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MERCHANT MARINE

for Trade and Defense

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By
LOGAN, UTAH

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CONTENTS

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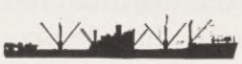


FOREWORD

"Merchant Marine for Trade and Defense" is designed to show the importance of the Merchant Marine to the economic welfare and the national security of the United States. It is not generally appreciated that the Merchant Marine is of vital concern to every citizen, not just to those closely connected with the shipping industry or to inhabitants of port cities.

The Merchant Marine is the carrier of a great part of our international trade, which helps to keep our production levels high and to provide us with many of the necessities and comforts of our daily lives. The Merchant Marine is also the supporter of our armed forces in their tasks of protecting us against aggression and of extending our aid when necessary to our friends in all parts of the world.

It is the responsibility of the United States Maritime Commission, as the Government agency charged with "fostering the development and encouraging the maintenance" of the Merchant Marine, to urge American shippers and travelers to use American ships. When shippers send their goods on American ships, they are helping to assure themselves of adequate and efficient service at all times. When travelers patronize American ships, they not only enjoy the comfort and safety of the finest vessels in the world, but they are also helping to keep in operation vessels which may serve, if the need arises, as an auxiliary to our armed forces. In turn, by increasing the use of American vessels, shippers and travelers will benefit by increased efficiency and economy of ship operation, and the whole nation will benefit through lowering of the cost of supporting a Merchant Marine sufficient for the national interest.

Note to Teachers

This booklet is designed to provide information on the history, present operation, and problems of our merchant shipping. To assist teachers in correlating the subject of the Merchant Marine with other economic, historical, and geographical problems, this booklet is divided into two parts. The first gives a brief history of the United States Merchant Marine. The second discusses its relation to industry, labor, foreign trade, Government, and national defense. Consideration and discussion of the questions presented at the end of each chapter may serve to acquaint pupils with some of the problems that they as citizens must help to solve if our Merchant Marine is to be a force in the promotion of prosperity and peace for our Nation.

PART I

A BRIEF HISTORY OF OUR MERCHANT MARINE

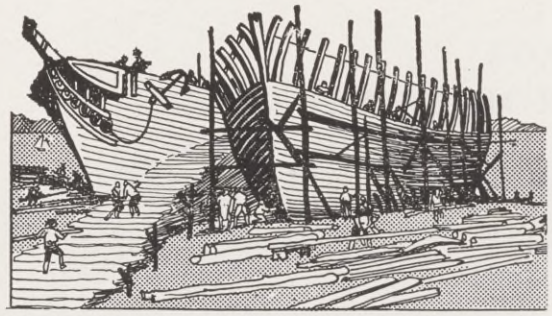
The graceful schooner, invented by an American, enabled fewer men to handle a large vessel.

Merchant Shipping in Colonial Days

AMERICA was built by people who were great seafarers as well as colonizers and explorers. Throughout our history the men and ships of our Merchant Marine have carried our trade in peace and helped sustain and defend us in time of war. By their conquest of the sea a few colonies scattered along the coasts of North America survived and grew into a new and powerful Nation, the United States.

Their own courage and ingenuity—and their ships—were the weapons the colonists used to bind the sea to their service. From the time that ships first brought them across the stormy Atlantic to the strange shores of America, they depended on ships to help them build a new life. Ships helped them keep in touch with families and friends in the old world. Ships carried their furs and lumber to the markets of Europe and brought them in exchange the manufactured goods they needed.

Ships were their links with their neighbors along the coast. There were no roads through the forests that grew close to the water's edge, and hostile Indians made it dangerous for white men to go far inland. By sea the northern colonists traded with



Wooden ship building became a leading industry.

southern colonists, exchanging furs for food. By sea men from one colony went to the aid of other colonists when famine, disease, or Indians struck.

The sea was not only a means of travel and communication but a source of food. When storm and cold destroyed their first crops and lurking Indians made hunting unsafe, the New England settlers turned to the sea for food. The abundance of fish gave them not only food but a new industry. Salted and dried fish became one of the colonists' leading exports.

Ships were a necessity to the colonists, but they owned no ships when they first landed in America. As few of them could afford to buy ships in England, they had to build their own. Wood was plentiful and free; the harbors were many and deep. There were few skilled shipbuilders among the first settlers, but everyone in the community did his share of the building. From the first, Americans showed originality in their ship designs. The *Mayflower*, typical of merchant ships built in Europe at that time, was about 100 feet long and 25 feet wide, with three masts and a high cabin at one end and a steep forecastle at the other. The Americans built their ships with longer, narrower, and more shapely hulls and with fewer top-heavy sails. The schooner, invented in Gloucester, had a novel rig which enabled a few men to handle a large ship. It danced as lightly over the waves as a stone skipped or "schooned" over the water.

The first American ship, the *Virginia*, was built by the fishing colony at Kennebec, Maine, in 1607. Though a small ship of only 30 tons, she made a successful trip across the Atlantic. The Puritans, who had chosen Boston and Salem as the sites of their settlements because of the deep natural harbors, built the *Blessing of the Bay* a year after they founded the Massachusetts Bay Colony in 1630. Laws of this colony provided penalties for any builder who turned out a ship that was "defective or amiss in materials or workmanship." Every ship which came to the colonies brought iron nails and metal ship fittings the colonists needed for their shipbuilding. Skilled workers were encouraged to come to the colonies by the offer of money and land grants and by exemption from service in the militia.

By 1676 there were in Boston and nearby 30 ships of 50 to 100 tons and 200 smaller vessels. In the next 40 years over 1,000 ships were built at Boston. Shipbuilding became one of the leading industries in the colonies. Before the middle of the eighteenth century American vessels were the best in the world. Fast and seaworthy, these ships cost only about half as much to build as British ships, and foreign countries soon placed orders for them. By the outbreak of the Revolution in 1776, one-third of England's own oceangoing merchant fleet had been built in America.

The colonists became as skillful sailors and traders as they were shipbuilders.

Early ships were built on shares. Some men of the community supplied money for wood, metal, and rope. Others contributed their time and skill. Merchants supplied provisions for the voyage. Each took shares entitling him to participate in the profits in proportion to his contribution. When the ship was ready to sail, farmers and merchants brought their produce to the wharf and gave it to captain or crew members to trade for them.

The seamen's wages were low, but each man in proportion to his rating was given space in the ship to carry his goods. When the ship stopped at a port, goods were traded for other products which were in turn traded at the next port. The final profits were often very much greater than the value of the original goods. Each man had a personal interest in the success of the voyage. The fewer the men on each ship, the greater was each one's share of the profit. This practice encouraged the building of ships that could be handled by few men and encouraged the seamen to become skilled and efficient. The system of trading on shares gave a chance to ambitious and energetic boys, who had started at 14 or 15 as foremast hands, to become skilled mariners and traders. They often became captains at 18 and with their share of the ship's profits progressed to positions as ship owners and merchants.

By 1700 the colonies were annually selling two million dollars worth of tobacco, ships, lumber, and grain to England. In 1741, when civil war in England cut off the flow of immigrants, money, and trade to America, the colonists turned to the West Indies. There they exchanged dried fish, lumber, and farm produce for sugar, molasses, and fruits and soon built up a flourishing trade. The rum made from West Indies molasses was later exported to Africa and exchanged for slaves who were then traded in the West Indies for more molasses.

There were many perils in the West Indies trade. The coasts were not lighted, charted, or marked with buoys. The islands swarmed with pirates. Merchant ships went armed, and sailors had to know how to handle guns and cutlasses. Even the best ships were poorly equipped. Food was bad and living quarters were cramped and stuffy, but men were eager to sail the ships because profits were high.

Trade along the coasts increased as the colonies grew and prospered. Fishing became a leading industry. By 1675 more than 600 New England vessels and 4,000 men were engaged in fishing. Sale of fish provided a source of wealth, and the sturdy fishing boats were quickly converted to ships of war when there was fighting to be done.

Whaling became an industry in itself and contributed abundantly to the wealth of several of the New England colonies. Whales provided the colonists with oil for lamps, bone for corset stays, and other products. Whaling had begun in 1712, after colonists had observed the Indians setting out in canoes to catch whales visible from the shore. Later, whaleships ranged far from the shore on voyages lasting 3 or 4 years. They roamed from the Arctic to the Equator, over the Atlantic and Pacific. Each ship carried 4 or 5 small whaleboats, each with its own crew. At the time of the Revolution, New England and New York had a virtual monopoly of the world's whaling. Three hundred vessels and 4,000 seamen were engaged in the

industry. Nantucket alone had 125 whalers in 1770, which that year brought in cargoes valued at $385,000.

