners.
Lake Allen	3,300	10	Cramp & Sons Co	Philadelphia, Pa	May 18, 1918	W. R. Grace & Co	Coal trade.
Lake Capens	2,875	9	Great Lakes Engineering Works.	Ecorse, Mich	May 20, 1918	United States Shipping Board	Army.
Lake Felicity	3,100	9	American Shipbuilding Co	Superior, Wis	do	do	Coal trade.
West Mount	8,800	10½	do	Detroit, Mich	do	do	Food Administration.
Lake Edon	3,550	10	Ames Shipbuilding & Dry Dock Co	Seattle, Wash	do	do	Army.
West Bridge	8,800	11¼	American Shipbuilding Co	Cleveland, Ohio	do	do	Food Administration.
			J. F. Duthie & Co	Seattle, Wash	May 21, 1918	do	

Allocation of new tonnage delivered to the United States Shipping Board, Emergency Fleet Corporation, up to June 6, 1918—Continued.

Name of vessel	Dead-weight.	Speed.	Name of shipbuilder	Location of yard	Date delivered	Owners	Assigned to—
	Tons	*Knots*					
North Bend (wood)	3,500	10	Kruse & Banks	North Bend, Oreg.	May 21, 1918	United States Shipping Board.	Owners.
Cape Henry	7,500	10	Bethlehem Steel Co.	Sparrows Point, Md.	May 22, 1918	do	Department of Agriculture.
West Indian	8,800	11½	Columbia River Shipbuilding Co.	Portland, Oreg.	May 23, 1918	do	Food Administration.
Lake Sebago	2,930	10	Toledo Shipbuilding Co.	Toledo, Ohio.	May 25, 1918	W. R. Grace & Co.	Coal trade.
Lake Lida	3,500	10¼	Manitowoc Shipbuilding Co.	Manitowoc, Wis.	do	do	Do.
Gulfland (T)	7,300	11	New York Shipbuilding Co.	Camden, N. J.	May 29, 1918	Gulf Refining Co.	Owners.
Lake Weir	3,100	9	American Shipbuilding Co.	Lorain, Ohio.	do	United States Shipping Board.	Coal trade.
Oakland	9,400	11	Moore & Scott Iron Works.	San Francisco, Calif.	May 30, 1918	do	Food Administrat
Luella (refrig.)	6,200	11½	Baltimore Shipbuilding & Dry Dock Co.	Baltimore, Md.	May 31, 1918	do	Army.
Waukesha	4,000	10	Pusey & Jones Co.	Wilmington, Del.	do	do	Owners.
Orizaba	4,500	17	W. M. Cramp & Sons.	Philadelphia, Pa.	do	do	Army.
Avondale (T)	9,000	10½	Chester Shipbuilding Co.	Chester, Pa.	do	do	Owners.
Santa Olivia	9,500	12	W. M. Cramp & Sons.	Philadelphia, Pa.	do	do	Army.
Lake Hemlock	3,300	10	Great Lakes Engineering Works.	Ecorse, Mich.	do	United States Shipping Board	Coal trade.
Lake Ennis	3,550	9¾	American Shipbuilding Co.	Cleveland, Ohio.	do	do	Do.
Mariners Harbor	3,500	9¾	Staten Island Shipbuilding Co.	Port Richmond, N. Y.	June 3, 1918	do	Owners.
Geo. W. Barnes (T)	9,100	10½	Fore River Shipbuilding Co.	Quincy, Mass.	June 4, 1918	Petroleum Transportation Co.	Do.
West Alsek	8,800	11½	Skinner & Eddy Corporation.	Seattle, Wash.	do	United States Shipping Board.	Navy.
Lake Cayuga	2,962	10	Toledo Shipbuilding Co.	Toledo, Ohio.	June 6, 1918	do	Coal trade.
Western City	8,800	11½	Columbia River Shipbuilding Co.	Portland, Oreg.	do	do	Food Administration.

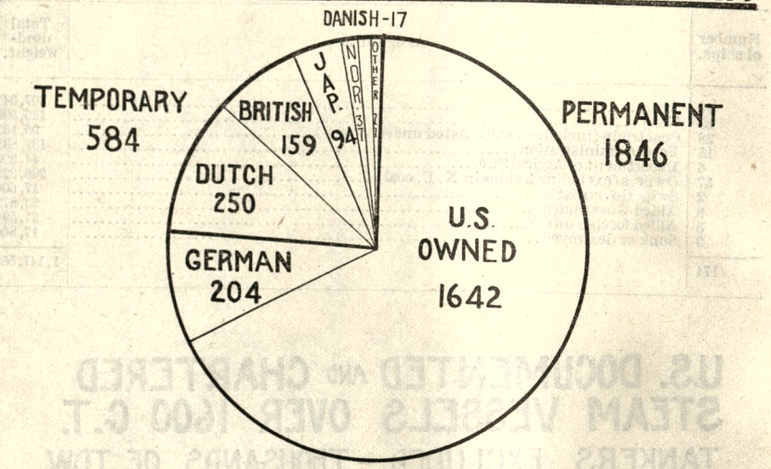
174 ships, 1,141,566 tons dead weight.

Allocation of new tonnage delivered to the United States Shipping Board, Emergency Fleet Corporation, up to June 6, 1918—Continued.

SUMMARY.

Number of ships.	Assigned to—	Total dead-weight.
47	Army	307,041
25	Navy	125,596
28	Coal trade (includes 3 ships listed under owners)	95,103
15	Food Administration	131,838
6	Department of Agriculture	44,200
37	Owners (excluding 3 ships in N. E. coal)	296,922
2	Swiss Government	17,600
8	Allied Governments	83,872
3	Allied foreign owners	21,594
3	Sunk or destroyed	17,800
174		1,141,566

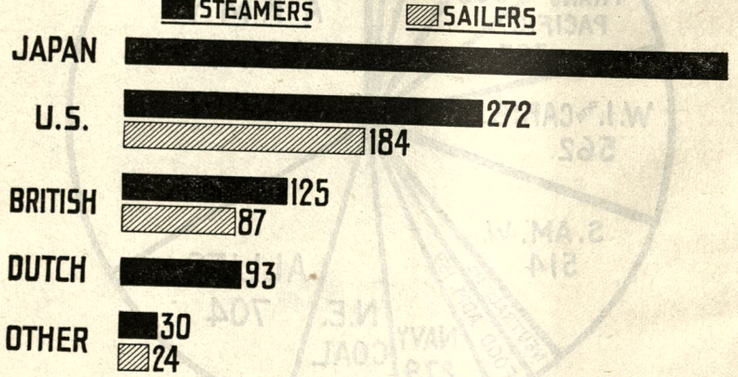
TDW OF TRANS-ATLANTIC CARGO TRANSPORTS-NOV. 1



TOTAL 2,430,000

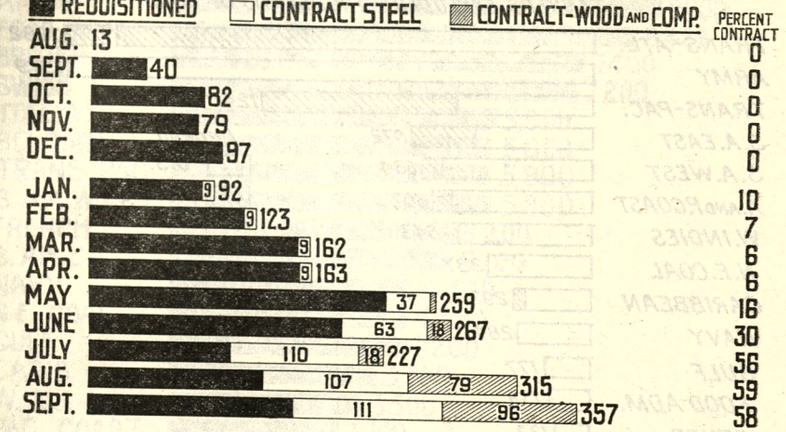
G.T. OF SHIPS IN U.S. TRANS-PACIFIC TRADE-OCT.1

EXCLUSIVE OF TANKERS

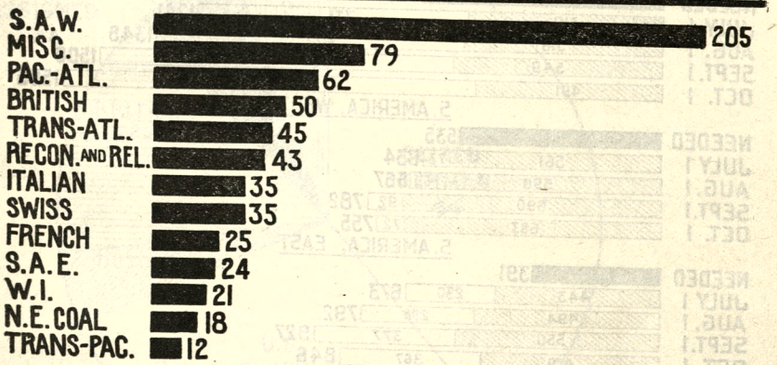


TOTAL – STEAMERS 974 SAILERS 295

STEAMERS BUILT IN U.S FOR E.F.C. REQUISITIONED AND CONTRACT



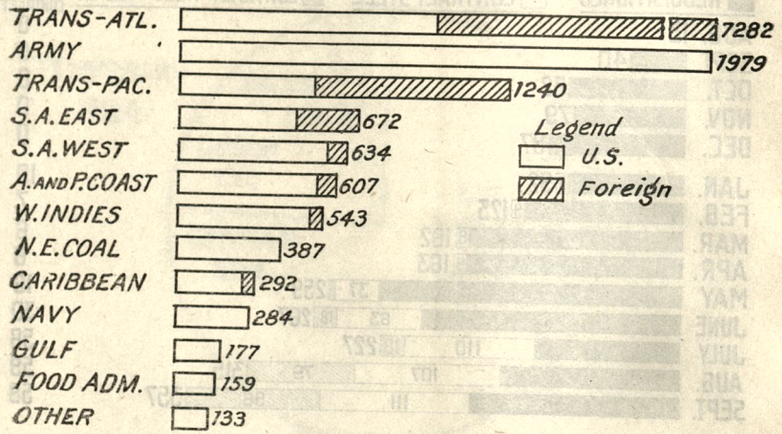
E.F.C. STEEL STEAMERS 4000 DWT AND OVER NOT IN ARMY OCT.1



TOTAL - 654,000 DWT

TDW OF U.S. AND FOREIGN VESSELS-BY SERVICE

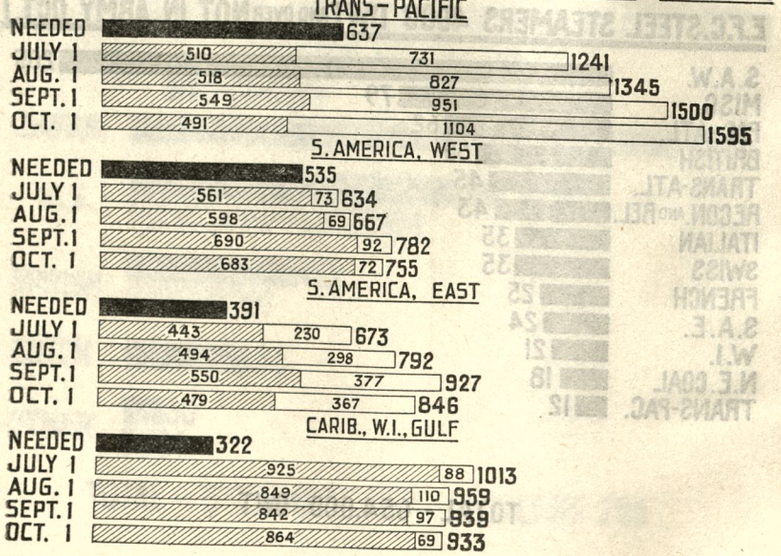
TANKERS EXCLUDED – THOUSANDS OF TONS



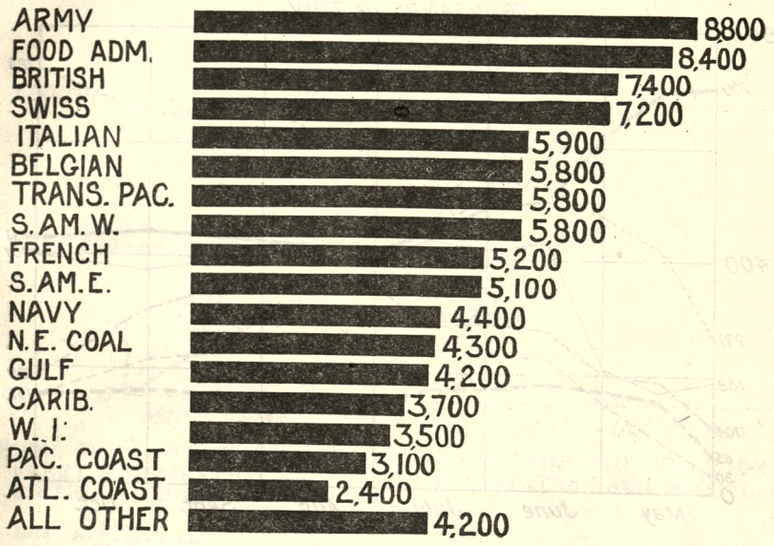
U.S. 6,873 + FOREIGN 7,516 = TOTAL 14,389

TDW OF U.S. AND FOREIGN TONNAGE VS TDW NEEDED

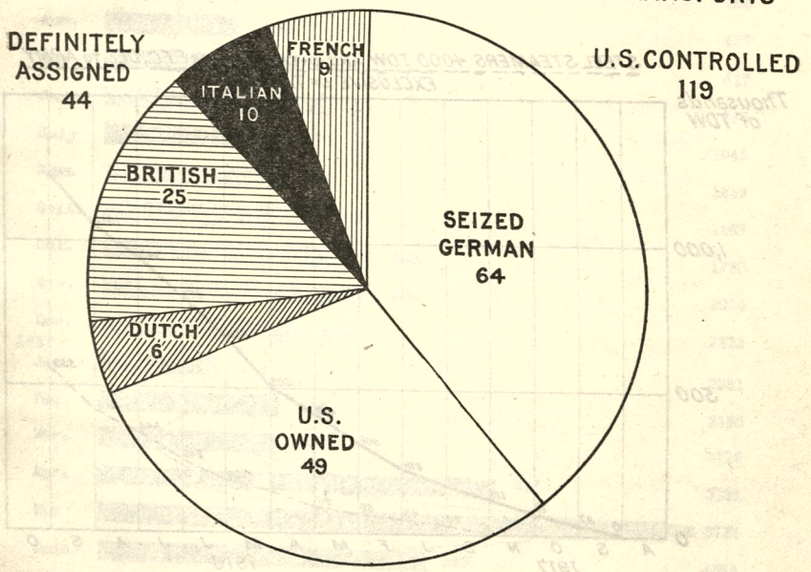
NEEDED FOR ESSENTIAL IMPORTS U.S.S.B. SEPT.1 ■ U.S. ▨ FOREIGN □



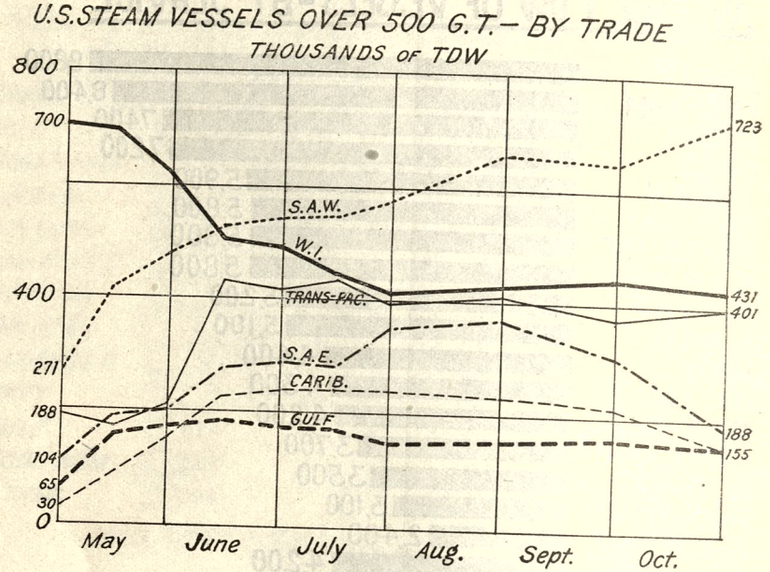
AVERAGE T DW OF VESSELS - BY SERVICE

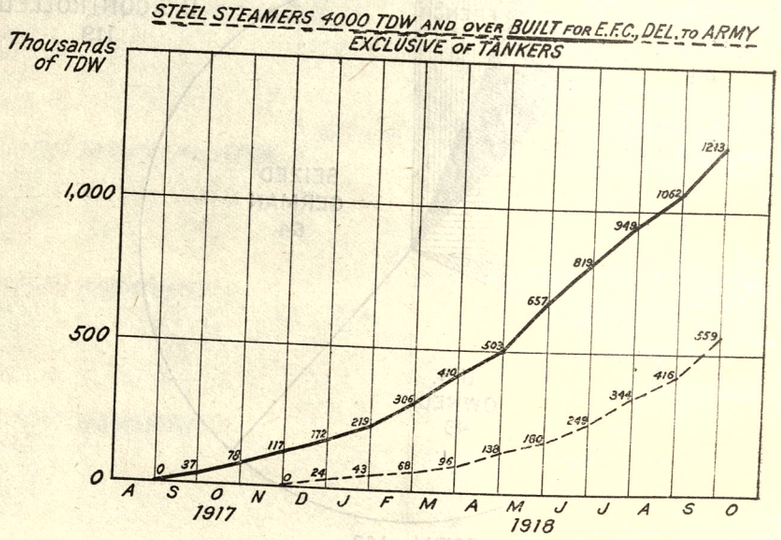


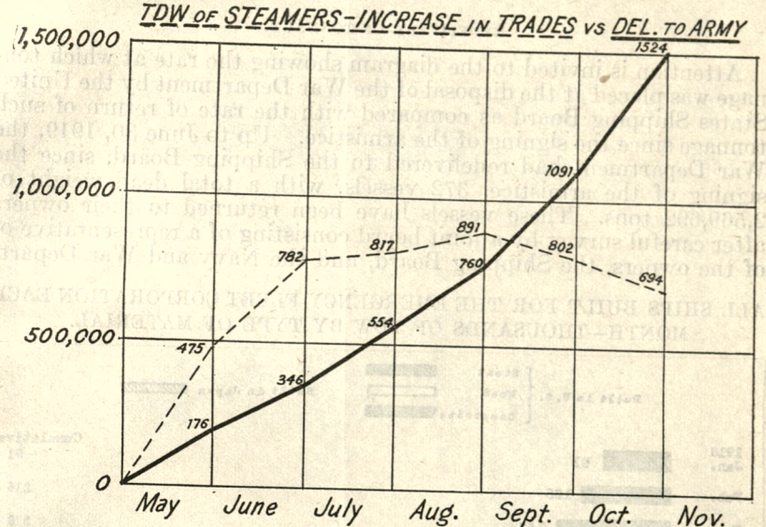
CARRYING CAPACITY PER MONTH OF TROOP TRANSPORTS



TOTAL 163
FIGURES IN THOUSANDS







STEEL SHIPS OTHER THAN TANKERS BUILT FOR THE EMERGENCY FLEET CORPORATION IN THE UNITED STATES EACH MONTH, BY DISTRICT—THOUSANDS OF TDW.

	Atlantic	Pacific	Great Lakes		Cumulative
1918					
Jan.	35			54	54
Feb.	68			99	153
Mar.	84	27		111	264
Apr.	78	51		143	407
May	74	83	53	210	617
June	130	50	49	229	846
July	115	61		197	1043
Aug.	95	26	75	196	1239
Sept.	115	40	73	228	1467
Oct.	136	74	73	283	1750
Nov.	87	82	107	276	2026
Dec.	123	83		206	2232
1919					
Jan	70	41		119	2351
Feb.	95	70		185*	2536
Mar.	55	99	23	180*	2716
Apr.	99	149	167	415	3131
May	235	259	98	592	3723
June	123	172	48	343	4065

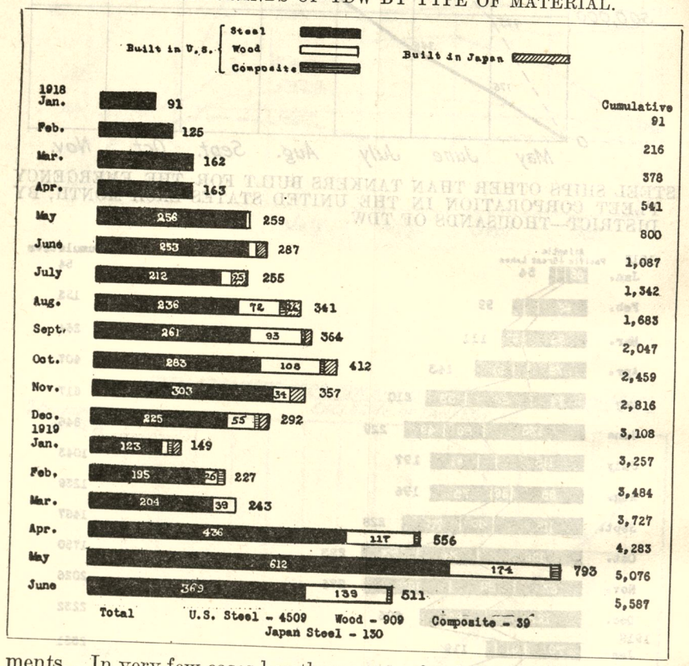
Total Pacific - 1817 Atlantic- 1325 Great Lakes - 916
Gulf - 7

** Includes one ship of 3,500 TDW built on Gulf.

REDELIVERY OF TONNAGE.