As the trade of the colonies contributed more and more to their growth and prosperity, the settlers became more resentful of British restrictions. From the first England had undertaken to keep the trade of the colonies for herself. The Navigation Act of 1651 forbade ships of other countries to trade with the colonies, and in 1660 laws were passed reserving a number of colonial products such as sugar, tobacco, and dye woods for England. The colonies were permitted to buy or sell goods in other countries only through England, with the English setting the prices and collecting most of the profits as well as numerous handling charges. Although the British Navy protected colonial ships, and British- and American-built ships had a monopoly of colonial trade, these advantages were outweighed by increasingly severe restrictions on American trade and manufacture. Smuggling of goods and open defiance of the Navigation Laws and other British policies continued until the colonists finally rebelled in 1775.

At the time of the Revolution the Americans had no real navy. A number of merchant ships and fishing schooners were taken over by the Government and manned by merchant marine officers, of whom John Paul Jones was perhaps the most famous. His best known exploit was the capture by his ship, *Bon Homme Richard*, of the much larger British ship *Serapis*, after a thrilling sea duel. Another hero was John Barry, who had sailed in merchant ships from the age of 11. He became the first commodore of the United States Navy and captured so many ships that the British offered him £20,000 to desert and to command one of their squadrons.

Other merchant ships were granted "letters of marque and reprisal" which permitted them to raid British shipping and to keep as prizes whatever they captured. Such "privateers," owned and operated by civilians but licensed to carry on war, had operated before the Revolution during the wars between England and France over possession of Canada. The seamen cut down the decks, mounted guns, and rerigged sails for greater speed. On one occasion a Massachusetts privateer by sheer bluff had captured a Spanish treasure ship worth a half a million dollars.

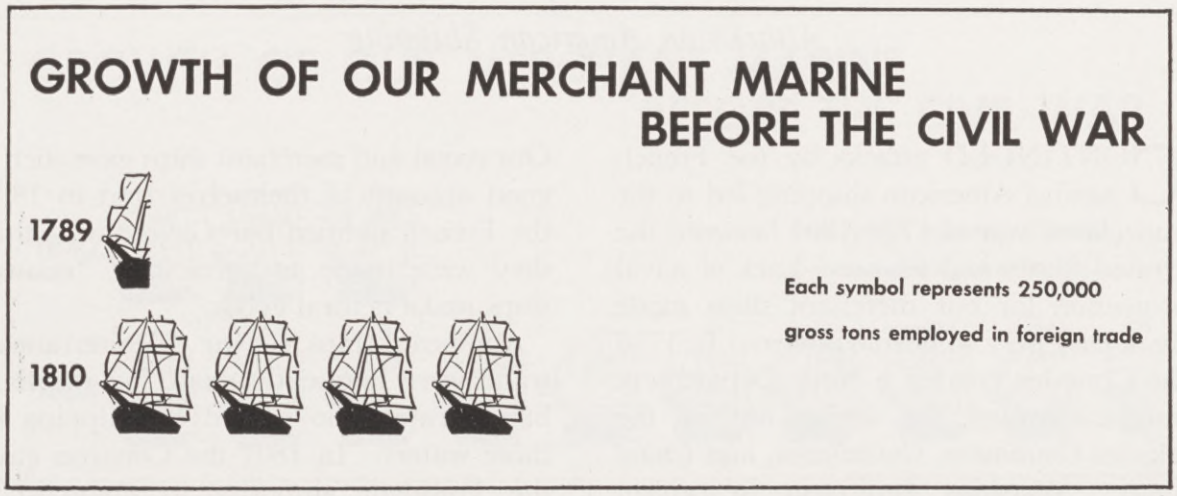
These privateers were the mainstay of our sea power during the Revolution. They captured English ships within sight of British shores, forced British insurance and freight rates up, and damaged British trade. They captured badly needed weapons and supplies for the American army. In 1778 more than 700 British ships fell to American privateers.

Growth of American Trade

AFTER the Revolution most of the Navy's ships were returned to the Merchant Marine, and our Navy ceased to exist. This was a critical period for the Merchant Marine. Many vessels had been captured by the British. The British Navy no longer protected our shipping, and the struggling new Confederation could give it neither encouragement nor protection. The southern states, seeking low freight rates for their exports, would not help the northern traders to fight the cutthroat competition of foreign-built ships. The British closed the West Indies to our trade. Both England and France, at war with each other, attacked American ships to keep them from trading with the enemy.

To build up the country after the severe financial drain of the Revolution and to promote its further growth, the Americans had to expand their trade. Defiant of restrictions, they turned to smuggling and to shipping in more distant waters. The first American ship to seek trade in the Far East sailed to China in 1784. In 1789–90 the ship *Columbia* made the first trip around the world under the American flag. Seamen on the *Columbia* discovered the great Oregon river and named it in honor of their ship. The purchase of Indian lands and the building of forts along the banks of the river gave the United States the basis for its claim to the Oregon Territory. Fine furs were shipped from this part of the country to China, where they found a ready market. Ships were soon trading regularly from the West Coast of America.

Continued interference of foreign countries with our ships and their restrictions against our trade led to demands for Government aid for shipping. Presidents Washington, Adams, Jefferson, and Madison urged Government support for the



The American merchant fleet grew rapidly in the period from 1790 to 1810.

Merchant Marine. The first act passed by the Congress under the new Constitution on July 4, 1789, contained a clause allowing a discount of 10 percent of the tariff duties on all goods imported in ships built and owned by American citizens. This discount meant that merchants could charge 10 percent less for goods imported in American ships and led them to insist on having American ships carry their goods. Later, in 1794, instead of the 10 percent discount for goods imported in American ships, 10 percent was added to duties on goods imported in foreign ships. This added cost gave merchants using American ships a competitive advantage. The law also provided that foreign-built ships could not be registered in this country, thus encouraging American shipbuilding by forcing American ship operators to purchase ships built in America.

Legislation was passed guarding the employment of sailors, stipulating that they should have written contracts setting forth the voyage and rates of wages. But if a seaman left his ship at any port, he could be put in jail.

America's foreign trade increased about fivefold in the period from 1790 to 1801, and ship tonnage kept pace. The daring and ingenuity of our seamen and traders drove our ships to every corner of the earth. As European countries were busy fighting with one another, trade went to neutral American ships. Government help and the support of the people, who at that time regarded shipping as a matter of national interest, created an atmosphere favorable to the growth of the merchant fleet. In 1789 more than three-fourths of American foreign trade was carried in foreign ships. Five years later American ships carried nine-tenths of the country's trade. During the period from 1789 to 1820 the money earned by the sale of ships abroad and payments to American ships for carrying foreign trade was used to pay for a large part of the country's imports.

Attacks on American Shipping

CONTINUED attacks by the French against American shipping led to the undeclared war of 1799–1801 between the United States and France. Lack of naval protection for our merchant ships made them easy prey to hostile powers. In 1798 the Congress created a Navy Department and authorized the fitting out of the frigates *Constitution*, *Constellation*, and *United States*. Warships were sent to protect American merchant ships from attack. Our naval and merchant ships gave such a good account of themselves that in 1801 the French notified our Government that they were ready to agree that "neutral ships make neutral goods."

American ships in the Mediterranean trade were frequently seized by the Barbary pirates who preyed on shipping in those waters. In 1801 the Congress gave the President authority to maintain a squadron in the Mediterranean and to

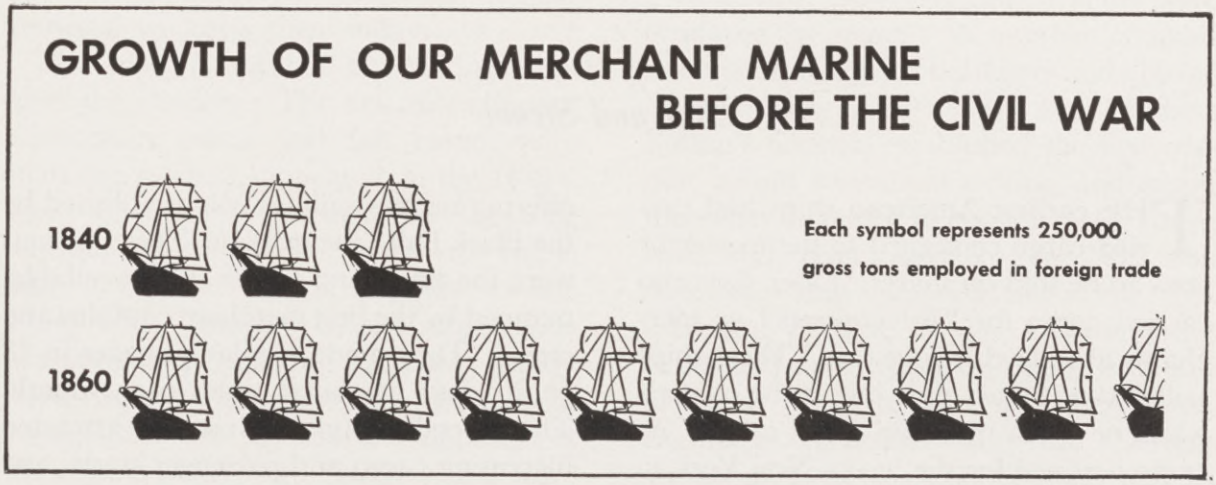
seize and destroy the ships and property of the Barbary pirates. American merchantmen were given convoy in and out of the Mediterranean. A number of former members of the Merchant Marine served as naval officers in the bombarding of the pirates' heavily fortified port of Tripoli, and performed some of the most heroic deeds in the annals of the American Navy. At last, in 1815, Stephen Decatur broke the pirates' rule of terror over merchant ships.

Constant interference with merchant shipping by France and Great Britain led President Jefferson in 1807 to forbid American ships to travel outside our coastal waters. This embargo damaged trade but led to a great increase in manufacturing in the United States. Products which could no longer be brought in from abroad were made at home. When the embargo was lifted after 14 months and merchant ships returned to the sea, they had as added cargo some of the products of the new manufactures.

England continued to discriminate against American shipping in an attempt to protect her own ships and trade against American competition. American ships were forbidden to enter ports in the East and West Indies and Canada; British merchants were forbidden to use American vessels in a number of trades. American ships could take goods into England from no country but America.

Great Britain also claimed the right to stop any American ship on the high seas and to carry off any "Englishman" found in her. Since most Americans had been Englishmen originally, the British actually seized American citizens. Desperately needing men for her war with Napoleon, Great Britain tried to replenish her navy by capturing American seamen and forcing them to serve in British naval vessels.

This "impressment" of American seamen, together with trade restrictions and other causes of friction, finally led the United States to declare war in 1812, with "Free Trade and Sailors' Rights" as the



For 40 years after the War of 1812 American merchant shipping grew and prospered.

rallying cry. In this war, as in the Revolution, American naval power consisted almost entirely of merchant privateers. Over 500 privateers captured about 1,300 prizes valued at nearly 40 million dollars. They did the British more damage than did our regular Navy. Victory in this war established the principle of the freedom of the seas and greatly increased the respect of foreign nations for the shipping of the United States and her rights as a nation.

For 40 years after the war of 1812 merchant shipping enjoyed its period of greatest expansion. The opening of the Ohio and Mississippi Valleys and the increase in cotton production sent more and more products to the ports for trade across the sea. A period of world peace from 1815 to 1850 furthered the growth of world trade. American ships were built at lower cost than European ships, and many were sold abroad. High wages and lively competition in this country encouraged the search for new and better methods of shipbuilding.

The United States exchanged skins, cotton, flour, grain, and lumber for tea, spices, sandalwood, camphor, rugs, machinery, coffee, rum, molasses, and mahogany. The enterprising Yankees started new ventures wherever there appeared a chance for profit. Learning that the Chinese were fond of sea slugs, a kind of snail, they carried dried slugs to China from their source off the Fiji Islands. They started a brisk trade carrying ice to the tropic West Indies and even as far as Calcutta.

Methods of navigation were gradually improved. Matthew Fontaine Maury, "the Pathfinder of the Seas," made a study of ocean winds and currents and published charts and sailing directions that made voyages shorter and cheaper. Nathaniel Bowditch published a book on navigation that is still a standard text on the subject. The romance of the sea and conditions existing on merchant ships were described in books by several ship masters and by two famous novels of the sea, "Two Years Before the Mast," by Richard H. Dana, Jr., and "Moby Dick, or the White Whale," by Herman Melville.

Sail and Steam

THE earliest American ships had carried cargo consigned to the master or crew to be sold on shares. Later they also carried cargo for "Adventurers" or merchants at a fixed freight rate. These ships sailed at no stated time but at the owner's whim or when they had a full cargo. As cargo destined for the heavy New York to Liverpool trade increased, a packet service offering regular sailings was established by the Black Ball Line in 1816. These packets were the finest and fastest ships available, manned by the best merchant captains and crews. They made regular passages in 18 or 20 days at stated times each month. The dependability of their service attracted increasing cargo and passenger trade, and other lines were soon formed in the trans-

American clipper ships were famous for their beauty and speed.

Atlantic and coastwise trade. The packet system was the beginning of the great shipping companies operating many ships on regular schedules and over regular routes as we know them today.

The most famous of our sailing ships were the clippers. The first real clippers, with taller masts and less cargo space than the packets, appeared in the 1840's. Most of them were used on the long voyages to the West Coast, to India, and to China. Such clippers as the *Flying Cloud*, *Dreadnought*, and *Ann McKim* are famous to this day for their speedy trans-Atlantic crossings and their swift voyages around the Horn. Captains of the clipper ships were "kings of the sea." With favoring wind some of the clippers sailed at 18 and 19 knots, which is faster than the majority of steam-powered cargo ships travel today.

Gradually, however, sailing ships were displaced by steam. A number of small steamboats had been built here and abroad by the early 1800's. In 1807 Robert Fulton's *Clermont* established the first regular inland steamboat service, and steam thereafter increased in popularity for coastwise and river service. In 1819 the American ship *Savannah* made the first successful crossing of the Atlantic using steam and sail. She took nearly a month to make the trip, and used her steam engine seven times. May 22, the day she sailed, is now celebrated each year as Maritime Day.

The S. S. SAVANNAH, making the first Atlantic crossing using sail and steam, was the forerunner of the modern steamer. The reliability of the steamship spelled the doom of sail.

The advantage of the steamer lay in her certainty. Though the clippers were often faster than the early steamships, even the best of them were at the mercy of the winds. They were expensive to run for they required large crews in proportion to their cargo capacity, and they had to charge high freight rates in order to make a profit. The clippers were waging a losing battle with steam. The discovery of gold in California gave a new lease on life to clipper building. Eager treasure seekers paid high rates for swift passages around South America to the West Coast. When the boom was over, the principal source of revenue of the clippers was gone, and the panic of 1857 prevented their finding another.

The transition from sail to steam was accompanied by the transition from wood to iron for shipbuilding. In 1837 the first iron steamer was listed by Lloyd's of England. In Great Britain coal was plentiful near the sea coast, and there were British coaling stations all over the world. Iron was available, machine tools were efficient, and workers were skilled in making and using them. American coal lay in the mountains far from the coasts. The machine tool industry was not highly developed in the United States, and capital was being used to open up the West, to build railroads instead of canals, to dig mines and cultivate farmlands, to pioneer new overland routes to the West instead of new sea routes. The American people turned their backs to the sea that had sustained them so long.

A few attempts were made by Americans to meet the challenge of steam from

abroad. E. K. Collins, operator of the Dramatic Line packets, obtained a mail contract and a grant of money from the Government. By 1850 he had put four paddle wheel steamers into operation, and they regularly made the passage to Liverpool in 10 days. The Government aid was increased. Then in 1854 one of his ships collided with a French ship with a great loss of life, and another of his ships disappeared. The Government subsidy was withdrawn. Hampered by the high costs of starting a new venture, Collins' line failed. Foreign governments continued to promote the development of steamships. Against the competition of subsidized foreign ships, American sailing vessels steadily lost trade.

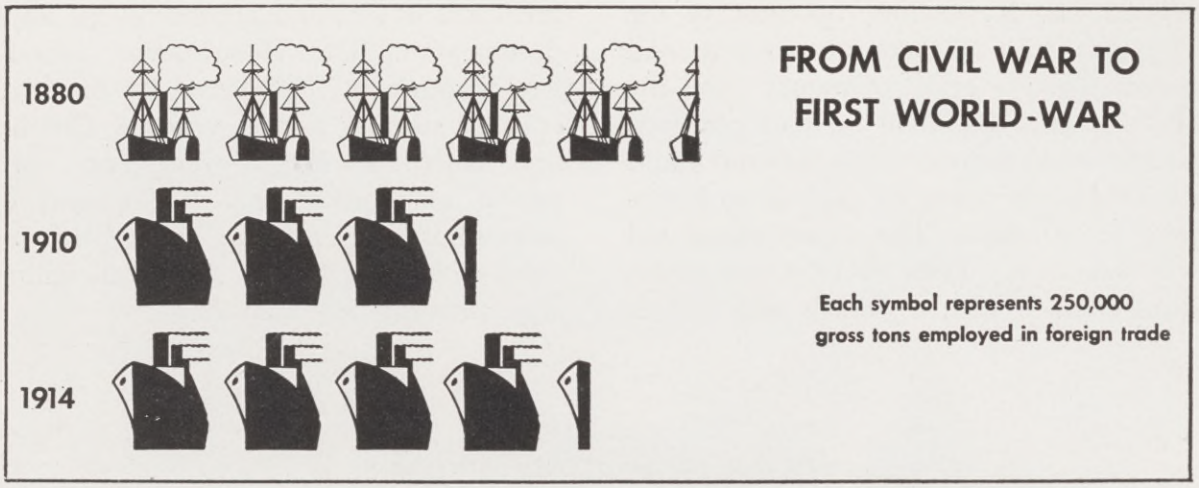
Decline of American Shipping

THE Civil War severely damaged shipping. Again the Merchant Marine formed the backbone of American naval power. Privateers destroyed many ships and spread such panic among shippers that they sold much of their shipping to foreign buyers. Blockaded ports and a shortage of ships led to a decline of trade.