Attention is invited to the diagram showing the rate at which tonnage was placed at the disposal of the War Department by the United States Shipping Board as compared with the rate of return of such tonnage since the signing of the armistice. Up to June 30, 1919, the War Department had redelivered to the Shipping Board, since the signing of the armistice, 372 vessels, with a total dead weight of 2,569,692 tons. These vessels have been returned to their owners after careful survey by a joint board consisting of a representative of of the owners, the Shipping Board, and the Navy and War Depart-

ALL SHIPS BUILT FOR THE EMERGENCY FLEET CORPORATION EACH MONTH—THOUSANDS OF TDW BY TYPE OF MATERIAL.

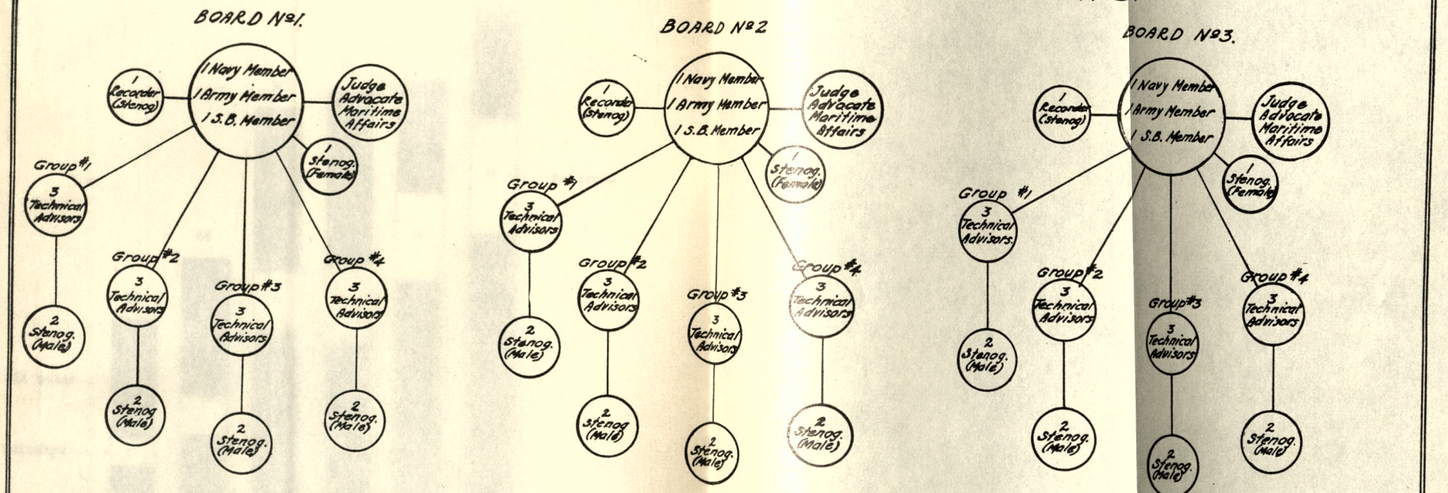


ments. In very few cases has the matter of redelivery been disputed by the owners, the policy of the War Department being to deal fairly with the owners in returning their vessels in as near as possible the same condition as when received, fair wear and tear excepted.

It was early appreciated that it would be impossible to return to their regular trades the large number of transports in the War Department's service within a reasonable time if the department attempted to make the repairs and alterations necessary in reconditioning these vessels. The repair facilities in all ports were insufficient to take care of the large number of ships to be redelivered and great delay would undoubtedly have been caused, with an increasing cost

TRANSPORTATION SERVICE
PORT AND ZONE TRANSPORTATION OFFICE
45 BROADWAY NEW YORK CITY

BOARDS OF SURVEY FOR REDELIVERY OF SHIPS.



Personnel

Members of Board	3
Surveyors	12
Stenographers	10
Total	25

Personnel

Members of Board	3
Surveyors	12
Stenographers	10
Total	25

Personnel

Members of Board	3
Surveyors	12
Stenographers	10
Total	25

Summary

Navy - Officers:			
	Members of Boards	3	
	Technical Advisors	9	12
Shipping Board:			
	Members of Boards	3	
	Technical Advisors	9	
	Stenographers (Female)	3	15
Army Officers:			
	Members of Boards	3	
Civilians:			
	Technical Advisors	18	
	Stenographers:		
	Recorders for Boards (male)	3	
	Stenographers for Technical Advisors (Male)	24	27
Grand Total			48
			75

Approved: July 28th 1919
J. B. Mitchell
J. B. Mitchell
Colonel I.G.D.

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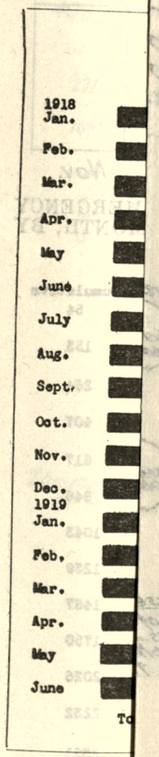

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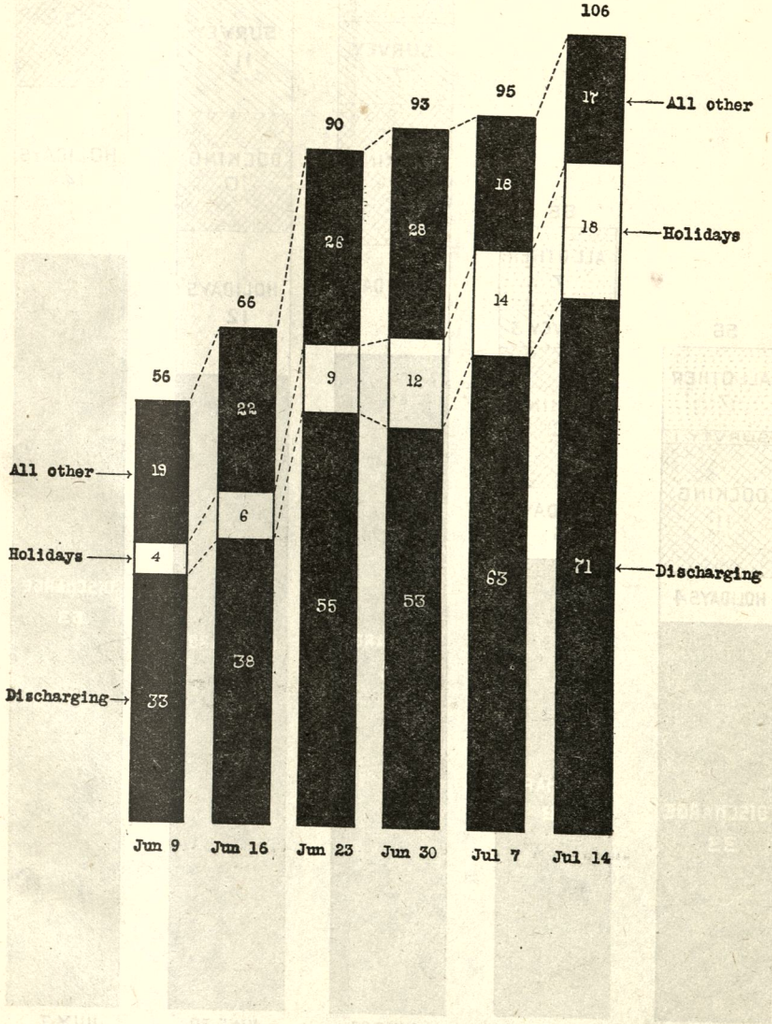
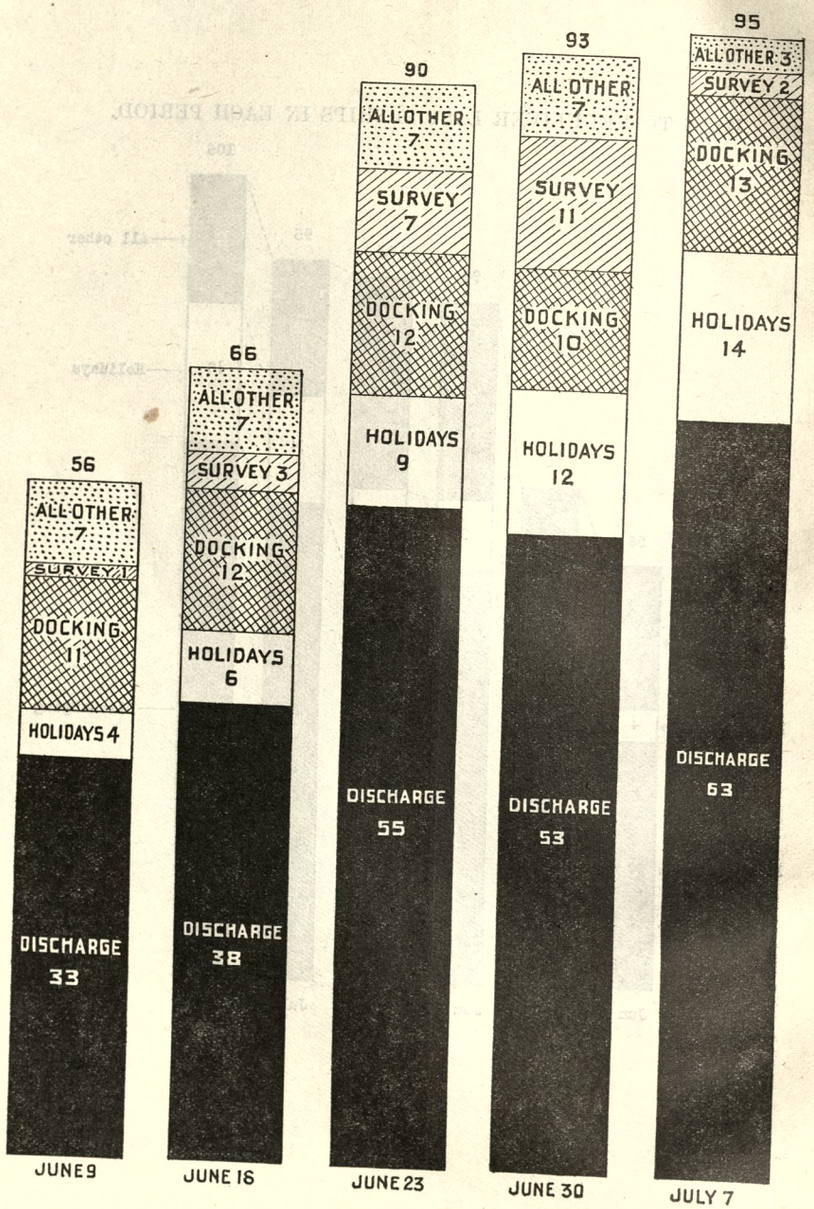
DAYS TO REDELIVER LAST 10 SHIPS IN EACH PERIOD.



DAYS TO REDELIVER LAST 10 SHIPS IN EACH PERIOD.



to the Government for charter hire, if a plan had not been devised of surveying vessels no longer needed in the War Department service by a joint board, above referred to, and reaching an agreement with the owner whereby, in lieu of the War Department actually making repairs, the owner was awarded a lump sum to cover the estimated cost of the repairs and a reasonable allowance for just compensation for the minimum period of time required to make such repairs. This method has resulted in the owner promptly receiving his vessel, making such minor repairs as were necessary to place it in operation at once, and at the same time prevented the congestion of the ports and repair facilities at a time when they were most needed to maintain the operation of the troop transport fleet.

It can safely be stated that this method has resulted in saving the Government hundreds of thousands of dollars. At the same time it is believed that a service has been done the ship owner in permitting him to obtain possession of his vessel at a much earlier date than if the vessel had been retained in the War Department service for the period necessary to make the necessary repairs.

The instructions governing the redelivery of vessels are outlined in detail in Transportation Bulletin No. 39, copy of which appears in the section of this report dealing in detail with the operations of the Water Transportation Division of the Transportation Service.

Days to redeliver last 10 ships—six weekly periods.

	Discharging.	Holidays and Sundays.	Docking.	Survey.	All other	Total.
June 9	33	4	11	1	7	56
June 16	38	6	12	3	7	66
June 23	55	9	12	7	7	90
June 30	53	12	10	11	7	93
July 7	63	14	13	2	3	95
July 14	71	18	13	1	3	106

SHIP OPERATION.

The following comparative tables show the records of performance of the United States and foreign troop transports. For comparison the data has been taken covering the period from March 1, 1918, to August 30, 1918, a period of approximately six months. The British and foreign transports have been computed from the same time or from the beginning of their service. In computing the performance of British transports the records were found to be by no means complete and in many cases the record showed that numerous vessels had made one trip and had never started a second. Only those British vessels which had completed one trip and started on a second trip were considered. Further in the case of the British vessels certain ones which had obviously carried only a few troops as passengers without attempting to fill their entire capacity were not considered.

The final average of troops per 1,000 tons per day arrived at, for example the 7.19 in the case of the United States troop ships for the total tonnage, is only an approximation, as it is based on the average of averages, which does not give correct results. Time has now permitted a computation by the method of harmonic means. The result in each case is probably in error not more than 0.2.

Statistical data re performance of United States troop transports.

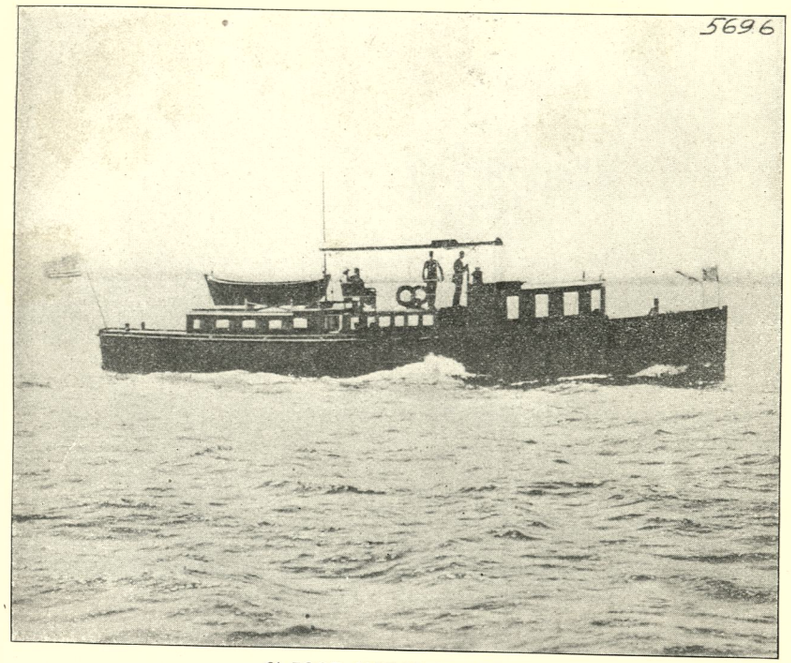
Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
Aeolus	13,102	9,063	3	153	51	59.36	4.53
Agamemnon	19,361	16,044	4	140	35	114.6	5.92
America	22,622	18,427	4	134	33.5	137.51	6.08
Antigone	2,935	6,056	3	145	48.3	41.76	4.26
Calamares	7,782	6,069	4	136	34	44.62	5.72
Covington	17,000	11,505	[1] 2½	82	32.8	140.30	8.25
De Kalb	8,797	3,777	4	145	36.2	21.91	2.48
Finland	12,222	8,947	3	122	40.7	73.33	6.01
George Washington	25,570	21,796	4	141	35.2	154.58	6.03
Great Northern	8,256	17,096	6	144	24	118.72	14.47
Harrisburg	10,232	4,620	2	71	35.5	65.07	6.38
Henderson	7,483	4,119	3	153	51	26.92	3.58
Huron	10,771	5,397	2	72	36	74.95	6.94
Kroonland	12,241	8,124	3	122	40.5	66.59	5.45
Lenape	5,179	4,751	3	112	37.3	42.41	8.31
Leviathan	54,282	48,629	5	152	30.4	319.92	5.89
Louisville	10,230	4,685	2	81	40.5	57.84	5.67
Madawaska	9,410	8,212	4	142	35.5	57.83	6.15
Mallory	6,063	6,349	4	129	32.2	49.21	8.06
Manchuria	13,639	10,302	3	99	33	104.06	7.65
Martha Washington	8,312	11,108	4	145	36.2	76.6	9.23
Matsonia	9,728	8,777	4	153	38.2	57.36	5.91
Mercury	10,984	10,742	4	181	45.2	59.34	5.39
Mongolia	13,639	7,616	2	72	36	105.77	7.77
Mount Vernon	19,502	19,859	5	149	29.8	133.28	6.83
Northern Pacific	8,256	11,902	5	126	25.2	94.46	11.51
Orizaba	7,652	9,244	3	86	28.6	107.48	14.14
Pastores	7,962	4,640	3	104	34.6	44.61	5.57
Plattsburg	10,080	4,433	2	79	39.5	56.11	5.61
Pocahontas	10,893	12,629	5	177	35.4	71.35	6.54
Powhatan	10,531	8,281	4	168	42	49.29	4.69
President Grant	18,172	15,496	3	135	45	114.78	6.30
President Lincoln	18,072	9,380	[1] 1½	62	41.3	151.29	8.35
Princess Matoika	10,981	11,196	3	104	34.6	107.65	9.78
Ryndam	12,527	9,382	3	104	34.6	90.21	7.21
Siboney	7,652	12,770	4	134	33.5	95.29	12.53
Susquehanna	10,058	9,504	4	153	38.2	62.11	6.21
Tenadores	7,782	4,994	4	129	32.2	38.71	4.96
Von Steuben	14,808	6,026	4	142	35.5	42.43	2.86
Wilhelmina	6,975	5,636	3	104	34.6	54.19	7.73
Zeelandia	7,995	3,517	2	80	40	43.96	5.49
	516,639	420,520	141	5,062	1,502.8	3,424.76	282.44
Less Von Steuben, De Kalb, and Henderson	485,551	407,198	130	4,622	1,380.1	3,333.5	273.52
General average	12,777	10,715	3.4	122	36.3	87.72	7.19

[1] Torpedoed on return passage.

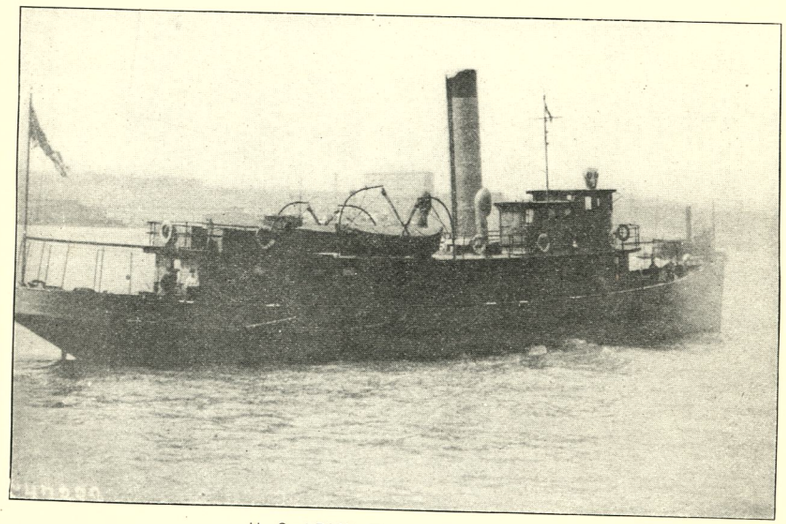
British ships transporting troops.

Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
Adriatic	24,541	6,795	3	120	40	56.62	2.31
Agapenor	7,565	1,438	1	44	44	32.68	4.30
Ajax	7,040	1,006	1	46	46	21.86	3.12
Anchises	10,046	5,913	3	121	40.3	48.86	4.88
Anselm	5,450	2,263	2	85	42.5	26.62	4.93
Aquitania	45,647	18,302	3	94	31.3	194.70	4.27
Armagh	9,220	4,068	2	81	40.5	50.22	5.45
Ascanius	10,048	2,075	1	71	71	29.22	2.92
Baltic	23,876	11,465	4	169	42.2	67.84	2.83
Beltana	11,120	1,976	1	69	69	28.64	2.58
Bohemian	8,555	4,163	2	98	49	42.48	4.99
Briton	10,248	3,774	2	88	44	42.88	4.20
Canada	9,415	4,579	3	121	40.3	37.84	4.02
Canopic	12,097	3,029	2	96	48	31.55	2.60
Carmania	19,524	12,238	4	156	39	78.44	4.02
Cardiganshire	9,426	1,664	1	40	40	41.60	4.42
Caronia	19,687	8,735	2	80	40	109.18	5.53

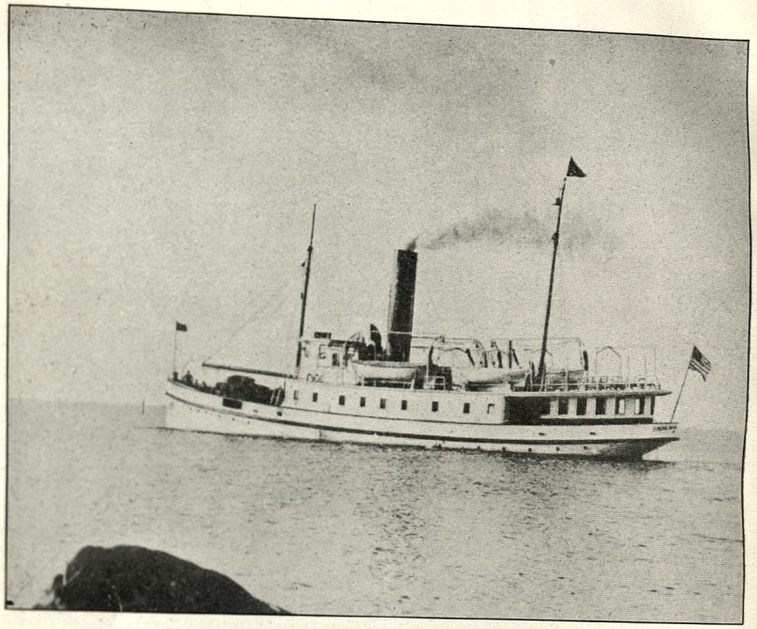
5696



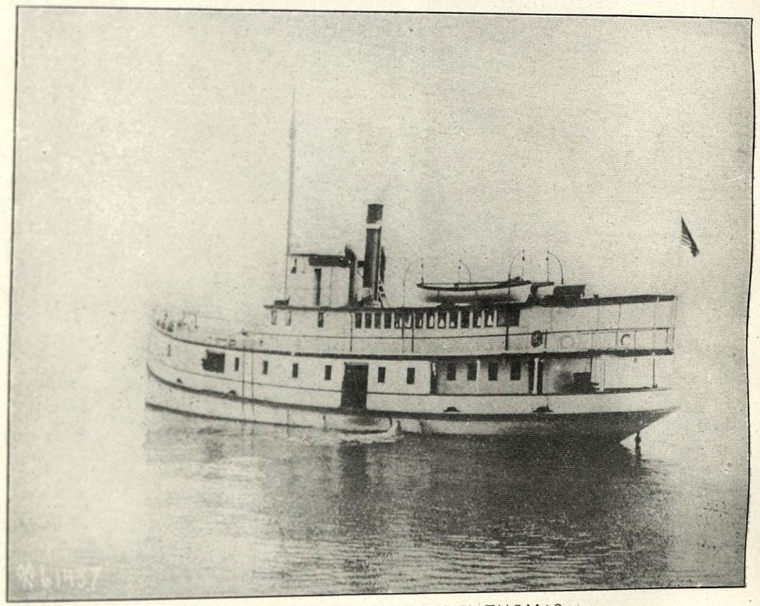
61-FOOT MOTOR LAUNCH.



U. S. ARMY TUG LEXINGTON.



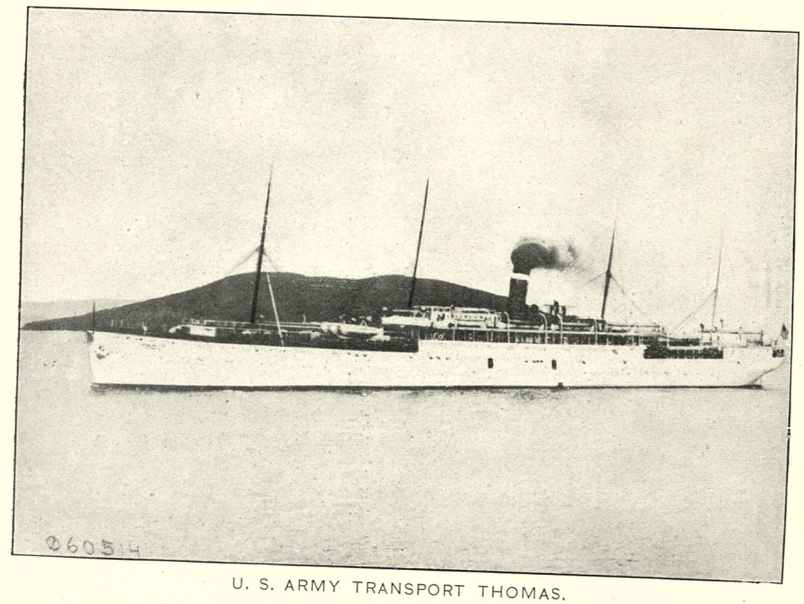
HARBOR BOAT GENERAL NATHANIEL GREEN.



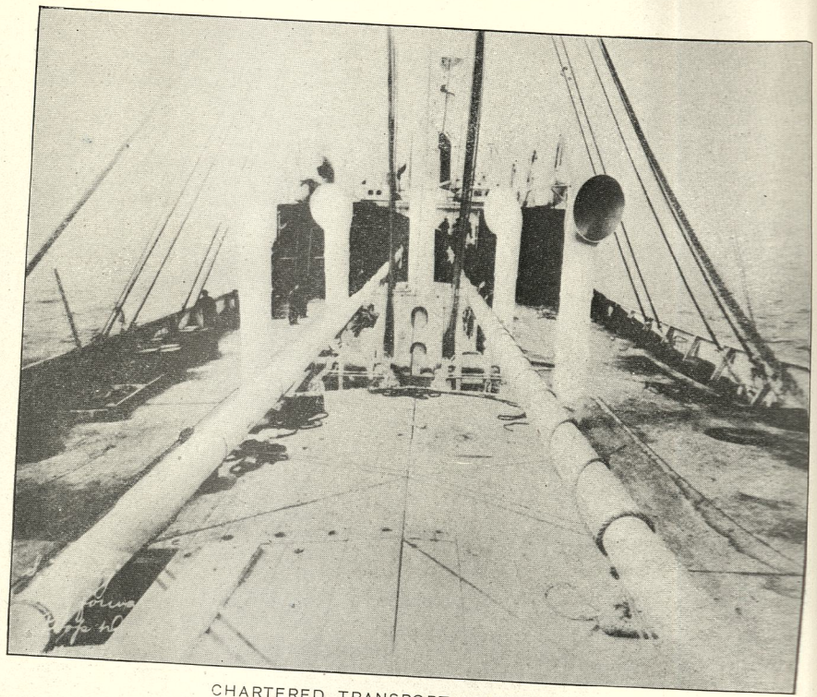
HARBOR BOAT MAJOR EVAN THOMAS.



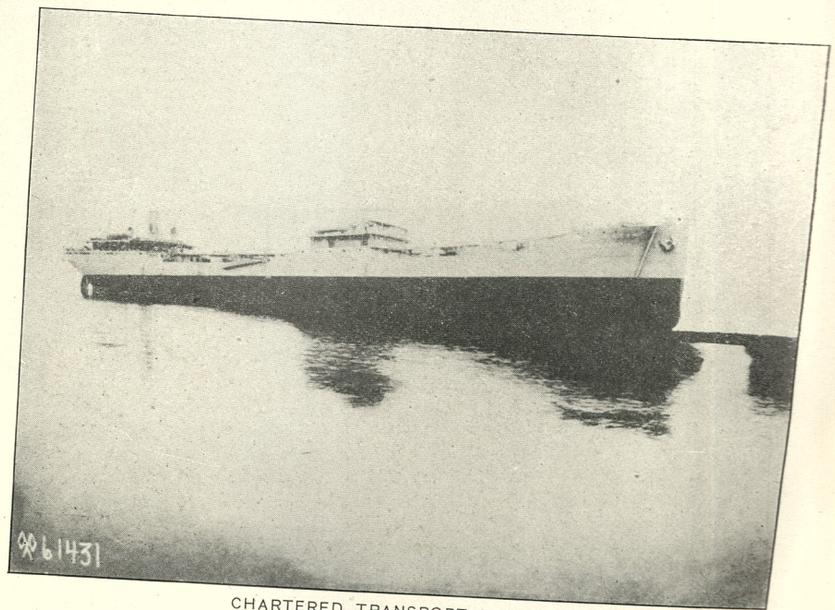
HARBOR BOAT HENRY WILSON.



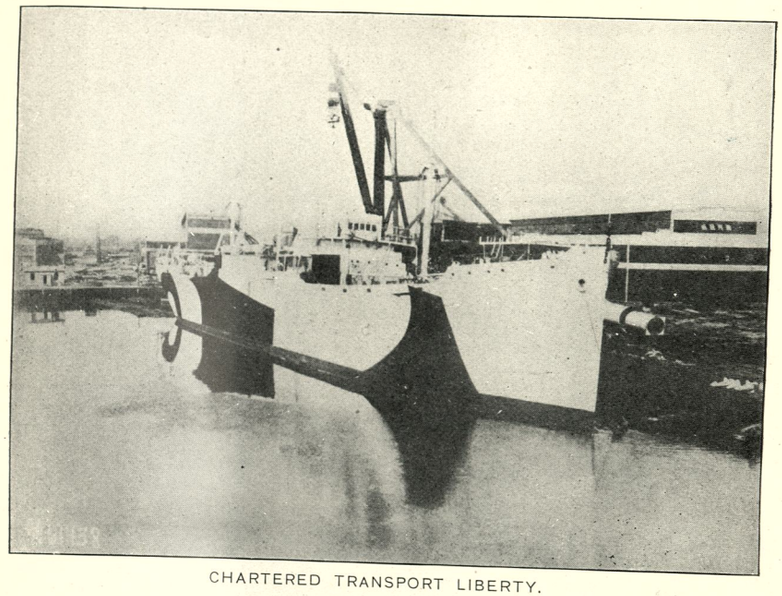
U. S. ARMY TRANSPORT THOMAS.



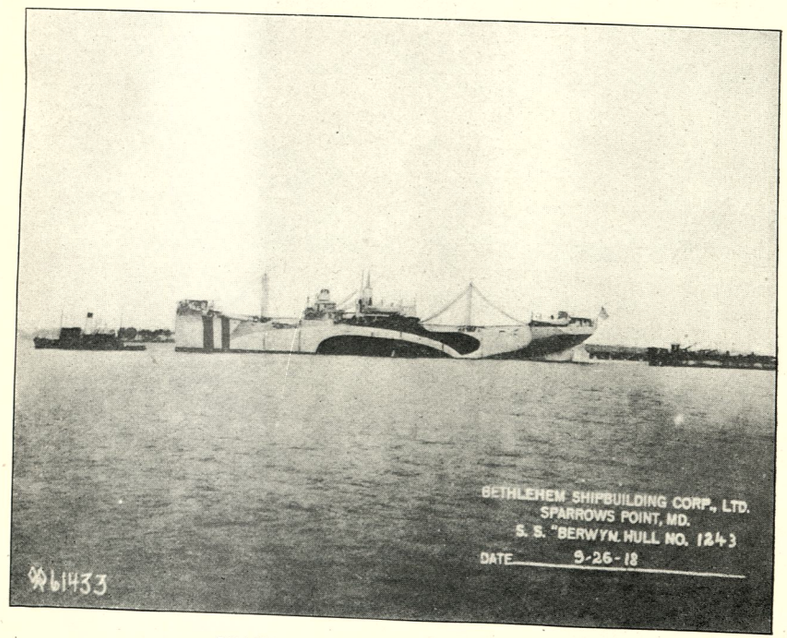
CHARTERED TRANSPORT LIBERTY.



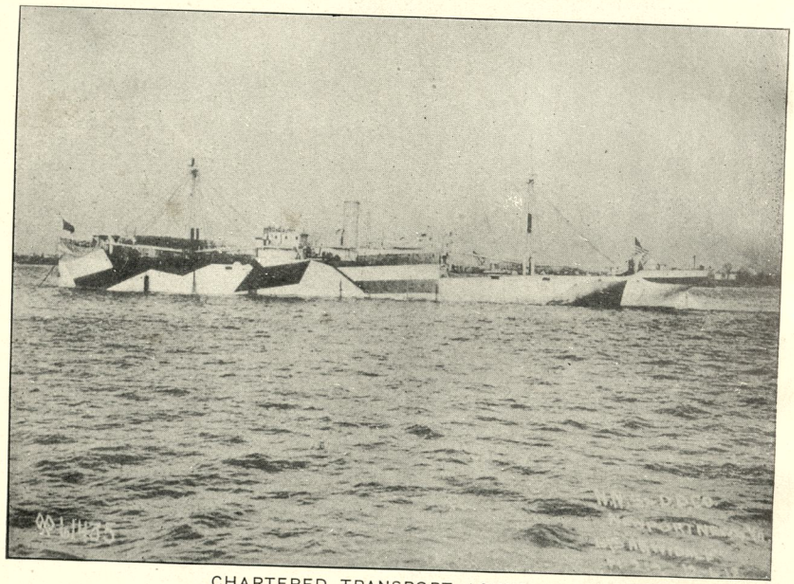
CHARTERED TRANSPORT HAVEN.



CHARTERED TRANSPORT LIBERTY.
Camouflaged.



CHARTERED TRANSPORT BERWYN.
Camouflaged.



CHARTERED TRANSPORT AGWIDALE.
Camouflaged.

160-6

British ships transporting troops—Continued.

Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
Carpathia	13,603	7,374	[1] 2½	123	49.2	59.92	4.40
Cedric	21,040	8,091	3	122	40.6	66.32	3.11
Ceramic	18,481	2,957	1	48	48	61.60	3.33
City of Exeter	9,373	2,714	2	89	44.5	30.49	3.24
City of Glasgow	6,545	918	1	48	48	19.10	2.93
City of Poona	7,474	1,199	1	42	42	28.54	3.80
City of Calcutta	7,636	1,349	1	56	56	24.09	3.17
Corinthic	12,343	599	1	72	72	8.32	.67
Corsican	11,419	4,866	3	124	41.3	39.24	3.44
Cretic	13,518	6,248	3	124	41.3	50.38	3.73
Demosthenes	11,223	3,459	2	110	55	31.44	2.80
Derbyshire	6,776	1,209	1	45	45	26.86	3.96
Elpenor	7,901	2,515	2	81	40.5	31.05	3.93
Grampian	10,955	4,483	2	81	40.5	55.34	5.03
Haverford	11,635	2,072	1	64	64	32.37	2.79
Hororata	11,243	2,115	1	46	46	45.98	4.10
Justicia	32,120	14,120	[1] 2½	104	41.6	135.76	4.23
Karmala	8,983	4,239	2	80	40	52.98	5.88
Karoa	7,009	4,739	3	125	41.6	37.91	5.41
Kashmir	8,841	6,401	3	122	40.6	52.46	5.96
Khiva	8,947	1,623	1	48	48	33.81	3.79
Khyber	8,946	4,243	2	80	40	53.03	5.96
Kursk	9,854	4,077	3	129	43	31.60	3.22
Laomedon	6,693	2,451	2	91	45.5	26.93	4.02
Lapland	11,565	6,049	3	124	41.3	48.78	2.63
Leicestershire	8,059	3,876	2	100	50	38.76	4.84
Margha	6,260	954	1	59	59	16.23	1.95
Mauretania	30,704	23,907	5	156	31.2	153.25	4.99
Megantic	14,878	5,578	3	124	41.3	44.98	3.01
Melita	15,000	4,651	2	65	32.5	71.55	4.77
Mentor	7,585	2,790	2	81	40.5	34.44	4.53
Mesaba	6,833	2,331	1	49	49	47.57	6.99
Metagama	12,420	4,242	2	81	40.5	52.37	4.22
Miltiades	7,814	1,532	1	60	60	25.53	3.27
Minnekahda	13,100	3,819	1	47	47	81.25	6.20
Missanabie	12,469	4,134	2	105	52.5	39.37	3.15
Nankin	6,853	1,445	1	59	57	24.49	3.60
Nestor	14,501	5,611	2	81	40.5	69.27	4.77
Northland	11,905	1,450	1	56	56	25.89	2.17
Northumberland	12,160	1,942	1	72	72	26.97	2.22
Olympic	46,359	17,558	3	100	33.3	175.58	3.78
Orduna	15,499	3,857	3	137	45.6	28.15	1.81
Port Lincoln	7,243	1,232	1	51	51	24.15	3.35
Port Melbourne	9,152	1,618	1	56	56	28.59	3.17
Pyrrhus	7,603	1,329	1	40	40	33.22	4.37
Rhesus	6,704	2,468	2	101	50.5	24.43	3.64
Saturnia	8,611	2,181	1	53	53	41.15	4.77
Saxon	12,385	4,282	2	89	44.5	48.11	3.87
Saxonia	14,297	2,460	1	56	56	43.92	3.07
Scandinavian	12,099	3,717	2	91	45.5	40.84	3.37
Scotian	10,322	5,285	3	161	53.6	32.82	3.18
Shropshire	12,184	1,103	1	57	57	19.35	1.58
Talphybius	10,224	1,288	1	43	43	29.95	2.93
Tennyson	3,944	756	1	61	61	12.39	3.17
Themistocles	11,231	1,848	1	65	65	28.43	2.53
Tunisian	10,576	1,697	1	45	45	37.71	3.55
Vestris	10,494	1,420	1	67	67	21.19	2.01
Winifredian	10,422	2,223	1	57	57	39	3.75
Toloa	7,445	2,390	2	87	43.5	27.47	3.71
Tsar	6,516	1,304	1	60	60	21.73	3.34
Tsarita	6,597	4,103	3	128	42.6	32.05	4.85
Ulua	7,451	1,072	1	66	66	16.24	2.19
Vauban	10,660	2,875	2	117	58.5	24.57	2.31
Total	962,841	329,326	149	6,668	3,776.2	3,602.57	297.20
Average	12,187.8	4,168.6	1.8	84.4	47.8	45.60	3.76

[1] Torpedoed on return passage.

Italian ships routed in United States convoys.

Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
America	8,996	7,195	3	96	32	74.94	8.32
Caserta	6,938	5,325	3	112	37.3	47.54	6.88
Dante Alighieri	9,737	6,659	3	104	34.6	64.02	6.60
Duca d'Abruzzi	8,294	3,888	2	80	40	48.60	5.85
Duca d'Aosta	8,169	6,154	3	113	37.6	54.46	6.64
Re d'Italia	6,878	4,802	3	112	37.3	42.87	6.49
Regina d'Italia	6,239	1,696	1	43	43	39.44	6.36
Total	54,951	35,719	18	660	261.8	371.87	47.14
Average	7,850	5,102.7	2.5	94.2	37.4	53.12	6.73

French ships routed in United States convoys.

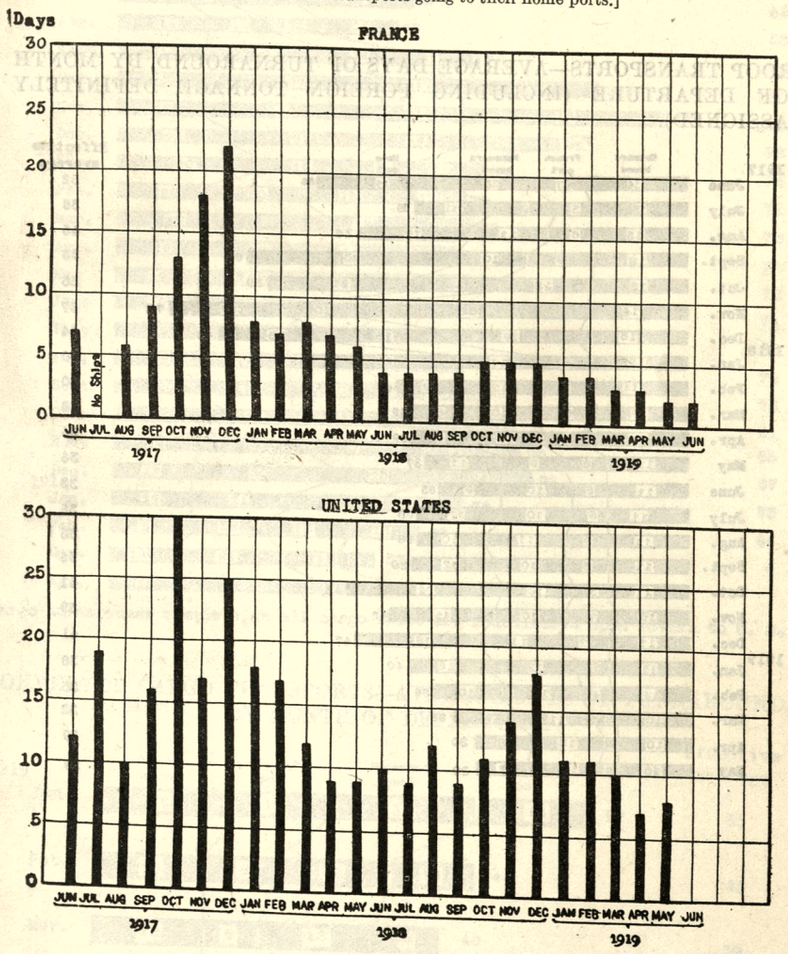
Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
La France	24,800	4,529	1	47	47	96.36	3.88
Lutetia	14,581	1,970	1	43	43	45.81	3.13
Patria	11,850	2,095	1	52	52	40.28	3.41
Total	51,231	8,594	3	142	142	182.45	10.42
Average	17,077	2,864.6	1	47.3	47.3	60.81	3.47

Foreign ships sailing in United States convoys.