After the war high prices and taxation hampered efforts to revive shipping. High protective tariffs raised the price of shipbuilding materials above the levels in foreign countries and destroyed the American shipbuilders' advantage of low costs. Investment in steamships required large amounts of capital, but the American Government failed to grant financial aid that would meet the large amounts given by foreign countries to aid their shipping. Private capital continued to invest in railroads and western expansion rather than in shipping. Lacking orders for new ships, shipbuilders turned to building "prairie schooners" for the westward migration.

The discovery of petroleum in 1859 made available a cheaper and better product than whale oil. Whales were becoming scarcer, and whaling trips were longer and less profitable. The Civil War was the finishing blow to a dying industry. A number of whalers were confiscated by the Government, loaded with granite and scuttled in an effort to bottle up Charleston Harbor. Many others were burned by Southern privateers. At the war's end they were in no position to compete with petroleum.

Although Americans pioneered many steamship inventions, we failed to keep up with the development of steamships and so lost our leading position as a maritime nation. The *Merrimac* and the *Monitor* had proved that steel ships were better than wooden ships. These vessels had also used the first successful screw propeller. It was England, however, who took the lead in developing steam-propelled ships and in building them of iron and later of steel. By 1864 half of Britain's merchant ships were using steam, while in 1883 half of our ships were still using sail and in 1900 half were still made of wood. Since our iron industry was less highly developed than Great Britain's, iron ships built in this



After the Civil War Americans turned their attention to the expansion of the West and let their merchant fleet decline. Other countries took the lead in building iron steamships.

country cost one-third more than those built in Great Britain. The United States lacked world-wide coaling stations where her ships could refuel. She did not have widespread consular services to assist her shippers. Shipping profits were smaller than profits to be made in railroads and mining; investors put their money in industries where returns were greatest. Wooden ships required frequent repairs. High costs and wages of American workers were no longer offset by increased efficiency as the quality of seamen declined.

While England and Scotland were developing the more efficient screw propeller for ocean ships, Americans were still using the "paddle wheelers" that plied the Mississippi and other great rivers. The British-controlled ship insurance market charged such high rates on American ships that a number of American lines were driven out of business.

A number of attempts were made by the Government to aid shipping. From 1845 to 1859 and from 1864 to 1875 contracts were granted for carrying mail to foreign ports on American ships. The profit on these contracts was not large enough to offset high expenses. In 1891 an act was passed which authorized payments for carriage of mail in proportion to the speed of the vessels. There had never been more than eight lines operating under the provisions of this act before it expired in 1923. The Government gave some encouragement to American shipbuilding by permitting importation of shipbuilding materials such as iron and steel without payment of tariff, which lowered the cost of building ships in American yards. This aid did not apply to ships used in coastwise trade, and ship operators hesitated to invest in vessels to be used in foreign trade if they could not be used in the protected coastwise trade as well.

None of these measures had any great or lasting effect on the prosperity of the Merchant Marine. Although there was general recognition of the need for help, opinion was so divided on the type of assistance to be given that no really effective legislation was passed.

The Position of Seamen

THE decline in the quality and efficiency of American seamen was in part owing to the introduction of the packet system and in part to the shift of American interest from the sea to the exploration of the West. The carriage of goods for a set fee by packets prevented seamen from making the high profits they had once made as shareholders in the ship and its cargo. Bad food and living quarters and constant floggings made the seamen's life one to be avoided by ambitious young men, who turned to the free farm lands, the mines, and railroads for the opportunities they had once found at sea.

Conditions were not much better after steam vessels had replaced sail, and in some respects they became worse. The "black hole gang," the seamen who tended the ship's engines and boilers, were greasy with sweat and coal dust for

As seamen left the sea and conditions on board ship became worse, "crimps" would man ships by kidnapping seamen. Illustration from "Twelve Thousand Cooks and Bakers."

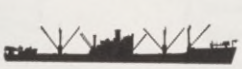
the entire voyage. More and more seamen took shore jobs. Many merchant ships had American officers and foreign crews.

Unscrupulous methods were used to man a ship with a full crew. A man called a "crimp" got a seaman drunk or drugged him in a saloon built out over the water. A trap door was then opened and the seaman was dropped into the water. Men in a rowboat picked him up and delivered him to a ship ready to sail. The seaman woke up far at sea and was forced to work for his passage, often without pay.

"Crimps" often lent money to needy seamen and then collected their wages after they had "signed on" for a voyage. Seamen were thus forced to work for months at a time for nothing. In the 1890's the hard-pressed seamen began organizing themselves into unions to improve their pay, food, and working conditions, and to break the control of crimps over hiring. The fight was led by a Norwegian-born sailor, Andrew Furuseth. The seamen met bitter opposition, but in the 20-year period from 1894 to 1914, the International Seamen's Union and other unions fought for and won many important advantages.

Some attempts had been made by the Government to improve conditions of maritime workers. In 1838 legislation enacted by the Congress had set up a Marine Inspection Service in an effort to decrease the number of accidents accompanying the use of steamships. Wooden hulls too frail to withstand the pounding engines and men unskilled in the operation of machinery contributed to the dangers of steamship navigation. The act required inspection of hulls and operating machinery and provision of safety equipment. In 1871 traffic regulations for vessels were established. An examining board was set up to review the qualifications for applicants for officer berths on American-owned ships. The Bureau of Navigation under the Navy Department was set up in 1884 to supervise the Merchant Marine and merchant seamen insofar as they were not controlled by other Government agencies.

Furuseth's efforts in behalf of the seamen at last resulted in passage of the Seamen's Act of 1915. Under this act seamen could not be forced to work aboard any particular vessel against their will. Their wages could not be collected by another person as payment on a debt. Hours of work at sea were regulated, food and living standards aboard ship were improved. Seamen were no longer subject to imprisonment for desertion nor to cruel and unusual punishment for disobedience. Safety measures set strict standards for lifesaving equipment and seaworthy conditions for vessels. Procedures were set up for recognizing complaints of seamen, and specifications were established for ratings and qualifications of able seamen. The act was to be enforced by the Steamboat Inspection Service of the Commerce Department.

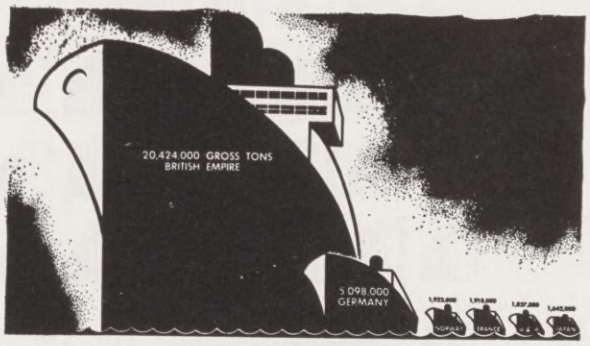


The Dangers of Weakness

IN the closing years of the nineteenth century only one American trans-Atlantic shipping line was in operation. Neglect of the Merchant Marine in peace weakened the country in war. Although the Spanish American War in 1898 lasted only 4 months, we did not have enough shipping to meet our relatively small wartime needs. The Army and Navy had to purchase 136,700 tons of foreign shipping. After this war our Merchant Marine continued to decline. President Theodore Roosevelt asked that a commission be appointed to study the needs of the Merchant Marine. Recommendations were made to the Congress, but no law was passed. When, in 1908, President Roosevelt sent our Navy around the world to demonstrate our naval strength, much of the effect was lost because we had to hire foreign merchant ships to supply our fleet.

The opening of the Panama Canal in 1914 stimulated intercoastal trade, which was reserved to American ships. Trade with Central and South America offered opportunities for some ships. A number of shipping lines were combined to reduce competition. In 1912 the Congress attempted to build up the weakened fleet by admitting foreign-built ships to American registry for foreign trade under American ownership, and in 1914 foreign officers and men were permitted to man American ships. These measures were intended to make cheap ships and labor available, but neither helped to build up the merchant fleet.