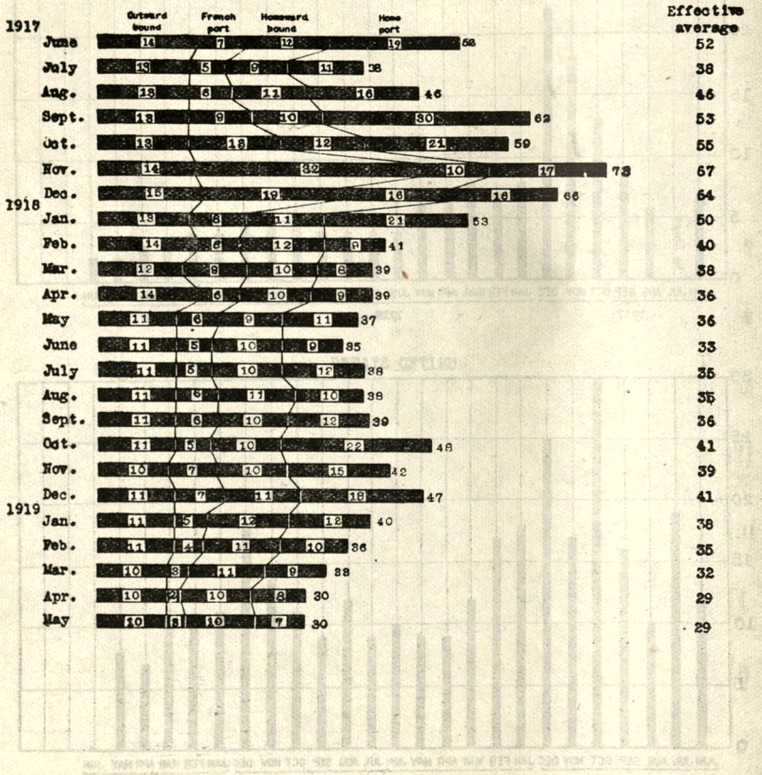
Transport.	Gross tons.	Troops carried.	Trips.	Days.	Average cycle (days).	Troops per total tonnage per day.	Troops per 1,000 tons per day.
America, Italian	8,996	7,195	3	96	32	74.94	8.32
Caserta, Italian	6,938	5,325	3	112	37.3	47.54	6.88
Dante Alighieri, Italian	9,737	6,659	3	104	34.3	64.02	6.6
Duca d'Abruzzi, Italian	8,294	3,888	2	80	40	48.60	5.85
Duca d'Aosta, Italian	8,169	6,154	3	113	37.6	54.46	6.64
Kursk, British	9,854	4,077	3	129	43	31.60	3.22
La France, French	24,800	4,529	1	47	47	96.36	3.88
Lutetia, French	14,581	1,970	1	43	43	45.81	3.13
Patria, French	11,850	2,095	1	52	52	40.28	3.41
Re d'Italia, Italian	6,578	4,802	3	112	37.3	42.87	6.49
Regina d'Italia, Italian	6,239	1,696	1	43	43	39.44	6.36
Toloa, British	7,445	2,390	2	87	43.5	27.47	3.71
Tsar, British	6,516	1,304	1	60	60	21.73	3.34
Tsarita, British	6,597	4,103	3	128	42.6	32.05	4.85
Ulua, British	7,451	1,072	1	66	66	16.24	2.19
Vauban, British	10,660	2,875	2	117	58.5	24.57	2.31
Total	154,705	60,134	36	1,389	717.1	707.98	77.18
Average	9,669	3,758.3	2.2	86.8	44.8	44.24	4.82

TROOP TRANSPORTS—AVERAGE DAYS SPENT IN PORT, BY MONTH OF ARRIVAL.

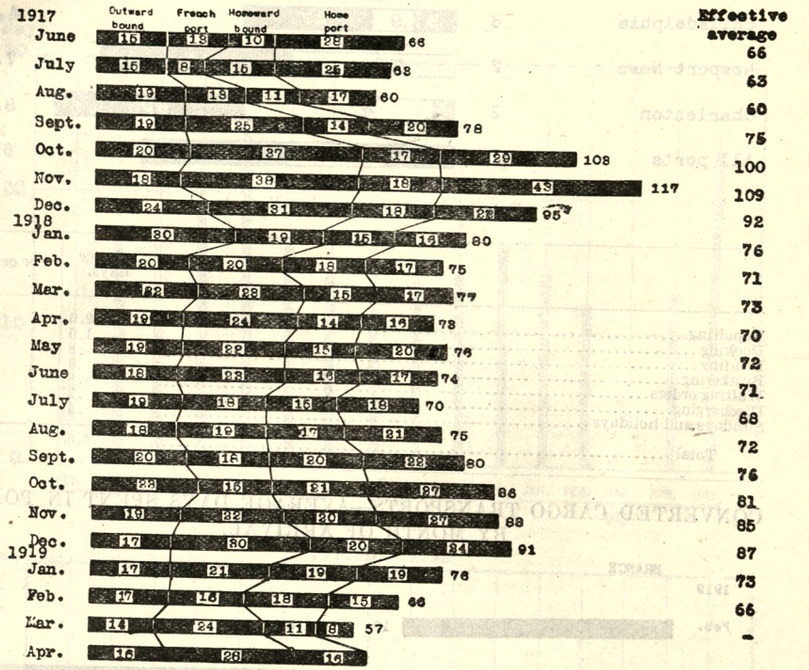
[Exclusive of British transports going to their home ports.]



TROOP TRANSPORTS—AVERAGE DAYS OF TURNAROUND, BY MONTH OF DEPARTURE (INCLUDING FOREIGN TONNAGE DEFINITELY ASSIGNED).

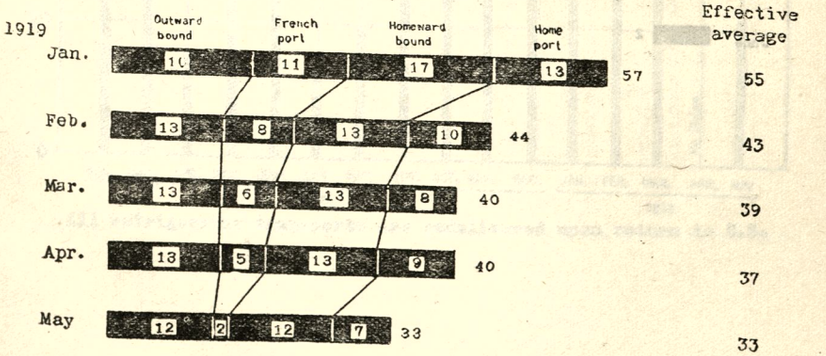


CARGO TRANSPORTS—AVERAGE DAYS OF TURNAROUND, BY MONTH OF DEPARTURE (EXCLUDES ANIMAL AND REGRIGERATOR TRANSPORTS AND TANKERS).

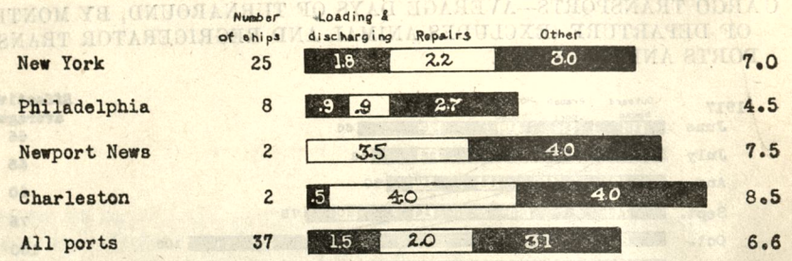


Cargo turnarounds complete, as all cargo ships are redelivered upon return to U. S.

CONVERTED CARGO TRANSPORTS—AVERAGE DAYS OF TURNAROUND, BY MONTH OF DEPARTURE.



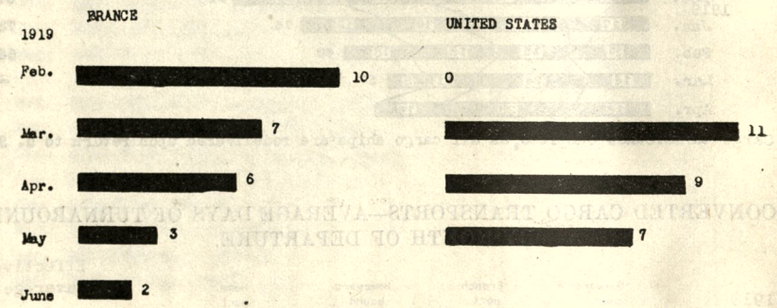
CONVERTED CARGO TRANSPORTS—AVERAGE DAYS SPENT IN HOME PORTS BY SHIPS ARRIVING IN MAY, 1919, BY PORT.



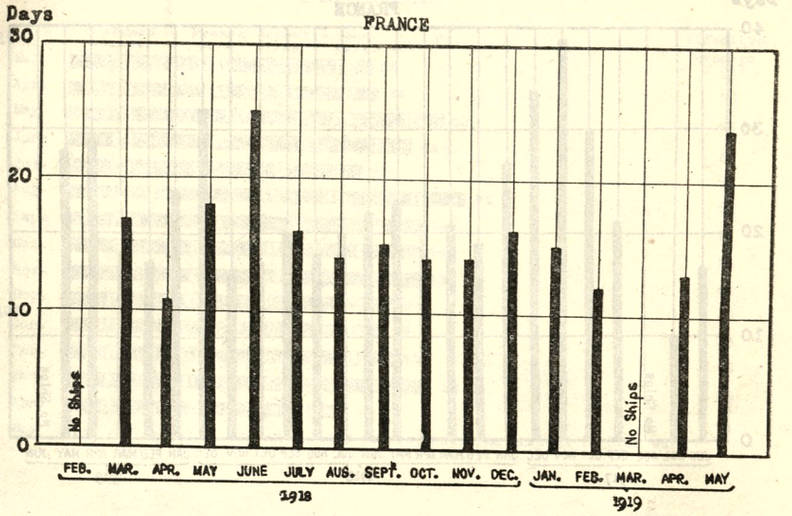
Detail of average stays in all ports.

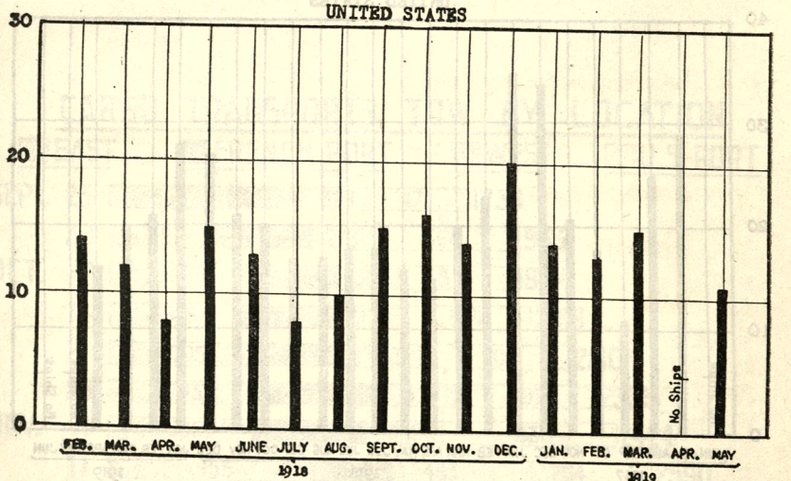
	Average days.	Per cent.
Repairing	2.0	30
Docking	1.0	15
Loading	.8	12
Bunkering	.8	12
Waiting orders	.8	12
Discharging	.7	11
Sundays and holidays	.5	8
Total	6.6	100

CONVERTED CARGO TRANSPORTS—AVERAGE DAYS SPENT IN PORT BY MONTH OF ARRIVAL.



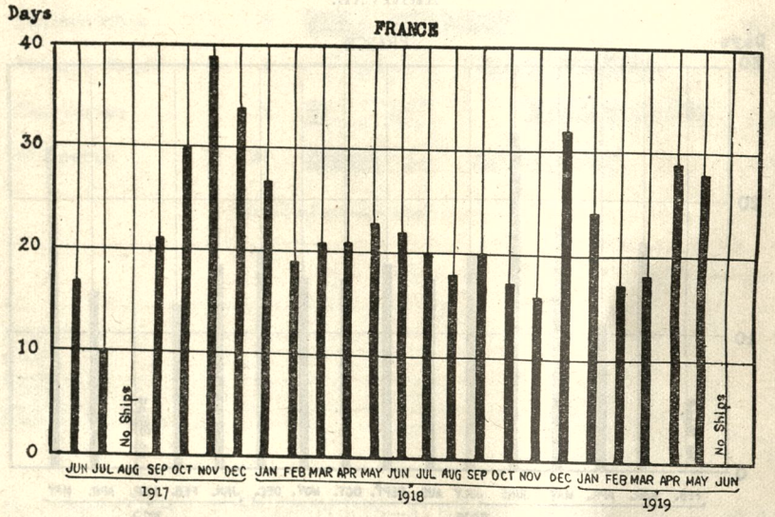
REFRIGERATORS—AVERAGE DAYS SPENT IN PORT, BY MONTH OF ARRIVAL.

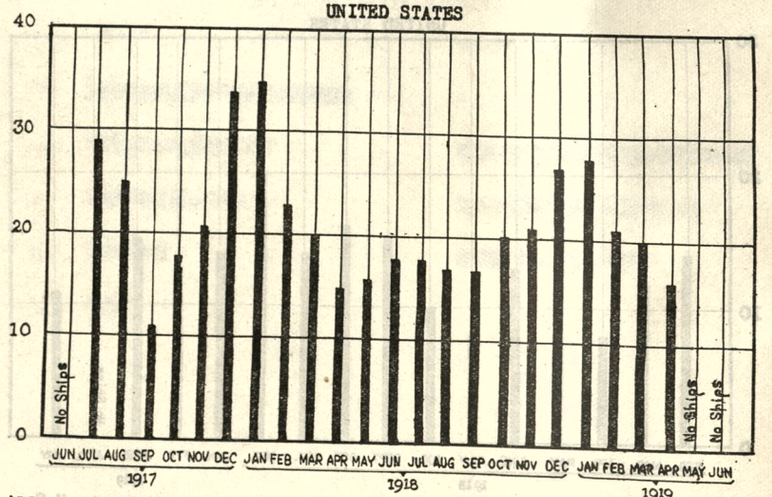




All refrigerator transports are redelivered upon return to U.S.

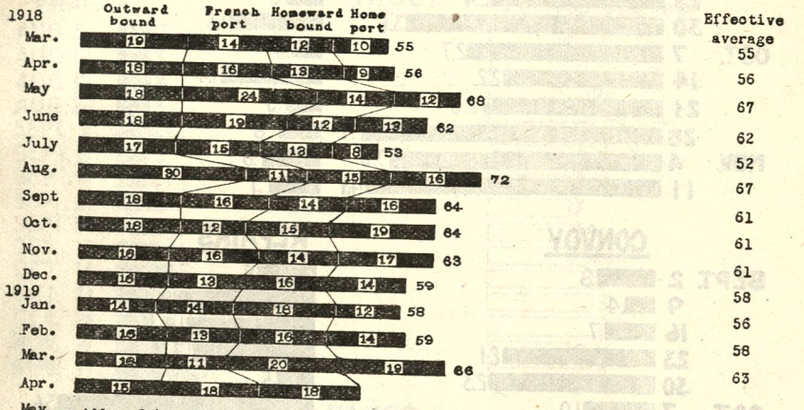
CARGO TRANSPORTS—AVERAGE DAYS SPENT IN PORT, BY MONTH OF ARRIVAL.



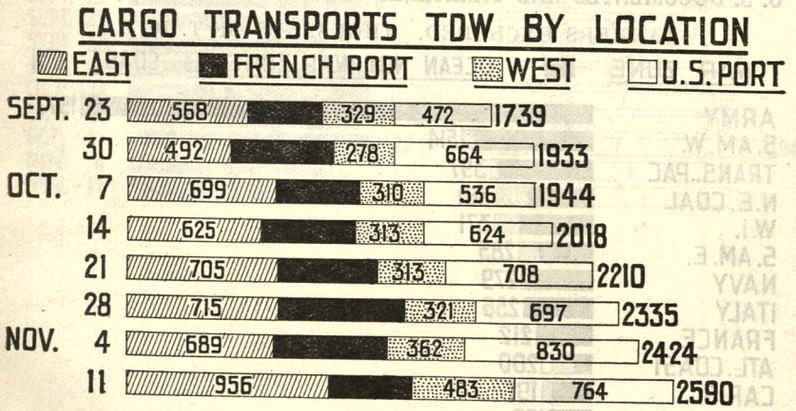


All cargo ships are authorized for release upon arrival in U.S. port.

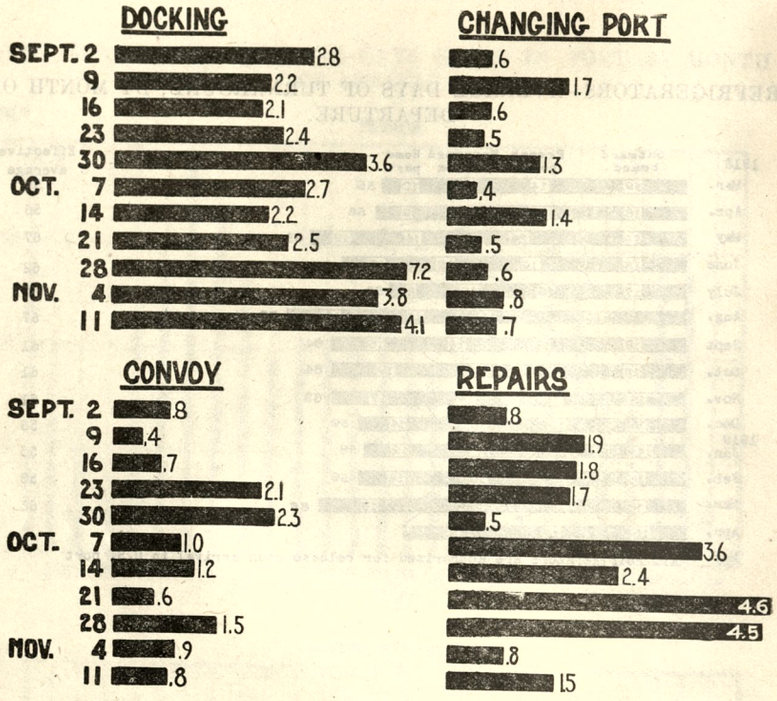
REFRIGERATORS—AVERAGE DAYS OF TURNAROUND, BY MONTH OF DEPARTURE.



All refrigerators are authorized for release upon arrival in U.S. port

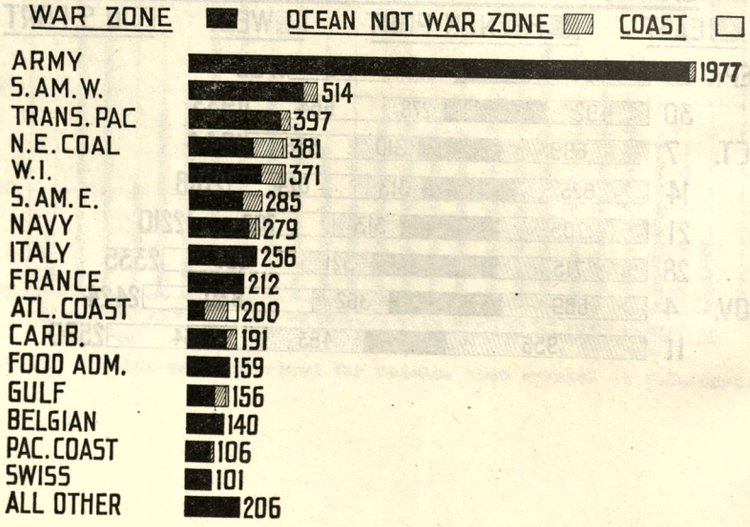


CARGO TRANSPORTS IN U. S. PORTS.

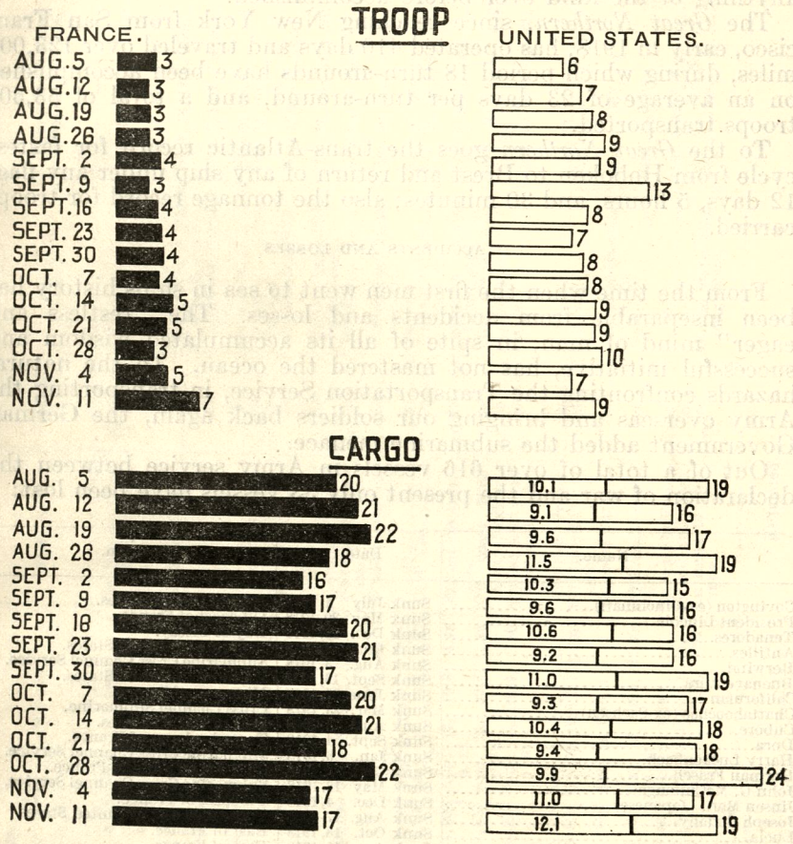


U. S. DOCUMENTED AND CHARTERED STEAM VESSELS OVER 1,600 G. T.

TANKERS EXCLUDED. THOUSANDS OF T. D. W.