For two centuries the earnings of the merchant fleet had paid for a large part of the imports which had enabled us to build up and expand our industries. As the strength of the merchant fleet declined, its earnings ceased to be an important means of paying our debts. The twentieth century brought a new era of prosperity to America. The continent was rich in natural resources, and the people were energetic and inventive. The United States sold not only raw materials like cotton, lumber, and beef, but finished goods like machinery, electrical appliances, office equipment. Our exports and imports totaled more than $3,300,000,000 in 1910, but 91 percent of this trade was carried in foreign flag vessels. We ranked fifth in total tonnage of merchant shipping. Great Britain, France, Germany, Norway, Japan, and other maritime nations had better, newer, faster ships and more of them. The British and Germans vied in building large, fast liners and pushed the development of Diesel engines for ships.



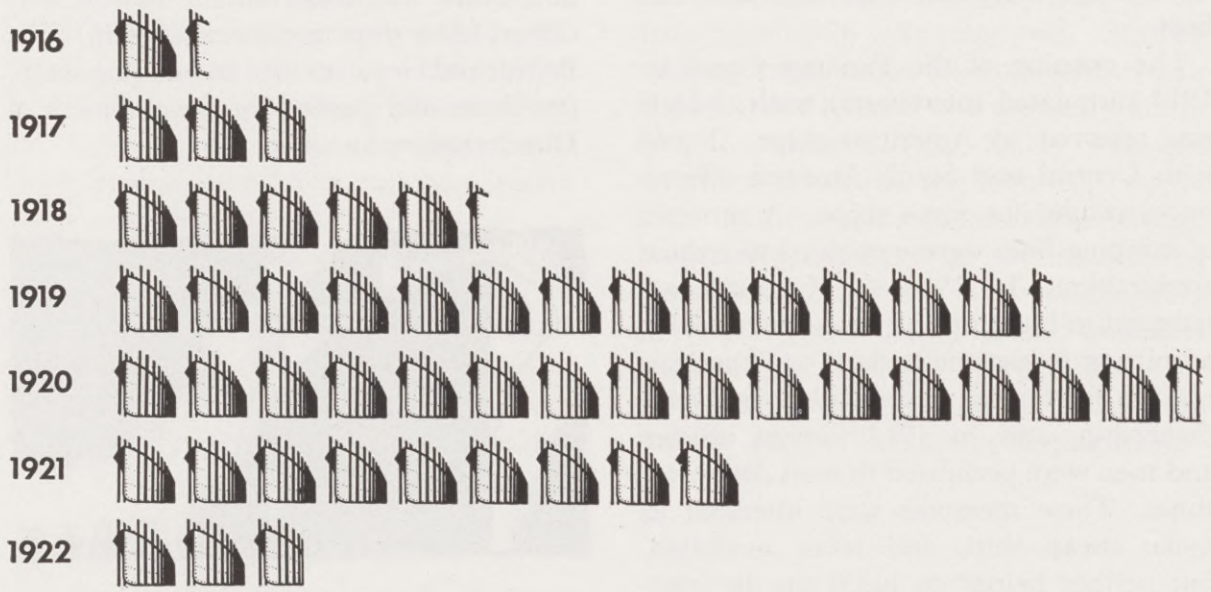
In 1914 the United States ranked fifth in total tonnage of merchant shipping.

WITH the outbreak of war in Europe in 1914 ships of the warring nations were withdrawn from peacetime trade for war uses. America's growing industries still needed raw materials and other products from foreign countries, and American products were increasingly in demand abroad. Some foreign ships were transferred to American registry and the domestic coastal trade was called upon for shipping, but we still had only enough ships to carry about one-tenth of our trade. The British Navy swept German cargo ships from the seas, and the German U-boats kept British ships from transporting American goods.

In an effort to build up our old and inadequate Merchant Marine, the Congress finally passed the Shipping Act, 1916. This act established a shipping board, whose main function was, at first, to regulate ocean freight rates and cost of ships, which had risen to fantastic heights with the shortage of world shipping brought about by the demands of the war in Europe. The act also contained a provision which allowed the Government to build and operate ships during the period of emergency and for 5 years thereafter. Shortly before the United States entered the war in 1917, the Emergency Fleet Corporation was organized by the Shipping Board to carry out a ship construction program. More than three billion dollars was appropriated for the construction of ships and shipyards and for the purchase and operation of ships.

There were at that time 37 yards building steel vessels and 24 yards building wooden ships. The Board advanced

America built $3 billion worth of ships for World War I, but most of them were too late to be of use.



money for expansion of yards and distributed contracts for steel and later for wooden vessels. The most famous of these yards was Hog Island on the Delaware River, where 100 ships could be built at one time. By the time the Armistice was signed in 1918 there were 341 shipyards. Although the shipbuilders had worked hard, few merchant ships had been delivered by the end of the war. Many of our soldiers were carried overseas in foreign ships. We borrowed over a million tons of cargo shipping from Great Britain in September 1918. Again, as in the Spanish War, we did not have the ships when we needed them most.

Our shipbuilding industry had become the greatest in the world. After Germany's surrender about one-third of the ship contracts were canceled, but many others were completed. Altogether the Emergency Fleet Corporation built 2,318 vessels. The Government continued building ships until 1922, but between 1922 and 1937 very few merchant ships were built in America.

At the war's end we had more ships than cargo. Freight rates fell, ships lay idle, many shipping lines were bankrupt. Seamen's wages dropped sharply, even while other workers' wages rose. In the economic depression of 1929 merchant seamen found themselves reduced almost to the level of their condition in the 1890's, when they had first begun their uphill fight for decent pay and treatment. By 1937 some seamen were earning as little as $25 a month. They ate bad food, worked 12 hours a day, and sailed in old, unsafe, and unseaworthy vessels.

Membership in the International Seamen's Union dropped from 103,000 in 1920 to 1,000 in 1930. In 1933 the seamen reorganized and laid their grievances before the National Industrial Recovery Administration. The following year West Coast seamen went on strike and succeeded in winning most of their demands for better pay and working conditions. Encouraged, East Coast seamen struck in 1936–37. They too met with success. Two new powerful unions were formed, the Maritime Federation of the Pacific in the West, and the National Maritime Union representing Atlantic and Gulf Coast seamen.

Fearful of returning to conditions of the 1890's, seamen struck for better wages.

There were a few bright spots in the postwar shipping picture. Passenger travel and the petroleum trade increased. Building of large, fast passenger liners and new tankers and the development of new mechanical devices for ships gave employment to a few shipyards.

Since the Shipping Act of 1916 had stated that the Government must dispose of its ships within 5 years after the war's end, the Congress passed the Merchant Marine Act of 1920, authorizing a new Shipping Board to sell our surplus vessels.

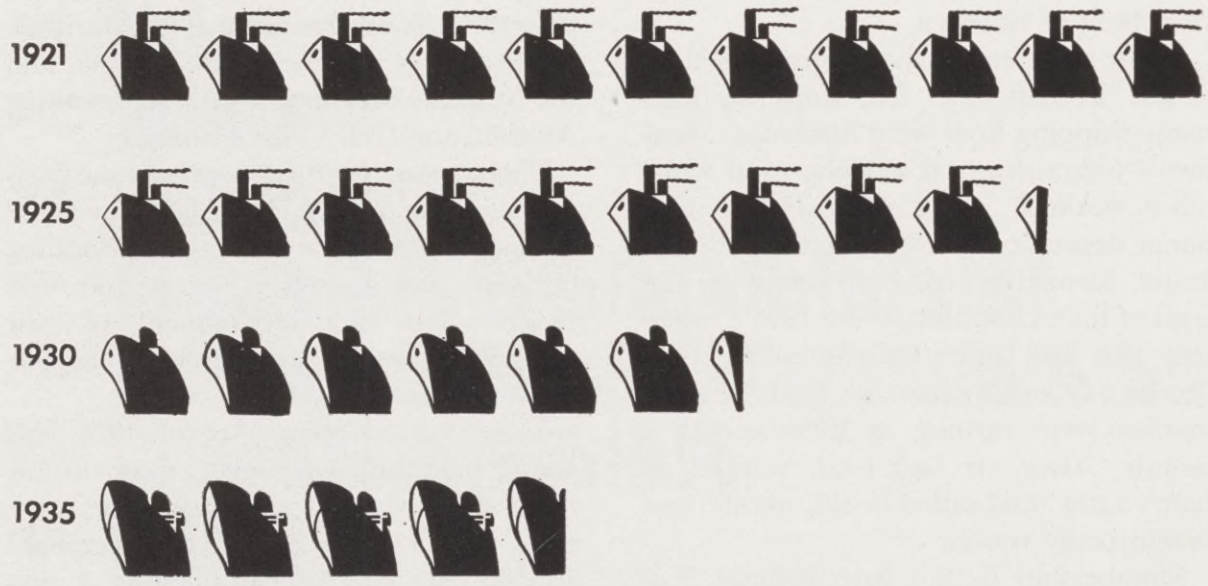
In the following 8 years 1,164 cargo and other type ships were sold to the highest bidder. They had cost the Government from $150 to $200 a ton to build, and they were sold to private operators at an average price of $18 a ton. At first the Government had got high prices but, failing to find enough buyers, at last had to sell the ships at great loss. Some other ships were sold at approximately $8 a ton for scrapping. Not all of these vessels could be sold even at such low prices, and they remained part of the "laid-up fleet" anchored in coastal rivers and bays. Some of the "laid-up" ships served in World War II.