STAYS IN PORT — FRANCE AND U.S.



RECORD OF THE U. S. A. T. "GREAT NORTHERN."

The operating record of this transport reflects the greatest credit upon the personnel assigned to this vessel. By untiring efforts and efficiency on the part of the master and crew of the *Great Northern* a record in ocean transportation has been established far beyond anything of the kind ever before accomplished.

The *Great Northern*, since reaching New York from San Francisco, early in 1918, has operated 410 days and traveled over 123,000 miles, during which period 18 turn-arounds have been accomplished on an average of 23 days per turn-around, and a total of 53,509 troops transported.

To the *Great Northern* goes the trans-Atlantic record for fastest cycle from Hoboken to Brest and return of any ship under any flag: 12 days, 5 hours, and 30 minutes; also the tonnage record for troops carried.

ACCIDENTS AND LOSSES

From the time when the first men went to sea in ships history has been inseparable from accidents and losses. The "restless and eager" mind of man, in spite of all its accumulated wisdom and successful initiative, has not mastered the ocean. To the natural hazards confronting the Transportation Service, in transporting the Army overseas and bringing our soldiers back again, the German Government added the submarine menace.

Out of a total of over 616 vessels in Army service between the declaration of war and the present only 33 vessels have been lost:

Name.	Date.	Position.
Covington (ex-Cincinnati)	Sunk July 1, 1918	East of United States.
President Lincoln	Sunk May 30, 1918	Off coast of France.
Tenadores	Sunk Dec. 28, 1918	Bay of Biscay.
Antilles	Sunk Oct. 17, 1917	En route to United States.
Berwind	Sunk Aug. 3, 1918	Submarine Cross Channel Service.
Buenaventura	Sunk Sept. 16, 1918	En route to United States.
Californian	Sunk June 22, 1918	Mine east of France.
Chattahoochee (ex-Sachsen)	Sunk Mar. 23, 1918	Cross Channel Submarine.
Cubore	Sunk Aug. 15, 1918	East of United States.
Dora	Sunk Sept. 4, 1918	Torpedoed east of France.
Harry Luckenbach	Sunk Jan. 6, 1918	Submarine Cross Channel Service.
Herman Frasch	Sunk Oct. 4, 1918	Collision en route to France.
John G. McCullough	Sunk May 18, 1918	Submarine Cross Channel Service.
Jinsen Maru (Japanese)	Sunk Dec. 4, 1918	Off coast of France.
Joseph Cudahy	Sunk Aug. 17, 1918	Torpedoed east of United States.
Lucia	Sunk Oct. 18, 1918	East of France.
Montanan	Sunk Aug. 15, 1918	East of France.
Neches	Sunk May 14, 1918	Collision en route to New York.
Oosterdijk	Sunk July 10, 1918	Collision with San Jacinto.
Piave	Sunk Feb. 4, 1919	Off English coast.
Saetia	Sunk Nov. 9, 1918	Off coast of United States.
Ticonderoga (ex-Camilla Rickmers)	Sunk Sept. 30, 1918	Off coast of France.
Tippecanoe (ex-Holsalia)	Sunk July 25, 1918	Submarine, France.
West Gate	Sunk Oct. 7, 1918	Collision en route to France.
Westover	Sunk July 11, 1918	Submarine east of Frauce.
Zaanland	Sunk May 13, 1918	East of France.
Lake Borgne	Sunk Oct. 12, 1918	Cross Channel Service.
Lake Edon	Sunk Aug. 21, 1918	Cross Channel Service.
Lake Owens	Sunk Sept. 3, 1918	Torpedoed, Cross Channel Service.
Lake Portage	Sunk Aug. 3, 1918	East of France.
Lake Weston	Sunk Jan. 13, 1919	Near Barry Roads.
Crimdon	Sunk July 29, 1918	En route to United States.
Helge	Sunk Aug. 26, 1918	En route Cherbourg to Brest.

Many vessels have experienced accident but the injuries, in the overwhelming majority, have been reparable.

Vessels sunk or lost while in service of the War Department.

Name.	Built.	Class.	Tonnage. Gross.	Tonnage. D. W.	Date sunk.	Place sunk.	Cause.	Owners.	Date entered Army Transport Service.	Value of ship.	Value of cargo.
A. A. Raven	1912	Cargo	3,406	5,300	Mar. 14, 1918, 10.45 p. m.	Wolf Rock Light, Land's End.	Torpedoed	American Transport Co.	Nov. 28, 1917, 10 a. m.	$1,107,868.49	$40,503.00
Antilles	1907	Troop	6,879	4,350	Oct. 17, 1917, 6.45 a. m.	Bay of Biscay	do	Southern Pacific S. S. Co.	May 26, 1917, 7 a. m.	1,891,450.00	No cargo.
Berwind	1893	Cargo	2,589	3,400	Aug. 3, 1918, 1 p. m.	Off Penmarch	do	New York & Porto Rico S. S. Co.	Sept. 18, 1917, noon	525,000.00	24,114.48
Buenaventura	1913	do	4,876	8,200	Sept. 16, 1918, 8.53 p. m.	Off Corruna, Spain	do	U. S. Steel Products Co.	Oct. 2, 1917, 7 a. m.	2,000,000.00	No cargo.
Chattahoochee	1911	do	8,007	12,320	Mar. 23, 1918, 10 p. m.	Off Penzance	do	Interned	Feb. 23, 1918	700,000.00	1,008,618.20
Covington	1908	Troop	16,339	12,357	July 1, 1918	En route America	do	do	Oct. 13, 1917	1,200,000.00	180,000.00
Cubore	1878	Cargo	1,599	2,300	July 29, 1918	English Channel	do	Swedish		382,375.00	16,256.71
	1917	do	7,117	11,668	Aug. 15, 1918, 10.30 p. m.	En route to America	do	Ore Steamship Co	June 10, 1918, noon	2,350,000.00	68.00
Dora	1913	do	7,037	10,575	Sept. 4, 1918, 5.55 a. m.	400 miles off French Coast.	do	United States Shipping Board.	May 27, 1918, 10 a. m.	1,765,981.27	1,732,155.13
Dwinsk	[1]1897	Troop	8,173	10,000	June 18, 1918	En route to America	do	Russian	No date in files	600,000.00	80,000.00
Harry Luckenbach	1881	Cargo	2,798	4,311	Jan. 6, 1918, 12.15 a. m.	English Channel	do	Luckenbach Steamship Co.	Nov. 30, 1917, 10 a. m.	602,370.00	23,156.84
Helge	1877	do	1,133	1,680	Aug. 26, 1918	do	do	Swedish			
John G. McCullough	1890	do	1,985	2,800	May 18, 1918, 4.57 a. m.	Ile d' Yeu	do	United States Steamship Co.	July 22, 1918, 10 a. m.	278,300.00	37,500.00
Jos. Cudahy	1917	do	3,302	4,992	Aug. 17, 1918, 4.45 a. m.	En route to America	do	American	Apr. 20, 1918, 9 a. m.	407,495.89	287,108.24
Lake Edon	1918	do	2,371	3,530	Aug. 21, 1918, 1.19 p. m.	Off coast New Quay, England	do	Italian Commercial Co.	Oct. 3, 1917, noon	1,008,000.00	No cargo.
Lake Owens	1918	do	2,308	3,270	Sept. 3, 1918, 2.10 a. m.	4 miles west coast Cornwall, England	do	United States Shipping Board.	May 20, 1918, 4.30 p. m.	794,378.65	29,691.30
								do	May 11, 1918, 1 p. m.	687,779.53	119,815.44
Lake Portage	1918	do	1,998	2,899	Aug. 3, 1918, 2 p. m.	Off Brest, France	do	do	June 13, 1918, 7 a. m.	698,288.84	300,000.00
Lucia	1912	do	6,744	8,600	Oct. 18, 1918, 3.30 p. m.	Off United States coast.	do	Interned	Feb. 16, 1918, noon	2,008,320.45	3,022,506.99
Montanan	1913	do	6,660	9,865	Aug. 15, 1918, 6 p. m.	En route Europe	do	American-Hawaiian S. S. Co.	June 1, 1917, 7 a. m.	1,960,000.00	4,138,401.80
President Lincoln	1907	Troop	18,168	19,810	May 30, 1918, 11.40 a. m.	Off French coast	do	Interned	Sept. 27, 1917	2,000,000.00	65,900.00
Ticonderoga	1914	Cargo	5,130	7,500	Sept. 30, 1918	En route to France	do	do	Dec. 4, 1917, 2 p. m.	450,000.00	618,905.89
Tippecanoe	1914	do	6,187	9,000	July 25, 1918, 7 p. m.	550 miles off Brest	do	do	Apr. 22, 1918, 5 p. m.	500,000.00	630,201.33
Westover	1918	do	5,769	8,561	July 11, 1918, 7.20 a. m.	En route to Europe	do	United States Shipping Board.	May 22, 1918	[1]1,684,844.43	[1]2,036,215.61
Total			130,575	167,288						25,531,752.55	17,391,123.96

[1] Estimated.

Vessels sunk or lost while in service of the War Department—Continued.

Name.	Built.	Class.	Tonnage.		Date sunk.	Place sunk.	Cause.	Owners.	Date entered Army Transport Service.	Value of ship.	Value of cargo.
			Gross.	D. W.							
Californian	1900	Cargo	5,658	8,220	June 22, 1918, 8.20 a. m.	Near Gironde River.	Mines	American-Hawaiian S. S. Co.	Feb. 11, 1918, 9 a. m.	$1,828,701.37	$3,103,960.90
Seatia	1917	do	2,873	5,025	Nov. 9, 1918, 8.20 a. m.	Off Maryland coast.	do	United States Shipping Board.	Mar. 1, 1918, 3.30 p. m.	694,279.84	No cargo.
Total			8,531	13,245						2,522,981.21	3,103,960.90
Herman Frasch.	1909	Cargo	3,803	6,180	Oct. 4, 1918, 12.25 a. m.	Off Nova Scotia coast.	Collision	Union Sulphur Co.	Sept. 19, 1918, 2 p. m.	1,300,000.00	2,138,858.55
Neches	1914	do	5,426	7,000	May 14, 1918, 11 p. m.	Plymouth, England.	do	Mallory Steamship Co.	July 19, 1917, noon	1,524,250.00	No cargo.
Oosterdijk	1913	do	8,251	11,927	July 10, 1918, 2.14 p. m.	At sea	do	Dutch	Mar. 21, 1918, 9 a. m.	2,939,418.75	3,095,958.64
est Gate	1918	do	5,799	8,717	Oct. 7, 1918, 2.40 a. m.	Off Atlantic coast	do	United States Shipping Board.	May 29, 1918	2,298,352.10	8,470,273.73
Zaanland	1900	do	5,417	6,490	May 13, 1918, 7.09 a. m.	En route to Europe.	do	Dutch	Mar. 20, 1918, 6 p. m.	1,543,845.00	1,840,864.30
Total			28,696	40,314						9,605,865.85	15,545,955.22
Jinsen Maru	1895	Cargo	3,737.22	5,530	Dec. 4, 1918, 12.15 a. m.	Ile d'Yeu	On rocks	Japanese (Nippon Yusen Kaisha).	Aug. 24, 1918, 6 a. m.	497,700.00	No cargo.
Lake Weston	1918	do	1,948	2,875	Jan. 13, 1919, 5.45 p. m.	Off Cardiff, Wales	do	United States Shipping Board.	May 6, 1918, 8.30 a. m.	646,875.00	No cargo.
Total			5,685.22	8,405						1,144,575.00	
Lake Bloomington.	1918	Cargo	2,342	3,530	Dec. 12, 1918	English Channel	Grounded	United States Shipping Board.	Aug. 26, 1918, 9 a. m.	794,250.00	No cargo.
Lake Borgne	1918	do	2,100	3,390	Oct. 12, 1918	do	do	do	Aug. 16, 1918, 12.55 p. m.	700,000.00	22,906.99
Lake Damita	1918	do	2,371	3,530	Nov. 9, 1918	Ause de Bertheaume.	do	do	July 22, 1918, 4.30 p. m.	700,000.00	35,943.95
Piave	1918	do	6,868	9,600	Feb. 4, 1919 (night)	Off Dover	do	do	Dec. 18, 1918, 5.50 p. m.	2,160,000.00	86,000.00
Tenadores	1913	Troop	7,782.63	7,000	Dec. 28, 1918, 12.33 a. m.	Off Bay of Biscay	do	United Fruit Co	May 24, 1918, 8 a. m.	770,000.00	No cargo.
Total			21,463.63	27,050						5,124,250.00	144,850.94

Ophir	1904	Cargo	4,726	7,089	Nov. 11, 1918, 6 p. m.	Off Gibraltar	Burned	Dutch	Apr. 13, 1918, 6.30 p. m.	708,900.00	No record.
Sixaola	1911	Refg	5,017.50	4,500	Feb. 23, 1919, 1.40 p. m.	Off Pier 29—Hoboken.	do	United Fruit Co. (to be raised).	Sept. 18, 1918, 5.30 p. m.	1,462,500.00	No record.
Total			9,743.50	11,589						2,171,400.00	
Grand total.			204,694.35	267,891						46,100,824.61	36,185,891.02

THE CASE OF THE S. S. "SARATOGA."

The S. S. *Saratoga*, owned by the New York & Cuba Mail Steamship Co., under bare boat charter to the United States and manned by a Navy crew, left Hoboken, N. J., on the morning of July 30, 1917, and anchored off Stapleton, L. I., at 8 a. m., the same day, awaiting convoy to France. There were 1,200 troops on board. The weather was clear with a mild breeze, and the tide was almost stationary. No other vessels were in the vicinity.

At 1.22 p. m., July 30, 1917, the *Saratoga*, while at anchor in the same position, was rammed by the S. S. *Panama*, owned by the Panama Railroad Steamship Line, Capt. Mowbray in command. The bow of the *Panama* penetrated No. 3 hold of the *Saratoga*, which quickly filled with water, resulting in the death of a private of the Quartermaster Corps.

The *Saratoga*, with the assistance of other vessels which came to her aid, was beached at South Brooklyn on the opposite side of the harbor, at 2.35 p. m., July 30, and sank at 5 p. m., in 43 feet of water. Subsequently the vessel was raised and repaired. These repairs were completed on September 27.

The cost of refloating and repairing the *Saratoga* was $150,104.31.

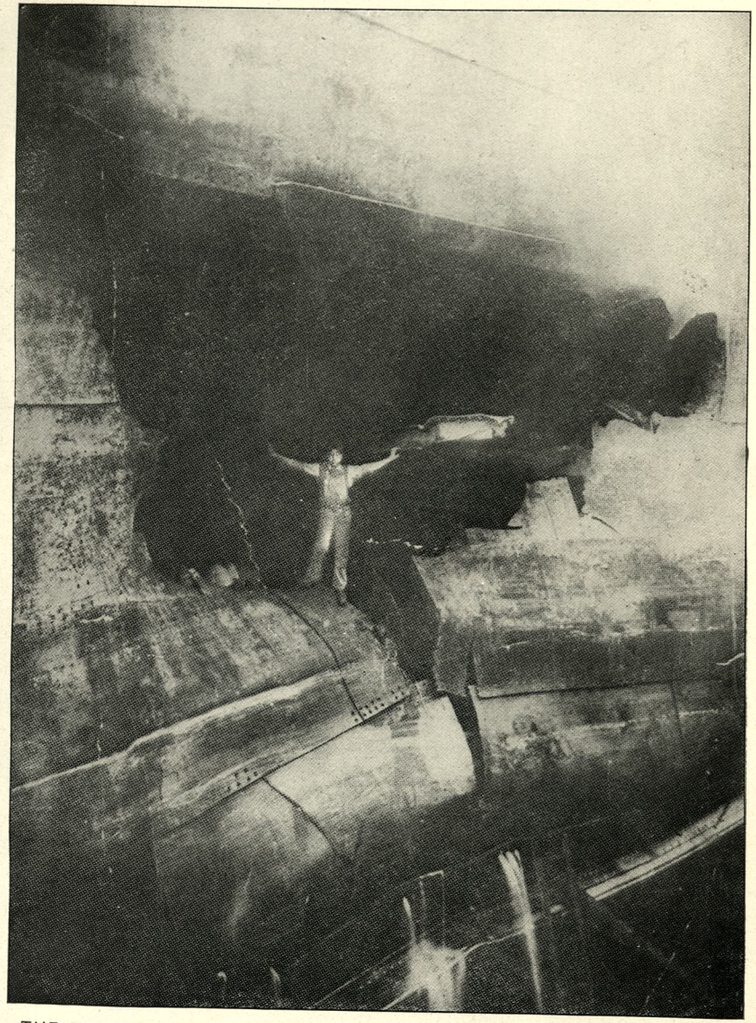
THE CASE OF THE S. S. "FINLAND."

When approximately 140 miles off shore, the U. S. Army transport *Finland* was torpedoed by an enemy submarine while proceeding westward in convoy at 9.30 a. m., on October 28, 1917. A single torpedo was fired and no sight of the enemy was had by anyone on the ship or in the escort. The torpedo was seen when 50 yards from the ship by the senior naval officer and a quartermaster of the United States Reserves, attached to the ship. The whistle was blown at once and the ship's engines stopped. Almost everyone on board took to the boats. The orders of the senior naval officer, in case of disaster, were that everyone should immediately enter the boats to which they were assigned, except those members of the ship, officers, and deck force who were detailed to lower the boats.

After standing by and rescuing people from the water, the boats were ordered back to the ship as an investigation had showed that the vessel was in no immediate danger of sinking.

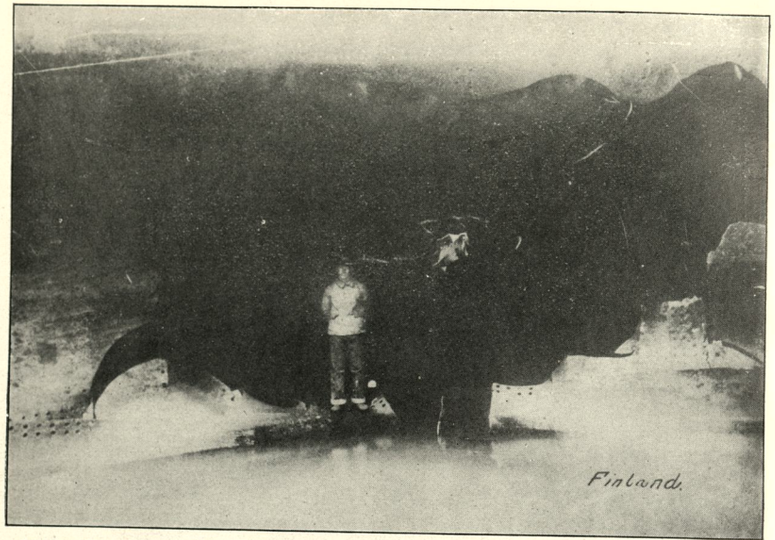
On the *Finland* were some passengers from the U. S. transport *Antilles* and from the *Luckenbach*, both of which vessels had been sunk only a few days previous. Some of these survivors had told how their vessel had gone down. This talk had gone over the ship and it added to the inevitable suspense of the *Finland's* own situation after the torpedo had crashed into her. In the face of this, the calmness, promptness, and confidence with which the immediate investigation of the injuries was conducted and the decision to stick by the ship, were in keeping with the highest traditions of the American Navy. Boats containing some 200 people returned to the *Finland*. Because of the danger of her being torpedoed again, these boats were cut adrift as soon as unloaded, and the rescuing of the balance of the crew and passengers was left to the vessels of the convoy.

Only eight lives were lost. By 11 a. m., one and a half hours after the torpedo struck the *Finland*, she was on her way back to Brest,



THE TORPEDO CRASHED INTO STARBOARD WATER-TIGHT COMPARTMENT NO. 4 AND TORE A HOLE ABOUT 35 FEET LONG AND 23 FEET HIGH IN HER SIDE.

176–1



THE CALMNESS, PROMPTNESS, AND CONFIDENCE WITH WHICH THE FINLAND'S INJURIES WERE IMMEDIATELY INVESTIGATED AND THE DECISION TO STICK BY THE SHIP WERE IN KEEPING WITH THE HIGHEST TRADITIONS OF THE AMERICAN NAVY.



INVESTIGATION SHOWED THAT THE FINLAND WAS IN NO IMMEDIATE DANGER OF SINKING.

under her own steam, escorted by a destroyer and a yacht. She made approximately 14½ knots an hour, and before midnight was anchored at Margate. At 9 a. m. on the following day she was again under way to proceed to Brest, remaining at anchor until the 30th, at noon, when she was taken to dry dock and promptly repaired.

The *Finland* has since been in continuous service and has contributed greatly to the return of the American forces.

THE CASE OF THE U. S. S. "PRESIDENT LINCOLN."

The U. S. S. *President Lincoln* left France, westward bound, in convoy on May 29, 1918, with a passenger list of 15 officers, 13 enlisted men, and 1 civilian.

About 8.55 a. m. on the 31st of May, 1918, a torpedo struck the ship, and almost immediately after a second torpedo struck, and she went down in approximately 20 minutes.

Excellent discipline prevailed. Just before the *President Lincoln* sank, and when her forward gun crew deck was still about 20 feet above the water, the starboard gun crew opened fire on the submarine. The lifeboats and life rafts easily held the passengers and crew. No one was lost or injured. Within 15 or 20 minutes after the ship sank the submarine again came to the surface and circled among the life rafts and lifeboats. It threw a line to one of the lifeboats and took a lieutenant on board, and, through him, the commander of the submarine directed a general inquiry for the captain of the *President Lincoln*. Failing to find him, the submarine sailed away with the lieutenant on board. It returned about 4 o'clock in the afternoon and then left and was not seen afterwards.