The emergency fleet of World War I was of little use in building up a strong Merchant Marine. The ships had been built in great haste, with little thought for their use after the war. Many of those who bought ships after the war lacked operating experience and failed to establish efficient permanent shipping lines. Little effort was made to provide for replacement of old ships with new and modern designs.

The Shipping Act of 1920 granted some aid to shippers and shipbuilders. Again mail contracts were used to aid in ship operation, by a provision that mail should be carried on large, fast vessels built in United States yards. These vessels could be built with the aid of Government loans secured by a mortgage on the vessel. A ship operator was exempt from certain income taxes on the earnings or sale of vessels when he invested specific amounts in the building of new vessels in a United States shipyard. It was generally agreed that this act was inadequate, as it failed to compensate for the effects of the world-wide shipping depression which followed the war.

In 1928 another Merchant Marine Act confirmed the policy of the act of 1920 and

America failed to keep up her great wartime fleet, and her merchant tonnage declined again.



Each symbol represents 1 million gross tons employed in foreign trade

increased the amount of construction funds. This act also provided that in a national emergency the United States could take over any vessels on which construction loans had been made or to which mail contracts had been given. Again a world depression prevented the maritime industry from realizing any real benefits from this act. Though our foreign trade rose to almost 20 billion dollars in 1928–29, foreign flagships carried the bulk of it.

In 1933 the Congress began an investigation of merchant shipping under the mail contracts and found that because there had been no safeguards to insure that payments made were used solely for the development and maintenance of the Merchant Marine, the mail contracts had not solved the problems of building up a modern and adequate merchant fleet. In spite of the experience of the past we had let our shipping decline again.

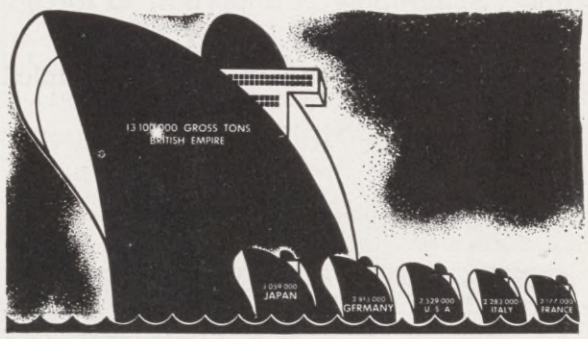
Magna Carta of the Merchant Marine

BY 1936, as another World War approached, our Merchant Marine was dying of old age. We were fourth among the six leading maritime nations in tonnage, sixth in vessels 10 years of age or less, fifth in vessels with speeds of 12 knots or over. After a study of our decaying fleet, the Congress passed the Merchant Marine Act of 1936, often called the "Magna Carta of the Merchant Marine." The act set forth the policy of the United States in these words:

It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine:

(a) sufficient to carry its domestic and water-borne commerce and a substantial portion of the water-borne export and import foreign commerce of the United States and to provide shipping service on all routes essential for maintaining the flow of such domestic and foreign water-borne commerce at all times,

(b) capable of serving as a naval and military auxiliary in time of war or national emergency,



In 1937 we again ranked behind other nations in merchant tonnage. Our fleet was old and slow.

(c) owned and operated under the United States flag by citizens of the United States insofar as may be practicable, and

(d) composed of the best equipped, safest, and most suitable types of vessels, constructed in the United States and manned with a trained and efficient citizen personnel.

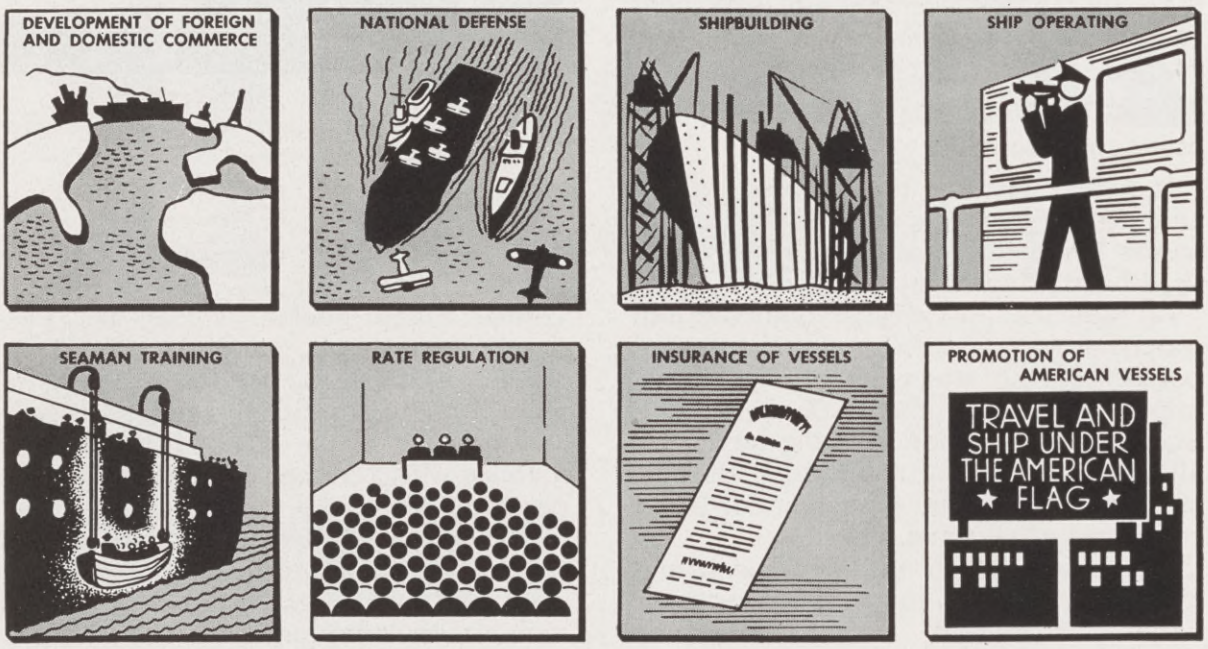
It is hereby declared to be the policy of the United States to foster the development and encourage the maintenance of such a merchant marine.

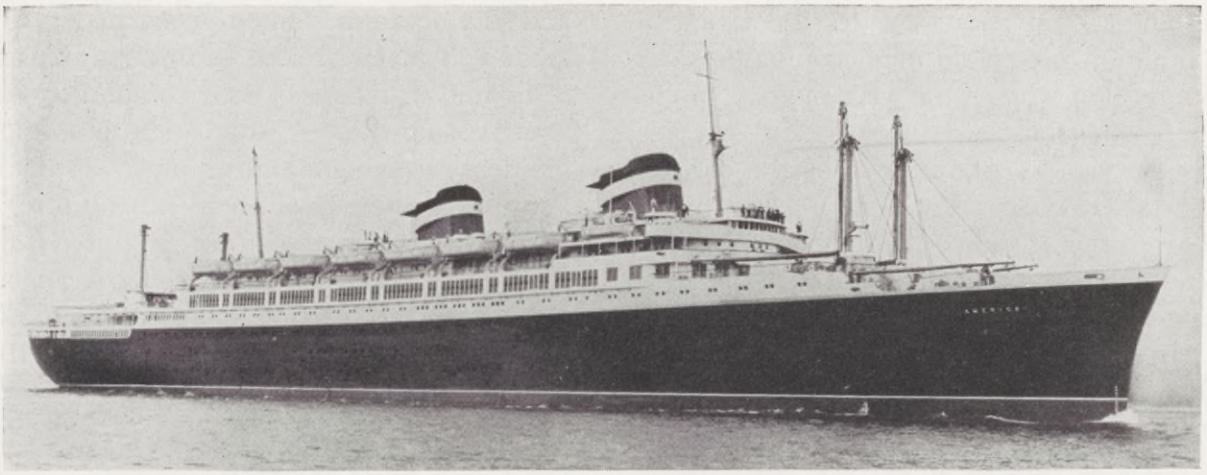
To carry out these policies the act established the United States Maritime Commission, consisting of five members appointed by the President. After the first Commission was appointed, it carried out the authorization of the act to make a series of studies on problems of the shipping industry.

The Commission's first report, the "Economic Survey of the American Merchant Marine," published in 1937, sought to answer three questions: What do we need? How can we get it? How much will it cost? The study declared that: the United States is the world's greatest exporting country and second only to the United Kingdom in the value of imports; shipping is important to foreign trade because ships subject to our own control are necessary to insure continued delivery of our exports and imports; American vessels in a trade tend to improve the service given to exporters and importers.

Twenty-three world trade routes essential to the economy of the United States were charted, and types of ships needed for these routes were recommended. In 1937 the merchant fleet consisted of 1,500 vessels, of which 400 were in foreign trade. The 1937 survey, after reviewing the shipbuilding facilities of the country, advised against launching a spectacular shipbuilding program. Instead, it recommended that 50 new cargo ships a year be built for 10 years. In addition to national defense features, these ships were to have adequate crew quarters and were to be the finest, fastest, safest ships on the sea.

The Merchant Marine Act of 1936 was designed to build up a strong and efficient merchant fleet through—





The S. S. AMERICA, the largest and finest passenger ship from an American shipyard, was part of a long-range program of new shipbuilding.

With the aid of experienced private shipping agencies and marine architects, the Commission designed three types of "C" (for cargo) ships. These were adaptable to the varied requirements of operators in different trades and to the needs of the Navy for potential naval auxiliaries. The Commission sought to lower ship operating costs by improving ship designs to give greater speed and cruising range with lower fuel costs.

The Commission recommended the building of medium-sized, fast, safe passenger ships rather than huge luxury liners. The S. S. *America*, the largest passenger ship ever built in a United States shipyard, was completed in 1940. Safety and comfort were the keynotes of her design. She was equipped to carry over a thousand passengers at a speed of 22 knots.

A number of high-speed tankers were ordered by private oil companies. As a defense measure the Commission paid the difference in cost between machinery required to increase speed for national defense purposes and that required for ordinary commercial uses.

The Commission investigated the labor situation in the Merchant Marine and set up standards for adequate, decent quarters for seamen in ships designed or subsidized by the Commission. Minimum standards for wage scales, for the number of seamen on each type of ship, and for working conditions were later put into effect. These standards applied only to ships built or operated with Government assistance, but pressure of competition gradually forced their acceptance by other ships.

The Merchant Marine Act of 1936 had authorized the establishment of the U. S. Maritime Service and the Merchant Marine Cadet Corps, under the control and direction of the Maritime Commission, to train merchant seamen. The Maritime Service was set up to train unlicensed seamen and to train seamen and officers for promotion to higher ratings. The Cadet Corps was set up to train inexperienced men as ships' officers.

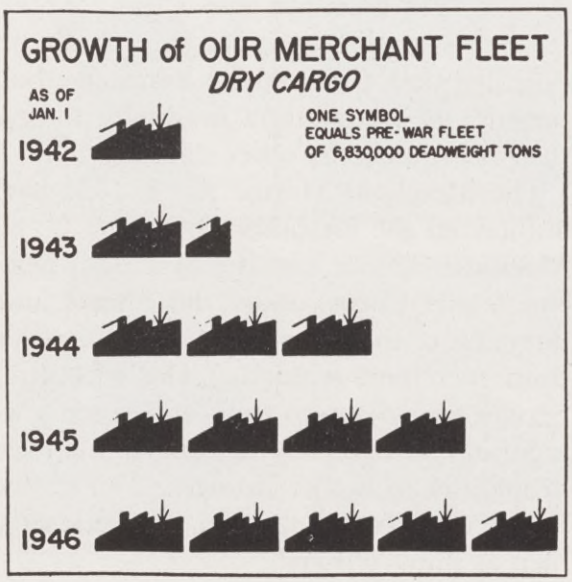
The Commission studied the financial condition of the shipping companies and found that while some were in good condition, others appeared to have little chance for survival. About half of the foreign trade fleet of dry cargo ships were receiving Government aid. Mail contracts accounted for about one-sixth of the operating income of these ships.

In accordance with provisions of the Merchant Marine Act of 1936, the Maritime Commission has granted subsidy, or parity, payments to private shipbuilders and ship operators to help meet the higher labor and material costs in this country as compared with costs of their competitors in foreign countries. Ship operators and builders receiving subsidies must agree to Federal regulation of their expenditures. Subsidized companies are required to place a portion of their earnings in a reserve fund to provide for replacement of ships. If a company earns more than 10 percent profit over a 10-year period, the Government "recaptures" half of the excess profits up to the total subsidy.

The Second World War

AS the long-range shipbuilding program of 50 ships a year got under way in 1939, Europe was again plunged into war. To the long-range program was added an emergency program, and in the next 2 years we built 185 new ships. After Japan attacked us on December 7, 1941, the emergency program became a war program demanding ships and more ships.

War demands doubled and redoubled the number of ships to be built. In 5 years we built 5,500 ships.



The number of ships to be built was doubled and redoubled. All our resources were mobilized. New yards were built and thousands of new shipyard workers were trained. By concentrating on a simple standard type of vessel, the Liberty ship, the shipyards were able to use mass-production methods. Factories all over the country sent materials and parts for ships in a steady stream to the shipyards. New methods of shipbuilding were used—welding replaced the slower riveting as a means of fastening steel plates together; huge sections of ships were built on the ground and swung into place on the hull with cranes.

Within a year and a half after we entered the war, our shipyards were building ships

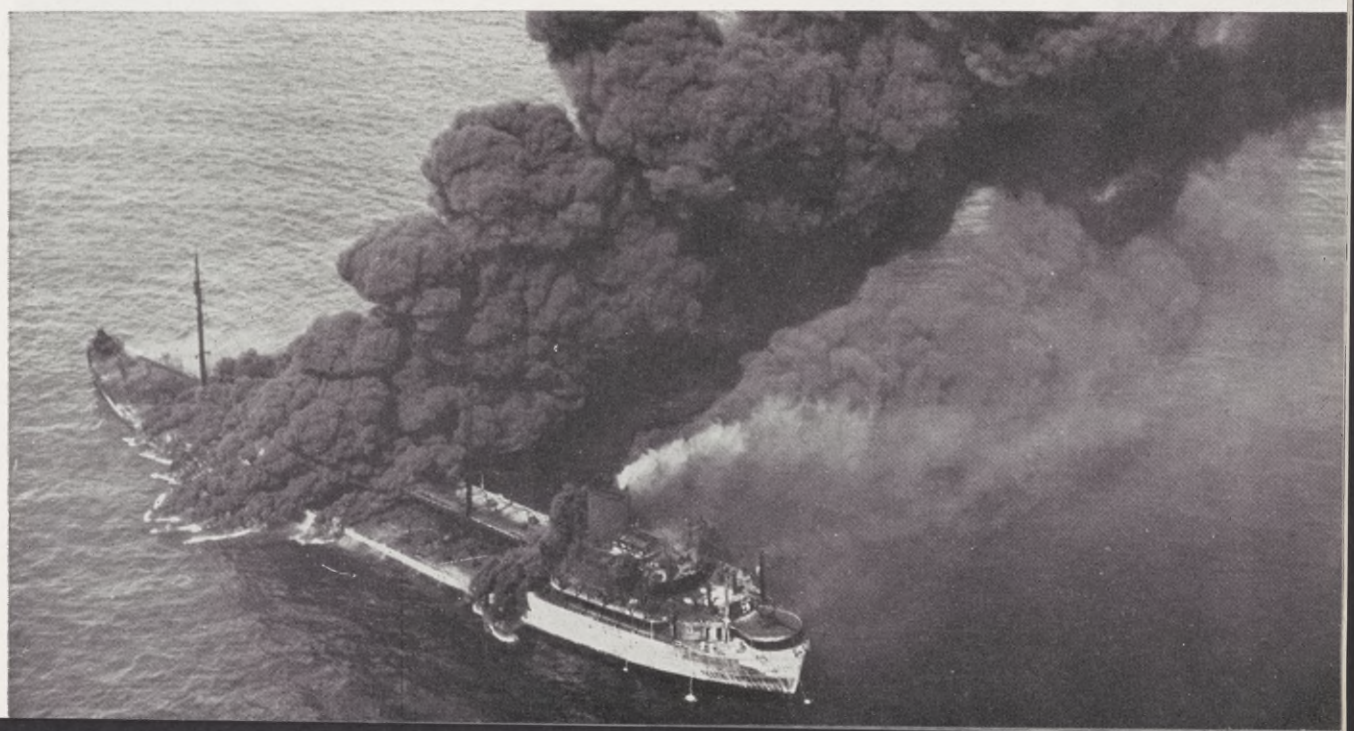
faster than the Germans were sinking them. From 1942 through 1945 these yards turned out over 5,500 oceangoing vessels, an average of *one vessel every 6 hours night and day for 4 years.*

The constantly increasing demands of war for merchant ships made it necessary for the Government to take over the direction of all merchant shipping. In February 1942 the War Shipping Administration was established for this purpose. Ships were taken over by the Government from private operators in both the coastwise and ocean trades; foreign ships were bought; enemy ships in our ports were seized. New methods of loading were developed to increase cargo-carrying capacity, and time spent in port was cut down. Thousands of seamen were recruited and trained to man these ships.