The captain of the *President Lincoln* kept the situation admirably in hand, directing the lifeboats to tow in all the rafts, the rafts then being lashed together and forming a sea anchor for the lifeboats.

At about 12.30 a. m. on the following day, June 1, in answer to the flares used by all the lifeboats, the U. S. S. *Warrington* came up, taking on board all the officers and men from the lifeboats. The U. S. S. *Smith* then commenced to take the men off the life rafts. Both destroyers remained on the spot until daylight then took the passengers to the port at Brest.

THE CASE OF THE U. S. ARMY TRANSPORT "COVINGTON."

On July 1, 1918, while bound for the United States, the U. S. Army transport *Covington* was sunk by a German submarine off the French coast. Fortunately, all aboard were saved, with the exception of six of the crew, who were reported missing.

The *Covington* was formerly the Hamburg-American Line steamship *Cincinnati*. She was proceeding home with a fleet of transports, under convoy of destroyers, when she was torpedoed. The attack occurred at 9.17 p. m. Immediately after firing its torpedo the submarine submerged. Her commander made no attempt to see if the *Covington* was hit or to attack other vessels of the fleet.

The *Covington* had only a few persons aboard and remained afloat until the following morning, giving ample opportunity to save all on board. A steamship and two tugs attempted to tow the *Covington* into the nearest port, but the torpedo had struck forward of the

engine room, and the engine room and fireroom had flooded rapidly. Owing to this great damage it was impossible to get the *Covington* afloat. Her motive power was gone and she was helpless. Facing the possibility of the torpedoing of another vessel in the convoy, it was determined to abandon her temporarily.

In excellent order the officers and crew were taken aboard a destroyer. The survivors were landed at Brest, France.

THE CASE OF THE S. S. "SAN JACINTO."

The *San Jacinto*, a chartered transport of 4,950 dead-weight tons, at midnight on July 9, 1918, was in collision 1,300 miles off New York with the *Oosterdijk*, a commandeered Dutch steamship of 11,900 dead-weight tons, both vessels having left New York for France July 4, 1918. The *San Jacinto* struck the *Oosterdijk* amidships on her port side and bounced back from the *Oosterdijk*. The bow of the *San Jacinto* was badly damaged and the *Oosterdijk* sank the following day.

The *San Jacinto* stopped until daylight. A wireless was sent to the cruiser *Albany*, notifying the commander of the collision and asking him for a ship to stand by until the damage could be ascertained. The *San Jacinto* was leaking, and it was not known how long she would stay afloat.

The U. S. S. *Culgoa* escorted the *San Jacinto* to Halifax, arriving there at 5.30 a. m. July 19. There temporary repairs, amounting to $17,878.37, were made. The balance of the repairs, amounting to $86,540.70, subsequently were made at Hoboken, N. J.

There was no loss of life and no injury to the passengers or crew of either the *San Jacinto* or the *Oosterdijk*.

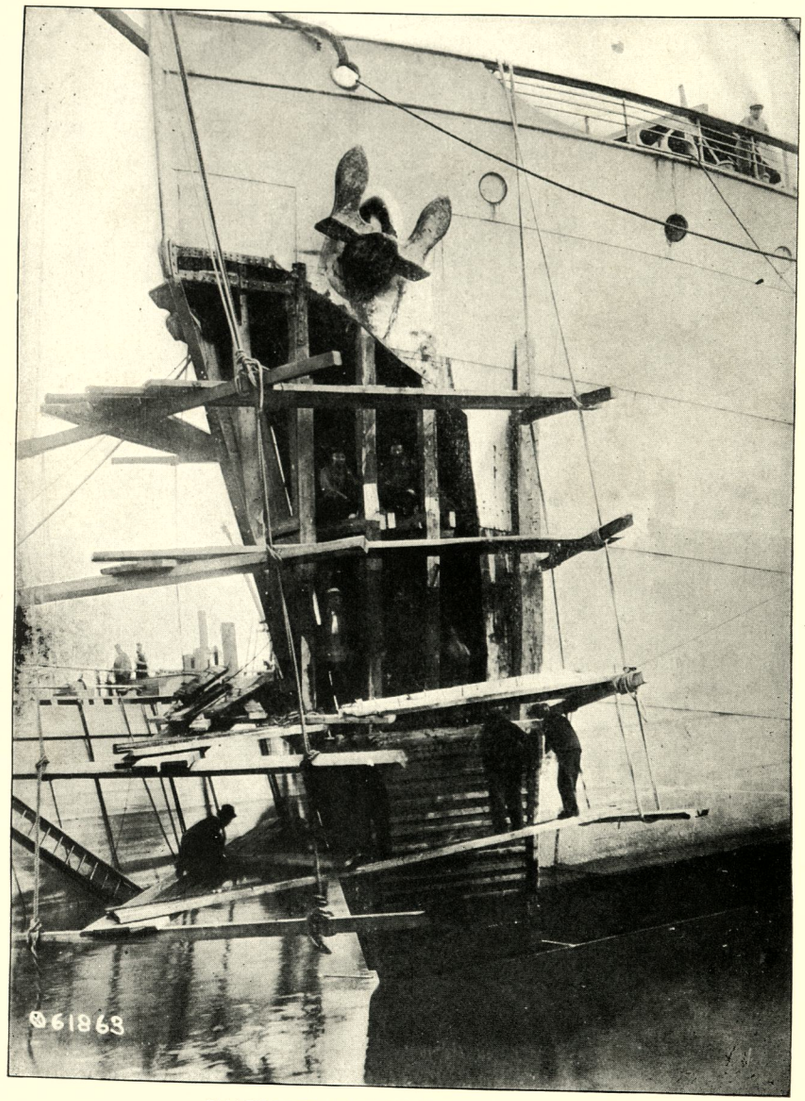
THE CASE OF THE S. S. "NORTHERN PACIFIC".

The huge 526-foot Army transport *Northern Pacific* went aground only 300 yards from shore off Fire Island Bar, Long Island, N. Y., at 12.30 a. m., January 1, 1919, in a blinding rainstorm. She was manned by the Navy and had aboard at the time a passenger list of 2,487 officers and enlisted men. Immediately the work of salvaging and relieving the vessel was undertaken by the Navy and the Commanding General, Port of Embarkation, Hoboken, N. J. The transport *Mallory*, the hospital ship *Solace*, and the cruisers *Columbia* and *Des Moines*, eight destroyers, three tugs, and a number of submarine chasers went to her relief. She lay port side to the beach, drawing 8 feet less water than the normal draft; the sea was rough, the wind south-southwest, 28 miles per hour and increasing.

There were nearly 1,765 sick and wounded men on board, and 300 of them, seriously wounded, were practically helpless. This was the largest number of sick leaving France on any single ship.

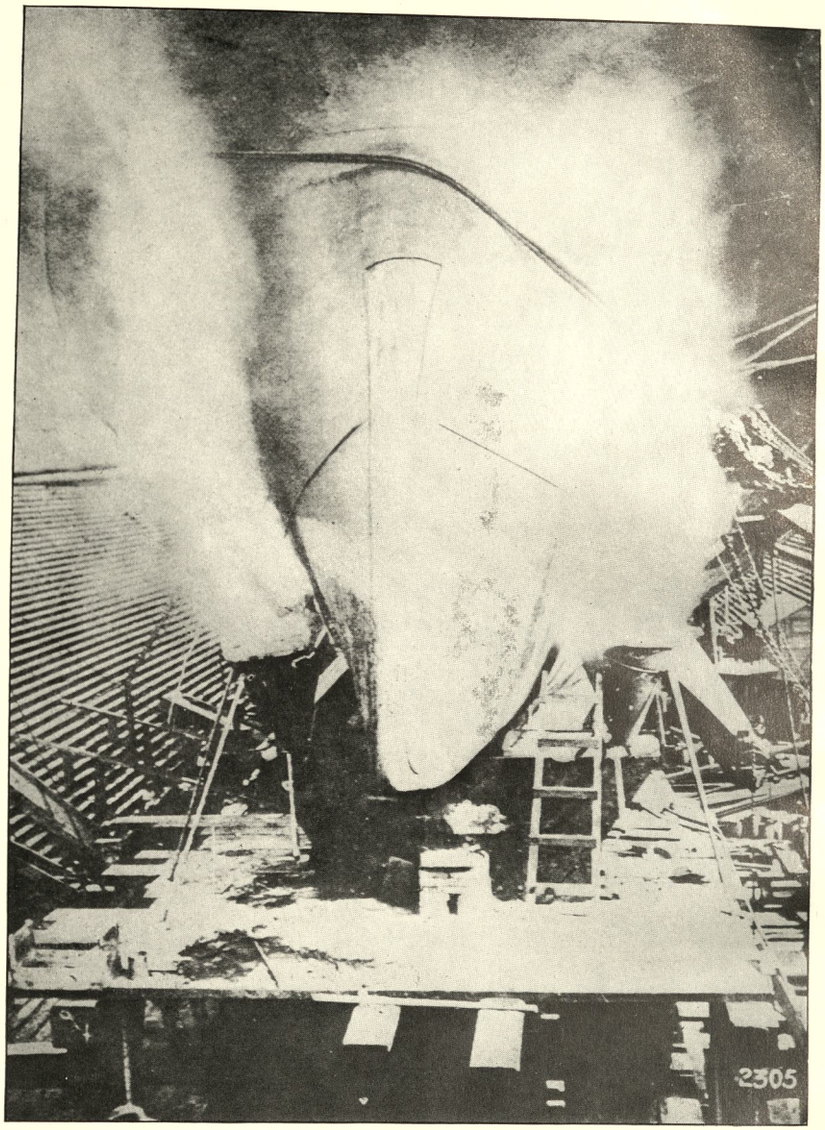
After striking the bar the *Northern Pacific* pounded heavily for 12 hours, threatening the lives of those on board. At first she had a dangerous list to port, but settled more on an even keel by daylight, so that taking the passengers off was postponed until the seas abated somewhat.

A breeches buoy was rigged during the morning and the hospital ship, destroyers, and submarine chasers arrived from New York. The work of transferring the sick and wounded was begun early



CHARTERED TRANSPORT SAN JACINTO.
Bow damaged by collision with S. S. Dosterdijk.

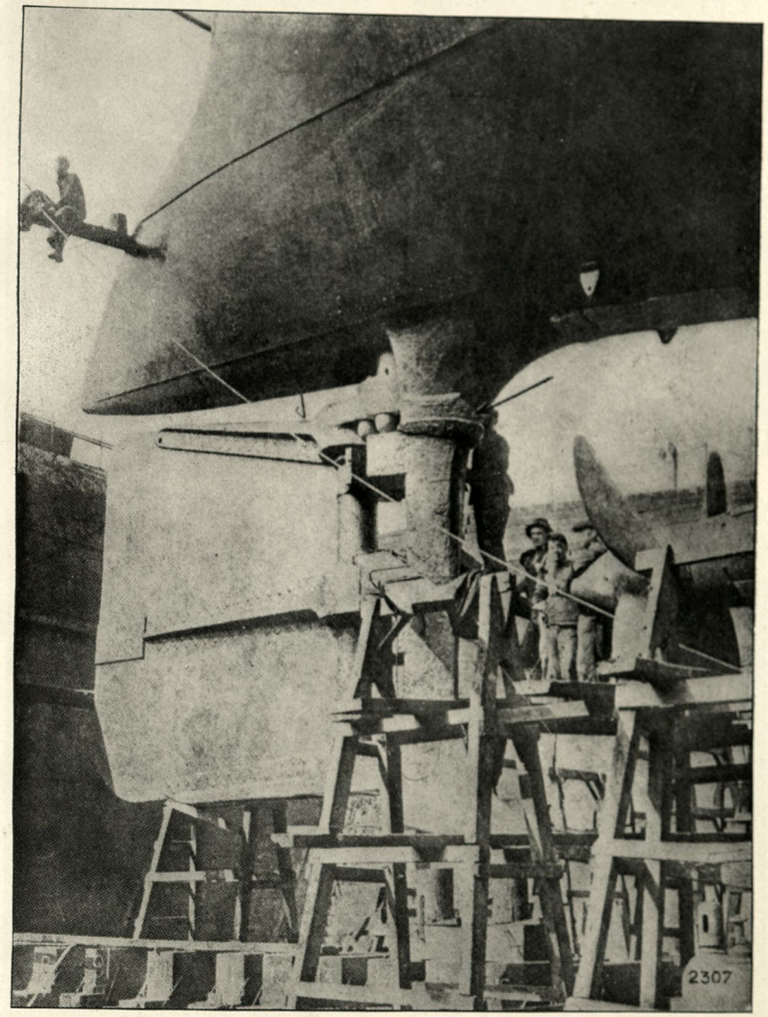
178-1



REPAIRING NORTHERN PACIFIC.

This photograph was taken a few seconds after the Thermit reaction had been started in the two giant crucibles in welding the broken sternpost of the U. S. S. Northern Pacific.

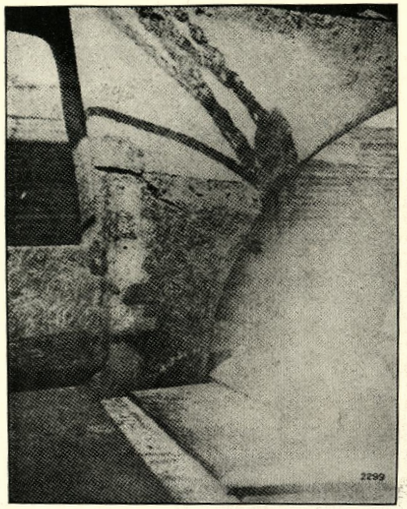
178–2



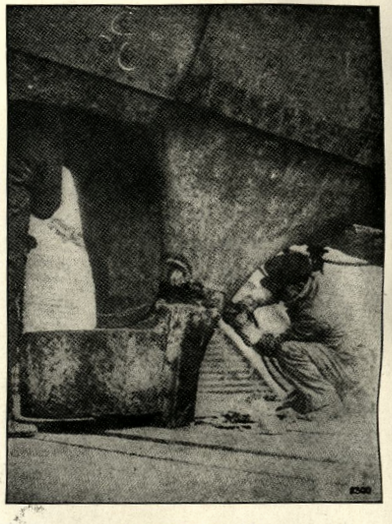
REPAIRING NORTHERN PACIFIC.

View of completed Thermit weld indicated by arrow, with the rudder shipped and the vessel practically ready for floating.

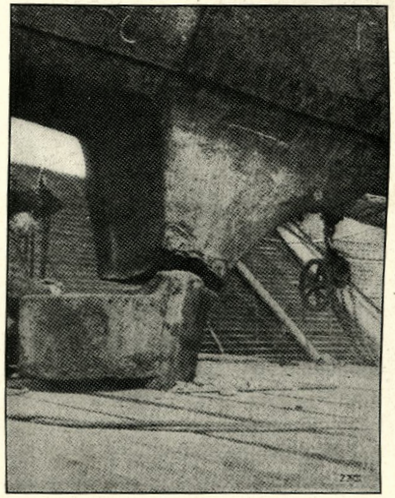
178–3



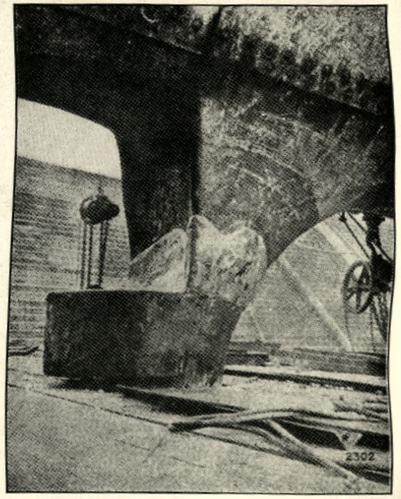
Near view of sternpost, showing fracture.



Cutting fracture by means of oxy-acetylene cutting torch.



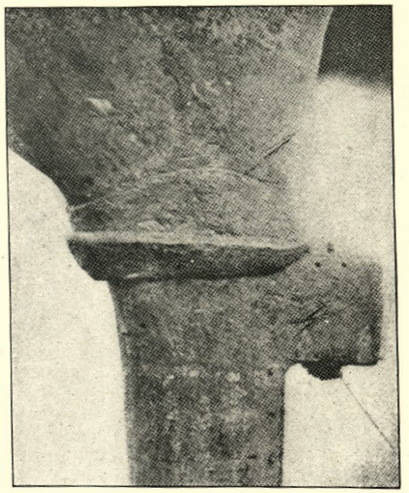
Fracture cut out, leaving space for Thermit steel to enter.



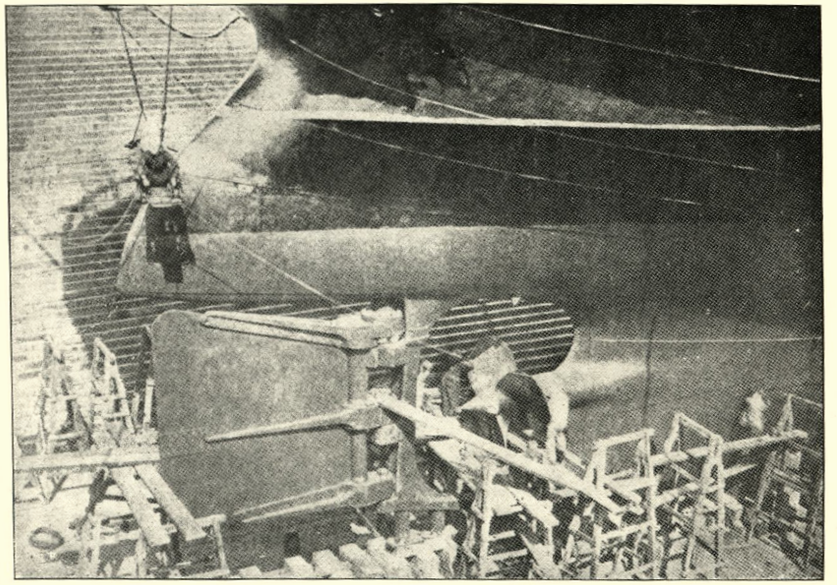
Wax pattern applied previous to building up mold.



Near view of finished weld.



Another view of the finished Thermit weld.



General view of ship in dry dock just previous to floating.

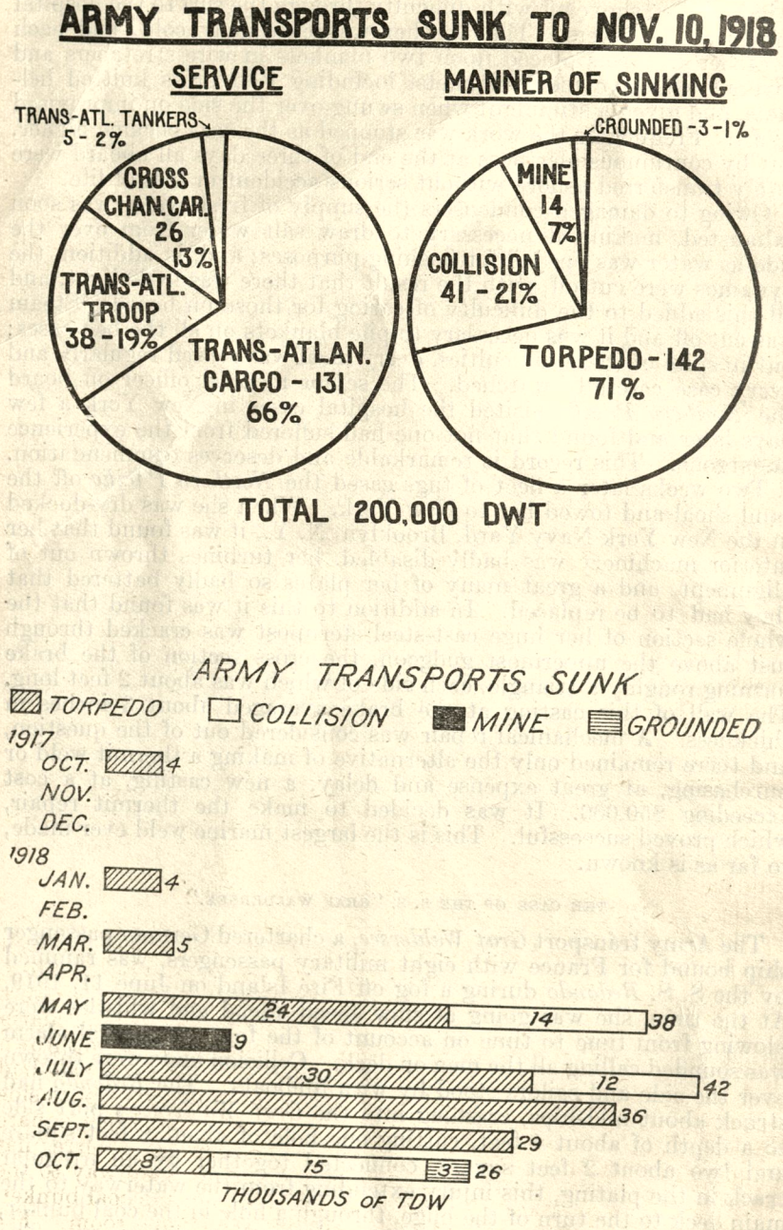
January 2 by transferring 6 stretcher cases and about 20 walking cases to small boats, which were able to creep in the lee side of the ship and then shove off with difficulty through the surf to the hospital ship and destroyers. The weather was extremely cold, and each stretcher case was placed upon two blankets in wire stretchers and covered with five more blankets, including Red Cross knitted helmets, and given a stimulant when swung over the side on improvised slings. Frequently the work was stopped as the seas became higher, but by continuous alertness at the end of three days all aboard were safely transferred ashore without serious accident or loss of life.

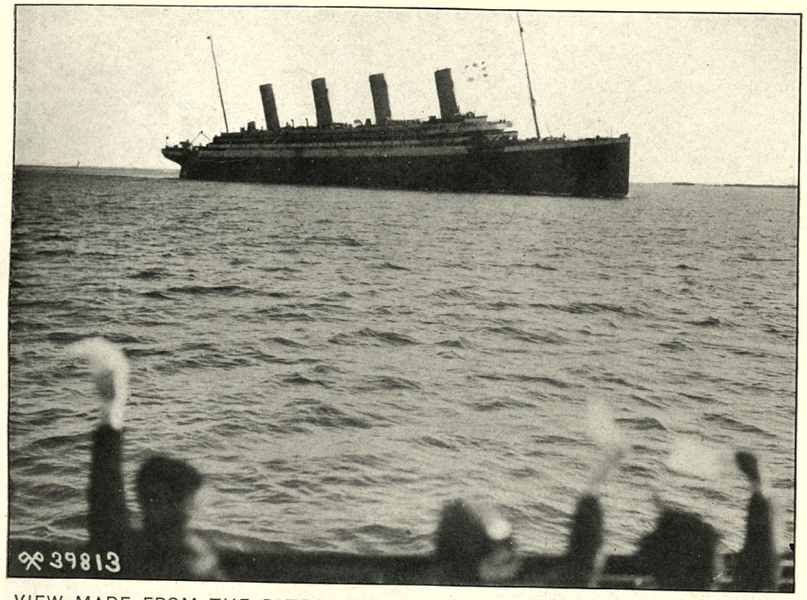
Owing to damaged condensers the supply of fresh water was soon exhausted, making it necessary to draw salt water from over the side as water was needed for flushing purposes; and, in addition, the dynamos were cut off, with the result that there was little light, and all this added to the difficulty of caring for those on board. Steam was cut off and it was necessary to pile blankets on all the bed cases; but in spite of these difficulties, every meal was served regularly and every case carefully watched. The senior medical officer on board the *Northern Pacific* visited the hospital cases in New York a few days later and found that not one had suffered from the experience undergone. This record is remarkable and deserves commendation.

Two weeks later a fleet of tugs eased the *Northern Pacific* off the sand shoal and towed her to New York. When she was dry-docked in the New York Navy Yard, Brooklyn, N. Y., it was found that her interior machinery was badly disabled, her turbines thrown out of alignment, and a great many of her plates so badly battered that they had to be replaced. In addition to this it was found that the whole section of her huge cast-steel sternpost was cracked through just above the uppermost gudgeon, the cross section of the brake forming roughly a triangle, each side of which was about 2 feet long. The wall of this casting at the brake averaged about 3 inches in thickness. A mechanical repair was considered out of the question, and there remained only the alternative of making a thermit weld or purchasing, at great expense and delay, a new casting, at a cost exceeding $50,000. It was decided to make the thermit repair, which proved successful. This is the largest marine weld ever made, so far as is known.

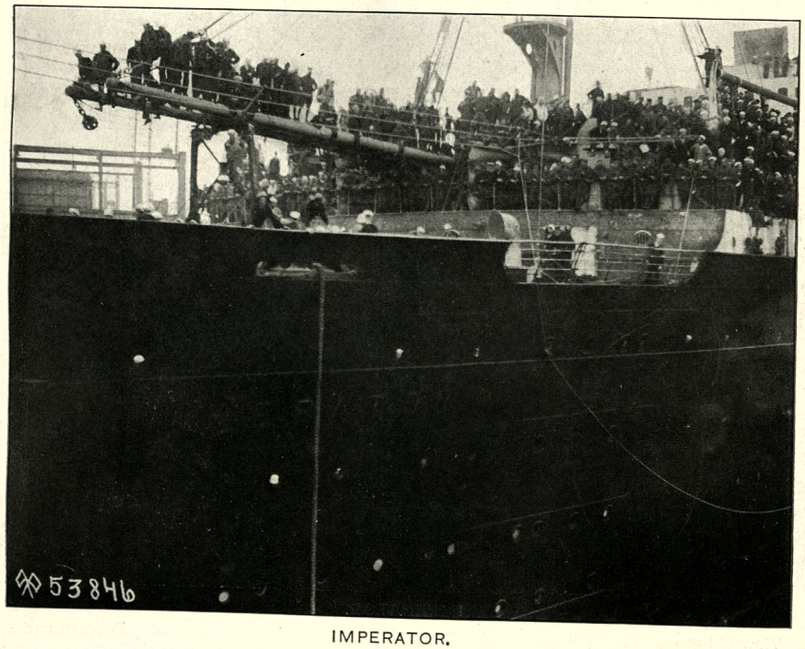
THE CASE OF THE S. S. "GRAF WALDERSEE."

The Army transport *Graf Waldersee*, a chartered German passenger ship bound for France with eight military passengers, was rammed by the S. S. *Redondo* during a fog off Fire Island on June 11, 1919. At the time, she was going at slow speed ahead and whistles were blowing from time to time on account of the fog. A general alarm was sounded calling all the men on deck. Collision mats were thrown over the side and sailors stood by with lifeboats. The *Redondo* had struck about midships, crashing into the *Graf Waldersee's* port side to a depth of about 4 feet, cutting one hole of about 8 feet square and two about 2 feet square, connected together by an irregular crack in the plating, this injury extending from the waterway to the main deck to the turn of the bilge, through a hole in the coal bunker, the water rushing through the bulkhead into the engine room. The holes in the vessel's side were under the water line and men were quickly stationed at the steam pumps below.





VIEW MADE FROM THE PATROL, SHOWING THE OLYMPIC AND THE SCENES ABOARD THE MAYOR'S BOAT AS IT DREW ALONGSIDE.



IMPERATOR.

View of the Imperator being warped into her slip at Pier 4, Hoboken.

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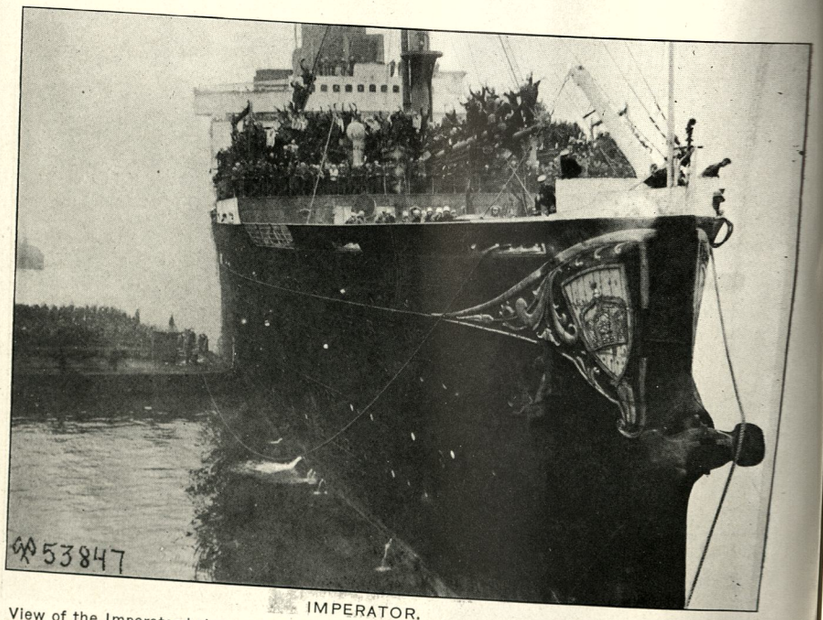
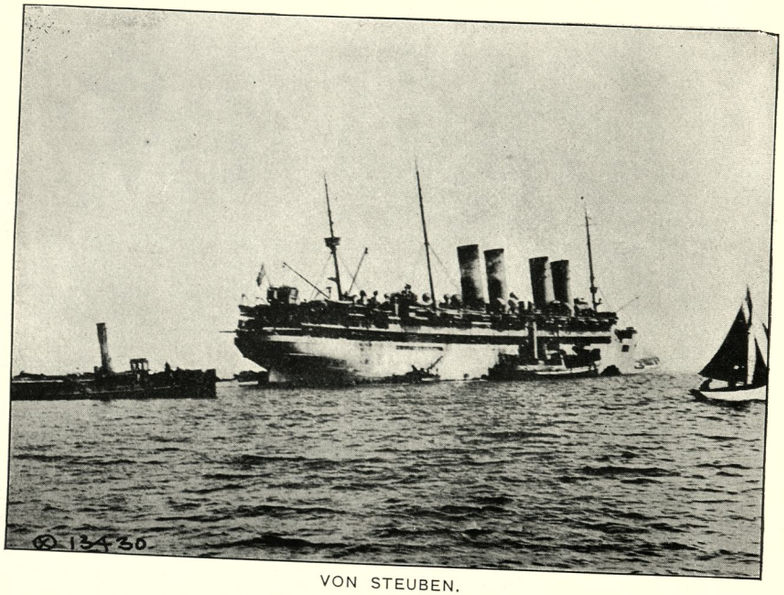
TROOPS LANDING ON LIGHTER, HARBOR OF BREST, FRANCE.



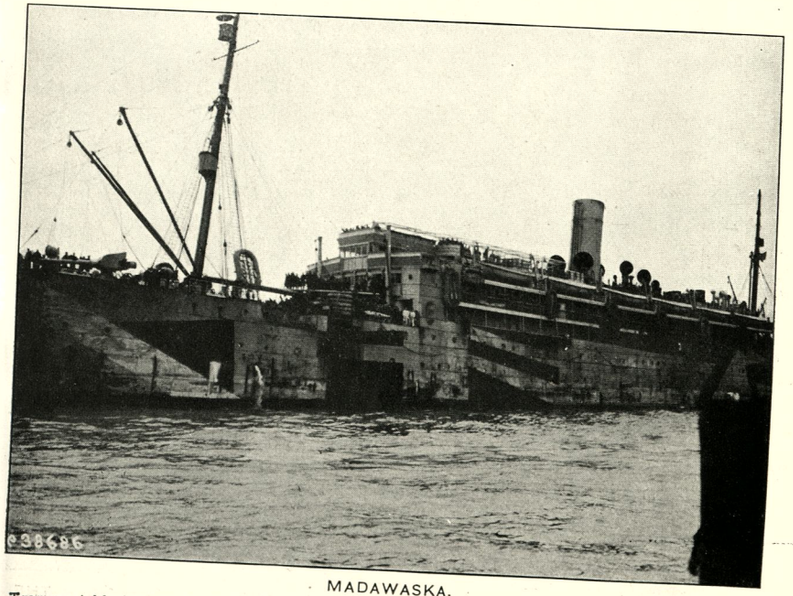
IMPERATOR.

View of the Imperator being warped into her slip at Pier 4, Hoboken, showing German name still on bow, as well as the Imperial crown.



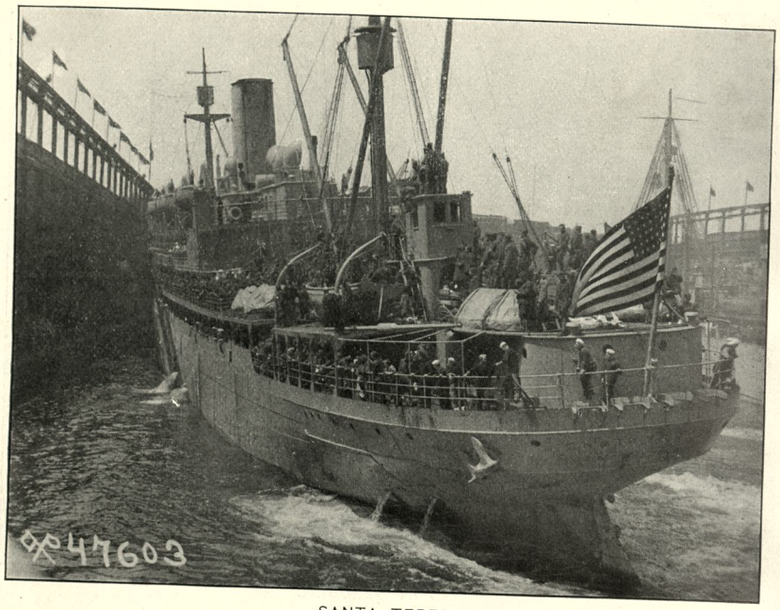
VON STEUBEN.

The Von Steuben—France.

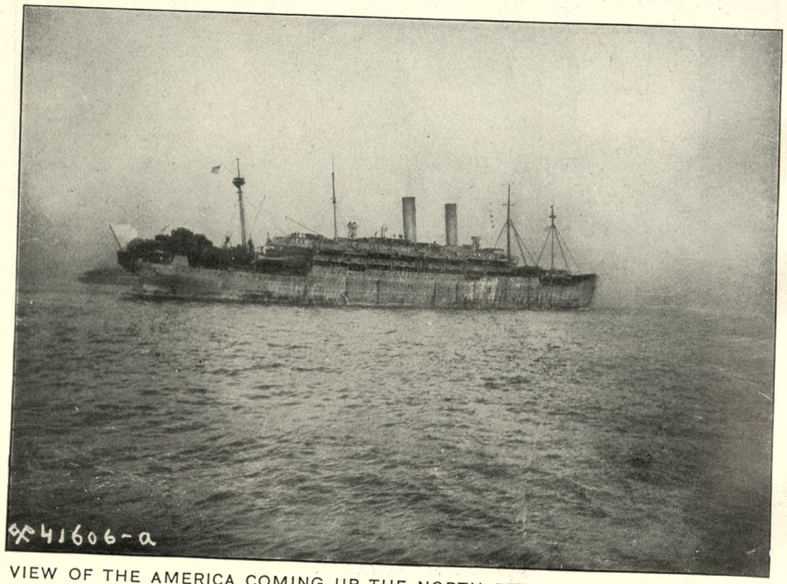


MADAWASKA.

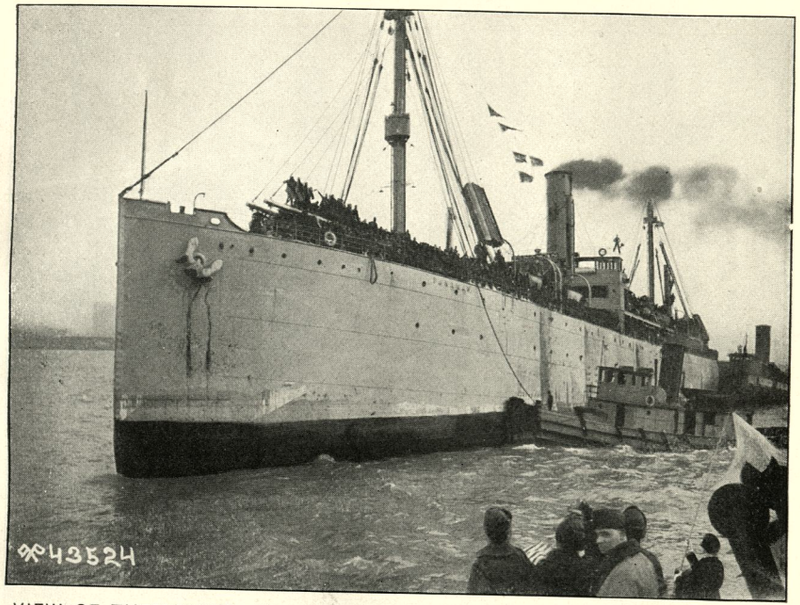
Transport Madawaska loaded with returning overseas soldiers entering dock at Newport News, Va., February 15, 1919.



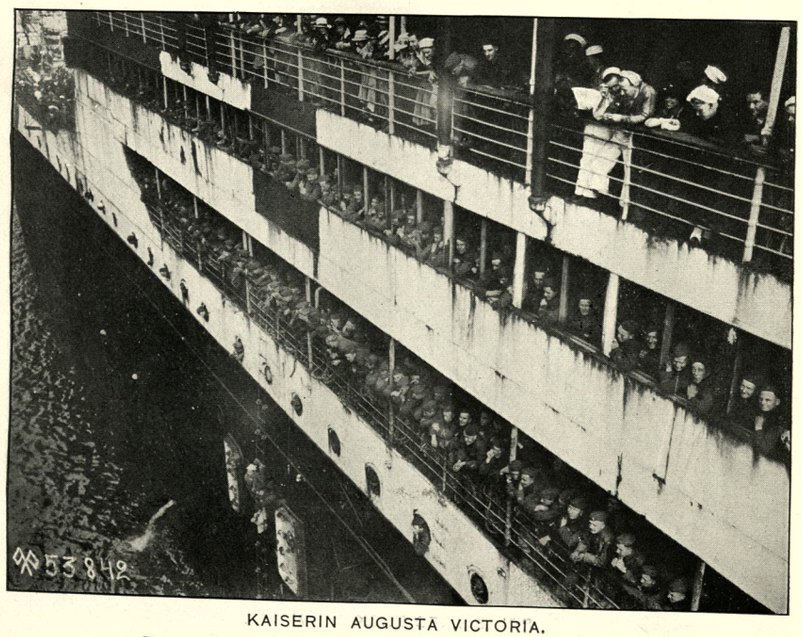
SANTA TERESA.
View of the Santa Teresa entering her slip with the Eleventh Engineers swarming her decks.



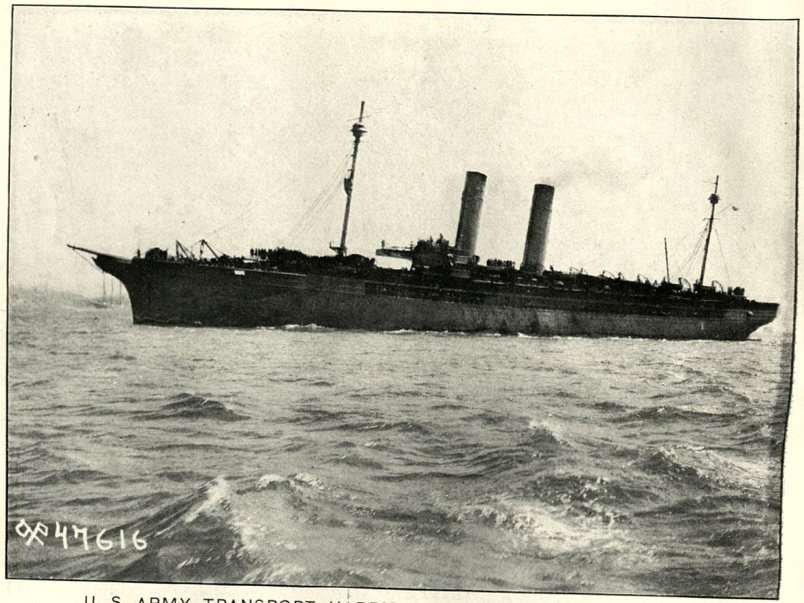
VIEW OF THE AMERICA COMING UP THE NORTH RIVER, AS SEEN FROM THE MAYOR'S COMMITTEE OF WELCOME BOAT, THE PATROL.



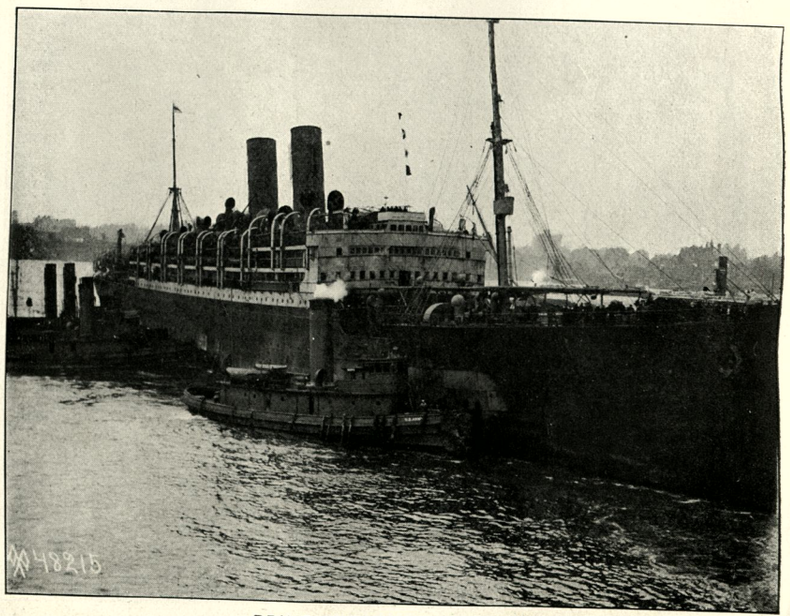
VIEW OF THE TROOPS ON THE PANAMAN (CONVERTED CARGO TRANSPORT) AS THE VESSEL WAS SNAKED INTO HER SLIP.



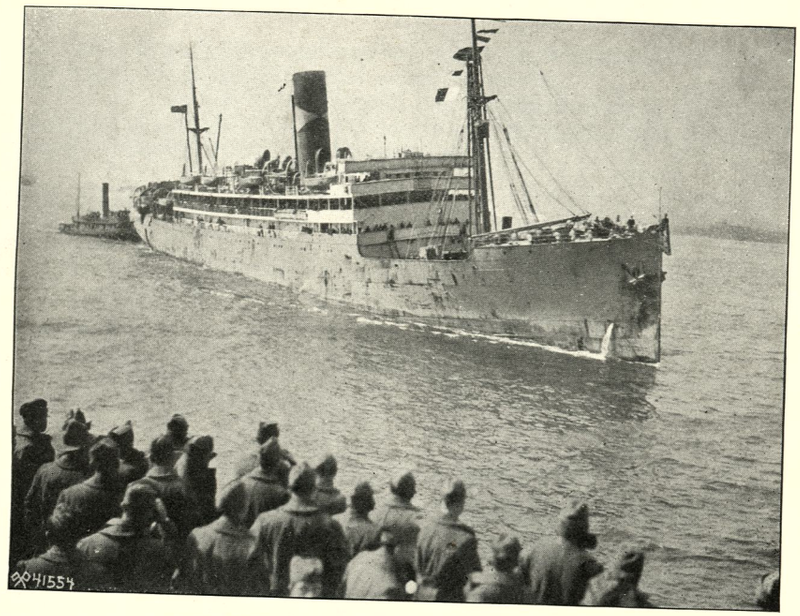
KAISERIN AUGUSTA VICTORIA.
Troops aboard the Kaiserin Augusta Victoria as she docked.



U. S. ARMY TRANSPORT HARRISBURG IN BREST HARBOR.



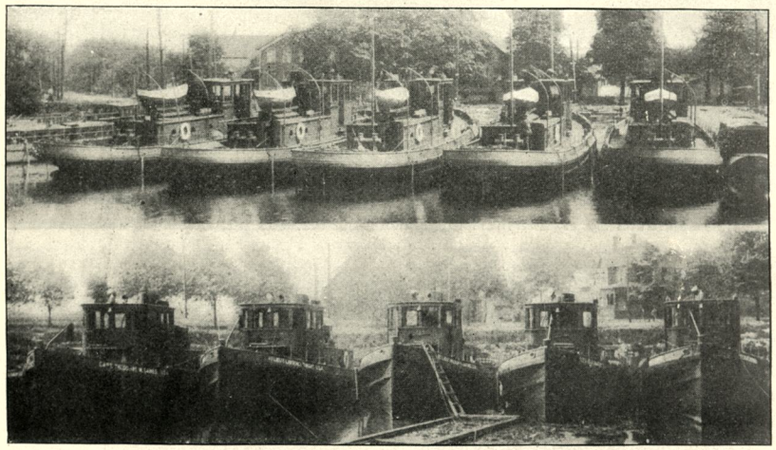
PRINZ FREDERICK WILHELM.
View of the Prinz Frederick Wilhelm approaching her slip.



VIEW FROM THE DECK OF THE SHINNECOCK.
Troops watching the progress of the Ulua up the river.



PRINCESS.
View of the hospital ship Princess.



BOW AND STERN VIEWS OF FIVE 64-FOOT WOODEN MOTOR TUGS READY FOR DELIVERY AT THE YARDS OF THE RICHARDSON BOAT WORKS, NORTH TONAWANDA, N. Y.

It takes approximately six months to complete one of these wooden motor tugs.

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The vessel listed to port about 6° after the crash, and her stern settled considerably. About one-half hour after being struck all lights went out, the water causing a short circuit by flowing in upon the generators. Very soon after the collision a tug drew alongside with a phonograph playing ragtime melodies. The effect of the music was remarkable in relieving the tension.

The *Patricia* was the first ship to come to the assistance of the *Graf Waldersee*, arriving in about three-quarters of an hour and taking aboard all the men who had been lowered in lifeboats. The *Patricia* towed her to a point off Long Beach, where she was beached to save the vessel.

The *Redondo* disappeared immediately after the collision, but returned half an hour later and offered assistance.

The *Graf Waldersee* was floated at 3.45 o'clock on the afternoon of the 14th and was towed into New York Harbor by four tugs. The vessel was promptly repaired and again put in service.

No lives were lost and no one was injured.

TONNAGE TABLES.

GROSS TONNAGE.

The gross tonnage of a merchant vessel is its total measured cubic contents expressed in tons of 100 cubic feet, or 2.83 cubic meters.

Every country has its own national measurement rules which specify the portions of a vessel that are excluded from gross tonnage, and at the two great interoceanic canals—the Suez and Panama—special rules differing widely from the national measurement rules of any of the maritime countries are enforced.

NET TONNAGE.

The net tonnage of merchant vessels was originally intended to represent their total cubic contents available for cargo and passengers, expressed in tons of 100 cubic feet, or 2.83 cubic meters each. It is ascertained by deducting from a vessel's gross tonnage the cubic contents of certain spaces that are specified in the measurement laws and rules of the various maritime nations or in the measurement rules applicable at the Suez and Panama Canals. As gross-register tonnage varies throughout the world and understates a vessel's gross capacity, so also does the official net-register tonnage of a vessel, as determined in the maritime countries, vary and understate its real net capacity for carrying cargoes and passengers.

DEAD-WEIGHT TONNAGE.

A ship's dead-weight tonnage represents the maximum weight of cargo, passengers, and fuel that it is able to carry when loaded to its deep-load line. It is the equivalent of the difference between the vessel's displacement "light" and its displacement "loaded" and is determined by the subtraction of the one from the other. Dead-weight tonnage is expressed in terms of space units of 50 cubic feet. When a vessel is in steaming condition, about 20 to 25 per cent of her dead-weight tonnage is required for coal, stores, and crew, depending on the length of the voyage. From 75 to 80 per cent of

the dead-weight tonnage remains for cargo. If an article stows 50 cubic feet to the long ton, then a vessel of 5,000 dead-weight tonnage will carry about 4,000 long tons of that article. If an article stows 100 cubic feet to the long ton, then such a vessel will carry only 2,000 long tons, but will not be loaded to its deep-load line. If an article stows 25 cubic feet to the long ton, then such a vessel will carry only 4,000 long tons of that article, but will have considerable unoccupied space.

Formula for computing rated deadweight fleet tonnage required for import of a specified quantity of a specified commodity in one year.

Let:

l = long tons of commodity to be imported in a year.

k = stowage space of commodity per long ton in cubic feet.

50 = cubic feet of ship space available *on the average* to stow one long ton of cargo.

$\frac{k}{50}$ = deadweight carrying *capacity required* to stow given commodity.

NOTE.—If $\frac{k}{50}$ is less than l it should be called l for the ship is loaded to her dead-load line altho not cubically filled.

If $\frac{k}{50}$ is greater than l the exact figure should be used for the ship is cubically filled altho not loaded to her deep-load line.

$\frac{ik}{50}$ = deadweight carrying capacity for year.

p = per cent of rated deadweight capacity to be deducted for fuel and passengers.

$100 - p$ = per cent of cargo carrying capacity to rated deadweight capacity.

Then:

$\frac{ik}{50(100-p)}$ = rated deadweight tonnage capacity required to transport commodity.

t = number of turn-arounds per year—365 days divided by the number of days required for round trip.

$\frac{ik}{50(100-p)t}$ = deadweight fleet tonnage required in continuous service to import l, long tons of the commodity in one year.

Illustration:

i = 33,000 long tons of Soya Bean Oil to be imported to Seattle from Kobe (distance 4,518 mi.).

k = 65 cubic feet

p = 20 per cent $\frac{33{,}000 \times 65}{50(.80)\ (5.4)}$ = 9,930 tons approx.

t = 5.4 times per year.

TROOP CAPACITY.

The following table gives the monthly carrying capacities of the troop transports now in service and the increases expected during 1918. The totals include commercial liners and personnel carried on animal transports.

Turn around days.	Trips per year.	Present capacity.	Increase during Apr.	Capacity May 1.	Increase during May.	Capacity for June, July, Aug. Sept., and Oct.
40	9	99,719	14,498	114,217	4,350	118,567
52	7	76,707	10,520	87,227	3,345	90,572
61	6	66,479	9,986	76,465	2,900	79,365
73	5	54,630	8,166	62,796	2,382	65,178
91	4	44,319	6,657	50,976	1,933	52,909

Turn around days.	Increase during Oct.	Capacity Nov. 1.	Increase during Nov.	Capacity Dec. 1.	Increase during Dec.	Capacity Jan. 1, 1919.
40	4,500	123,067	16,500	139,567	10,500	150,067
52	3,459	94,031	12,690	106,721	8,076	114,797
61	3,000	82,365	11,000	83,365	7,000	90,365
73	2,463	67,641	9,039	76,650	5,751	82,431
91	2,000	54,909	7,333	62,242	4,666	66,908

Tonnage required to transport and maintain 1,000 men abroad per month.

Turn around.	Trips per year.	Tonnage required for initial movement.															
		Of troops.		Of animals.		Of troop equipment.		Of animal equipment and transportation.		Of subsistence, initial supply.		Of clothing and equipage.		Of forage.		Total.	
Days.		Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.
52	7	3,500	7,291	811.8	1,691.25	3.85	8.01	212.1	441.8	312.8	651.6	152.37	317.42	235	489.6	5,227.92	10,890.68
61	6	3,500	8,749	811.8	2,029.5	3.85	9.62	212.1	530.2	312.8	781.9	152.37	380.9	235	587.5	5,227.92	13,068.6
73	5	3,500	10,207	811.8	2,367.75	3.85	11.22	212.1	618.5	312.8	912.2	152.37	444.38	235	685.4	5,227.92	15,246.45
91	4	3,500	13,123	811.8	3,044.25	3.85.	14.44	212.1	795.3	312.8	1,172.8	152.37	571.34	235	781.2	5,227.92	19,502.33

Turn around.	Tonnage required for maintenance and replacement.															
	Subsistence.		Clothing and equipage.		Forage.		Animal equipment and transportation.		Post exchange, Y. M. C. A., Red Cross.		Ammunition, small arms, grenades.		Artillery ammunition.		Oil.		Replacement artillery.	
Days.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.
52	205.9	428.95	30.47	63.46	58.85	122.6	62.7	130.5	24.75	51.55	33	68.75	66	137.5	8.25	17.17	264	550
61	205.9	514.7	30.47	76.15	58.85	147.1	62.7	156.6	24.75	61.86	33	82.5	66	165	8.25	20.6	264	660
73	205.9	600.5	30.47	88.84	58.85	171.6	62.7	182.7	24.75	72.17	33	96.25	66	192.5	8.25	24.03	264	770
91	205.9	772.1	30.47	114.22	58.85	220.7	62.7	234.9	24.75	92.79	33	123.75	66	247.5	8.25	30.89	264	990

Turn around.	Total tonnage required.				Total.	
	Absolutely essential.		All other requirements.			
Days.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.	Tons.	Cargo tonnage.
52	295.2	615	458.7	955.47	753.92	1,570.48
61	295.2	737.9	458.7	1,146.61	753.92	1,884.51
73	295.2	860.9	458.7	1,337.69	753.92	2,198.59
91	295.2	1,107	458.7	1,719.85	753.92	2,826.85

NOTE.—Assumption that cargo vessels will operate at 75 per cent efficiency and make turn arounds as indicated.
Figures given are dead-weight tons, 2,240 pounds per ton.
Troop transport tonnage taken as average of those in actual operation, which is 3½ dead-weight tons per man.
143 animals per 1,000 men, at 1,200 pounds per animal.

CONCLUSIONS AND RECOMMENDATIONS.

From time to time during the past year recommendations have been made to higher authority, on matters pertaining to the Transportation Service, which were thought to be necessary to improve the operation of the Transportation Service. Some of the recommendations made have been acted upon and others, especially those requiring legislation to put them into effect, are still pending. It is believed desirable, as a matter of permanent record, to repeat some of the most important of these recommendations as a part of this report.

The following recommendations are, therefore, submitted with the belief that the accomplishment of the changes indicated will materially increase the efficiency of the Transportation Service:

(A) CONSOLIDATION OF ALL TRANSPORTATION.

The idea of central transportation control has not been carried to its logical conclusion in the United States in that the Motor Transport Corps exists to-day as an independent agency of transportation, and the control of military railroads in the theater of operations is a matter under the control of the Chief of Engineers. It is believed that efficient transportation service for all the operations of the Army can not be expected until all matters of transportation are centralized into one service. It is believed that economy in administration, efficiency in operation, and greater coordination, justify, beyond any question of a doubt, all transportation for the War Department being combined into one service along substantially the following lines: A Transportation Corps to be charged with complete jurisdiction over all matters of transportation for all branches of the War Department. A service of this kind logically calls for operation through four main divisions, viz:

Water transportation.—This division to handle all matters pertaining to transportation by water, including the construction, upkeep and and repair of all harbor floating equipment and the coordination of all shipping matters pertaining to the War Department with those other agencies of the Government, such as the United States Shipping Board, the Navy, and the Emergency Fleet Corporation.

Rail transportation.—This division to handle all matters pertaining to the movement of troops and supplies for the War Department by rail; the coordination of such service with the Railroad Administration or with the railroads in the event they are returned to their owners for operation; and the operating control of military railroads in a given theater of operations.

Motor propelled transportation.—This division to handle all matters pertaining to motive transportation.

Animal drawn and other means of transportation.—This division to handle wheel and animal drawn transportation and all other forms of transportation. This would contemplate the purchase of mules and draft animals, except those pertaining to the tactical organizations of Field Artillery and Cavalry.

It is not thought necessary to again present in detail the advantages to be gained by the consolidation of all transportation under one head. However, it may be pointed out that the consolidation

of transportation so far carried out has resulted in many cases of economy to the Government. The consolidation at the Port of New York, where the port and zone transportation activities were combined under one head, resulted in a material reduction in overhead and the saving along many lines.

The Port Transportation Officer at New York reports that such consolidation enabled his office to clear up and close out approximately 6,000 old transportation accounts unsettled at the time of consolidation; that he was able during the months of May, June, and July, for his zone alone, to reduce demurrage charges from $17,000 for the month of May to $600 for the month of July, thereby making a net saving to the Government per month of over $16,000.

(B) TRANSPORT RESERVE.

Under the terms of the treaty of peace negotiated with Germany and now pending before the United States Senate, all German interned vessels in the possession of the United States at the time of the signing of the armistice became the property of the United States.

The War Department heretofore has not had a definite policy with reference to a transport reserve. A number of old transports were in the service of the War Department at the outbreak of war, having come into the possession of the department following the Spanish American War.

The vessels in question are now old and are nearing the end of their usefulness. This situation makes it imperative for the War Department to take some steps with a view of replacement within the immediate future and it would seem desirable at the same time to establish a policy with reference to a transport reserve.

On this subject this office recommended to the Secretary of War that the following policy, having in view the establishment of a transport reserve, be approved:

1. That when the War Department determined that any of the ex-German vessels were no longer needed in the Army Transport Service such vessels be withdrawn from that service and assigned to the United States Shipping Board for operation either by the Shipping Board or an American commercial company with the understanding that the title to the vessels in question remain always with the United States.

2. That in the assignment of these vessels to a commercial company a written agreement be made between the United States Shipping Board and the War Department, specifying that such vessels were assigned with the understanding that they form an Army transport reserve and in case of necessity, or the event of a national emergency, such vessels are subject to immediate withdrawal upon the order of the Secretary of War.

3. That the reconditioning of any of these vessels for commercial service will be undertaken without cost to the War Department and be covered by a reimbursement obtained from the first earnings of the vessels in commercial service.

4. That the vessels assigned to the Army transport reserve will be subject to inspection from time to time by representatives of the War Department for the purpose of insuring to the Government that the vessels assigned to an operating company are being maintained

in the proper condition of upkeep so that these vessels will be in proper condition for immediate service in case of an emergency.

A policy along these lines will insure to the United States a nucleus of a transport fleet and at the same time result in building up and training a reserve transport force; it will stimulate the extension of our commerce by assigning to such service every available vessel under the American flag not needed strictly for military or naval needs, and it in no way hampers or interferes with commercial operation of these vessels, the only requirement being that the vessels are properly maintained.

The plan will also save to the War Department a large sum of money which would otherwise be expended in reconditioning these vessels and offers a fair means of covering the expenditures made from the earnings actually made by the vessels themselves in the trades to which they are assigned.

The foregoing plan has been tentatively approved by the War Department, the Navy Department, the United States Shipping Board, and the Department of Commerce, and recommendation to that effect has been sent to the President with a view to having issued the necessary proclamation establishing the Army transport reserve.

(c) RESERVE PERSONNEL.

With the establishment of the Army transport reserve it is strongly urged that a reserve of personnel also be established. It is believed that such a plan is entirely feasible and can be accomplished without great difficulty with the aid and cooperation of the Seamen's Organization. A transport reserve force on the vessels actually requisitioned in case of an emergengy would then enable the vessel to be called into the War Department's service fully manned and ready for service, after slight alteration and installation of the necessary troop equipment. There should be no necessity in calling a vessel under the American flag into the Army transport service, to install a new crew thereon. It should be necessary only to muster into the service the regular crew with such replacements as may be required, thereby permitting these vessels to enter the Army Transport Service promptly in the event of an emergency.

(d) THE POWER OF REQUISITION IN TIME OF A NATIONAL EMERGENCY.

The procuring of the necessary vessels to carry out the Army's program in France, in my judgment clearly demonstrates that in time of war only one agency should be charged, in so far as the Government is concerned, with the conduct of the war

In all matters pertaining to the transportation and supply of United States forces overseas, or within the territorial limits of the United States, the War Department should be vested with full and complete authority.

It is my opinion that the authority of requisition which was placed, during the past emergency, in the United States Shipping Board, for the purpose of obtaining tonnage for the use of the War Department, should have been vested in the War Department. This would have prevented, at a time when the greatest emergency existed, prolonged discussions between the various agencies competing for the

"much in demand" American tonnage and would have assured the prompt placing into the War Department's service of all tonnage then under the American flag without contention or delay.

While the United States Shipping Board and the Emergency Fleet Corporation contributed much toward the successful outcome of the war, the fact still remains, nevertheless, that the War Department was compelled to use every possible effort just prior to the armistice, to obtain for its service the remaining tonnage under the American flag which was at that time urgently needed to carry out our overseas program.

It is a doubtful procedure for a civilian body whose commercial interests, no matter how loyal such a body may be, are nevertheless involved, to debate with the War Department when the question arises as to whether a certain vessel shall or shall not be drawn from a commercial trade and allocated solely for the use of the War Department. In the conduct of the war it should not be necessary for the War Department to have to prove the necessity for a vessel's use, and thereby greatly delay the needed tonnage becoming available.

The argument may be presented that an agency such as the United States Shipping Board is essential in order that allocations may be made to other trades requiring tonnage for the purpose of furnishing materials vitally connected with production relating to the problem of Army supply. This contention can best be answered with the statement that there is no Government agency in a better position to determine such needs than the War Department, which is charged with the responsibility of the conduct of the war in all matters directly or indirectly connected therewith. Neither the nitrate, manganese ore trade, nor any other trade can set up its needs over and above those which are known to and should be determined by the Secretary of War. The War Department with equal efficiency can bring into this organization personnel of as high technical ability as can the United States Shipping Board, War Trade Board, or any other civilian official organization established during the past emergency.

It is believed that whatever agency is charged with the building of ships which are to be used during the war for war purposes, and afterwards for commercial purposes, should be solely under the jurisdiction and control of the War Department during the period of the emergency. In no other way can the Government be assured that these activities, which were of the most vital importance in the past emergency, are being conducted with that energy required by the emergency or solely in the interests of the requirements of the service. This is all important, as the policy following will greatly effect the final results and an early conclusion of the emergency.

(e) CENTRAL TRAFFIC AGENCY OF RAILROADS.

In view of the fact that the United States Railroad Administration will be dissolved by January 1, 1920, and that in all probability the railroads will be returned to private ownership on that date, it is recommended that steps be taken at this time to prepare some arrangement whereby an agency will be established at Washington, D. C., to represent all the transportation companies in the United States in the conduct of business with the War Department.

These functions were performed, to some extent, by the Executive Committee appointed after the declaration of war and continued in existence until the railroads were taken over by the Government. Their activities extended only to matters which pertained to the physical movement of troops and property.

To establish an economical, efficient, uniform method of conducting all transportation matters in connection with the War Department, it is absolutely essential that not only the railroad companies appoint a single agency through which business will be conducted, but that the War Department make similar arrangements. Heretofore it has generally been the custom for any division of the War Department to approach the authorities of the various transportation companies in connection with War Department business. This naturally resulted in various methods of doing business, lack of uniformity in the accomplishment of contracts, etc., and left the carriers entirely at sea as to the proper agency of the War Department to address in securing adjustments of matters in dispute or in connection with any other transportation matter. As now organized, the transportation service represents the War Department in business connected with the United States Railroad Administration or other carriers.

It is recommended that the agency established by the railroads be authorized to represent every corporate railroad company in the United States, as well as all inland water transportation companies, and have the power to conduct all negotiations in connection with all transportation matters in which the War Department is interested. This should include passenger and property movements, construction, operation and maintenance of tracks and facilities, adjustments of rates and charges, etc.

Through such an agency, representing all the railroads, it would be possible to continue the present system of embargoes by transportation orders, which, while not necessary during normal periods, would be necessary during a future emergency; therefore, the machinery for the installation of such a system should be so set up that it could be put into operation without delay. This should also apply to the matter of express embargoes.

COMMENDATION OF THOSE ON DUTY WITH TRANSPORTATION SERVICE.

No report covering the activities of the Transportation Service during the past year would be complete without a reference to the untiring efforts and loyal support given by the officers, enlisted men and civilian employees on duty with that service. Only by the splendid cooperation and support of superior authority and the faithful and efficient performance of duty by all assigned to the Transportation Service, has it been possible to accomplish the results outlined in this report.

Respectfully submitted.

FRANK T. HINES,
Brigadier General, General Staff,
Chief of Transportation Service.

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