In addition to transporting millions of our soldiers and their weapons and supplies to battlefields in every part of the world, the merchant fleet carried four-fifths of the supplies for the entire United Nations war effort. At the same time it brought back essential raw materials to our war factories and food and other products needed to maintain the civilian economy. The Army used merchant ships as troop carriers and as hospital ships. The Navy took hundreds for use as tankers, warship and plane tenders, airplane carriers, and for other special uses.

Merchant ships took an actual part in the fighting. There are a number of exciting stories about merchant ships which fought with attacking planes and submarines and sometimes defeated the more powerful enemy craft. Often a ship so damaged by fire, bomb, and torpedo that it seemed impossible for her to remain afloat came limping into port carrying her precious cargo, saved by the good workmanship of those who built her and the courage of the men who sailed her. Merchant ships played an important part in the crucial invasion of Europe. Some

Merchant ships and seamen were special targets for the enemy who knew their importance in carrying on the war.



60 old and damaged ships were towed across the English Channel, then sunk to form a breakwater and an artificial harbor in which the invading fleet could discharge the men who were to defeat Hitler.

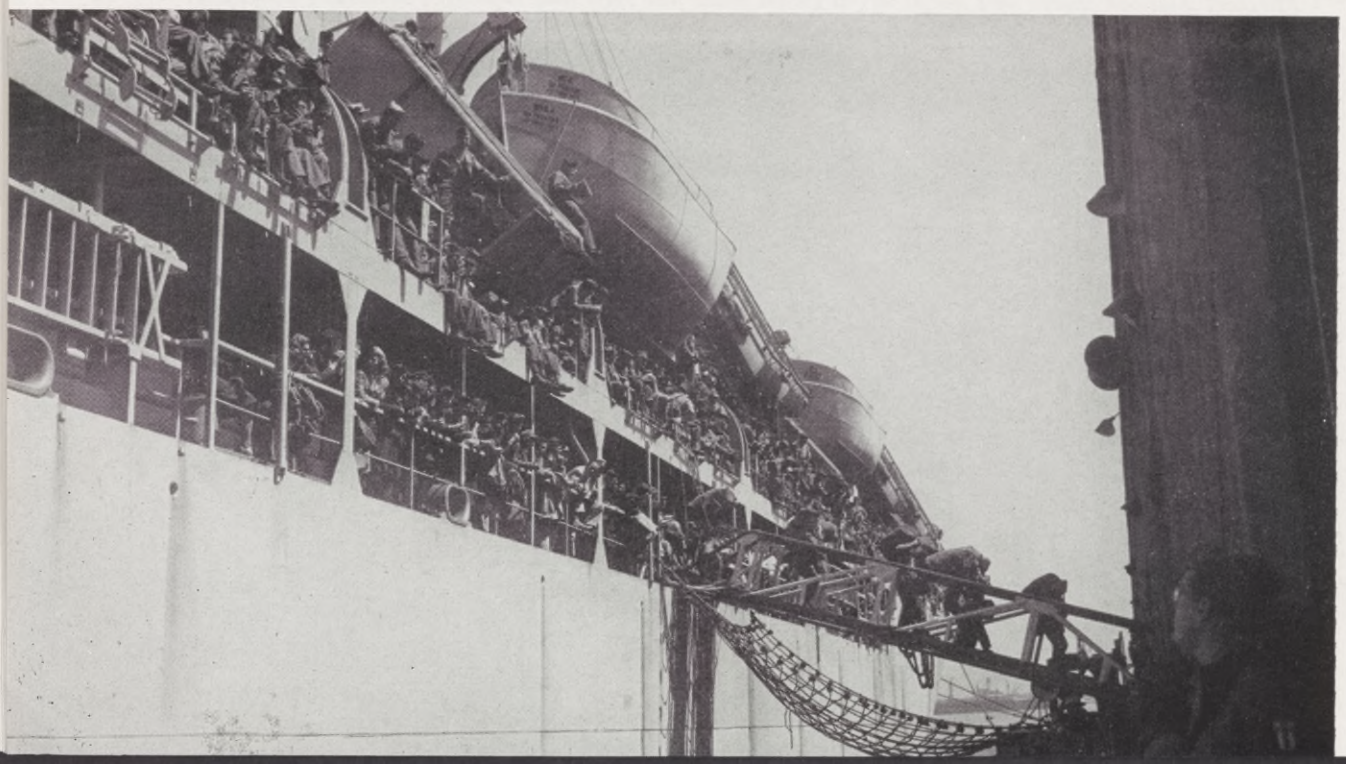
Many merchant ships were sunk and many brave seamen were killed in the fierce war at sea, for the enemy knew how important to the success of the Allied cause were the cargoes carried by merchant ships, and much of his effort was concentrated on defeating them. On the run to the Russian port of Murmansk merchant ships plowing through fields of ice were attacked by wave after wave of German bombers. Often the greater part of a convoy was destroyed. Seamen thrown into the icy waters could survive only a few minutes, but the high loss of life did not prevent others from doggedly driving their ships through to their destination. Even within sight of our own coasts our tankers were sunk by German submarines, and many seamen perished in the flames.

In spite of losses and difficulties, the shipbuilders kept building ships faster and faster; the seamen kept sailing the ships in spite of bomb and torpedo. The Navy increased its protection of our shipping. Together, workers and seamen won the Battle of the Atlantic and conquered the distances of the Pacific.

After the war ended in August 1945, the Merchant Marine was busier than ever. One of the biggest transportation jobs of all was getting our fighting men back home. More than 7 million troops had been sent overseas. Half of them were back in the United States by December 1, only 3 months after the Japanese surrender. They came back in merchant ships—in passenger liners converted into troop ships, and in every cargo ship that could carry a few men.

Thousands of war brides were brought to America in merchant ships especially

After the war, merchant ships were still busy, bringing back soldiers and their brides.



adapted for them and their babies. A huge amount of cargo tonnage was provided to carry relief. About 400 big freighters, which only a few weeks before had been unloading guns and other implements of war, began delivering grain, woolens, farm implements, and dairy cattle to stricken areas. Throughout 1946 the War Shipping Administration scheduled for shipment to Europe a monthly average of 1,500,000 tons of coal, 800,000 tons of grain, 200,000 tons of flour.

Our Merchant Fleet Today

AS its war and postwar jobs were completed, the merchant fleet was returned to a peacetime basis as rapidly as possible. Ships taken over from private operators by the Government were returned to their owners, more than half of them within 6 months after the war. The rest were returned or compensation was arranged for them by the end of 1947. Many of the ships taken for the use of the Army and Navy were restored to their civilian status. The luxury liner *America* and other passenger-type ships still usable after rigorous wartime service were sent to repair yards for reconversion to the peacetime travel trade.

The nation was faced with the problem of disposing of the large number of ships it had built during the war in the most advantageous manner possible. The Congress in March 1946 passed the Merchant Ship Sales Act, placing the responsibility for this task upon the Maritime Commission. This legislation fixed minimum rates at which ships might be sold and set charter rates at which ships might be hired for use by private operators. By June 30, 1949, the Commission had sold 693 ships to American operators and 1,113 to foreign operators. The purpose in making ships available to owners in other countries was to help build up the fleets which had suffered severe losses during the war. By March 1948 foreign fleets, through purchases of United States war-built ships and by the building of new vessels, were approaching their prewar levels. At that time, therefore, the United States Congress ended the Commission's power to sell its vessels to foreign nations.

The number of Government-owned ships chartered to private American operators has varied greatly. Shortly after the war, when fleets of foreign nations were insufficient to meet their needs and demand for relief and rehabilitation goods was very high, United States ships were in great demand, especially in bulk services such as transport of wheat and coal, which were not serviced by regular American shipping lines. By June 1947 there were 1,500 vessels under charter, but from that point on, as other maritime nations began to put an increasing number of vessels into service, and as the privately owned fleet under the United States flag grew larger through purchases of war-built vessels, fewer Government-owned ships were chartered. By June 30, 1949, there were only 375 chartered vessels still being operated.

With its war tasks completed, the War Shipping Administration was dissolved on September 1, 1946, and its remaining ship operation functions were turned over to the Maritime Commission. Until June 30, 1947, the Maritime Commission itself

operated a number of its vessels, employing private operators as agents, especially in domestic services. The competition of low railroad freight rates and the sharply increased postwar costs made it almost impossible for operators in prewar coastwise and intercoastal services to resume operations. The need for water service to supplement the overburdened land transport agencies immediately after the war led the Commission to carry on some of these trades, but in June 1947 these services were discontinued. The only vessels operated by the Government after that were a few emergency type passenger vessels employed in carrying displaced persons and those traveling in the national interest, and a number of tankers. By the end of 1948 practically all the Commission's tankers had been sold to private operators, and by April 1949 the Commission ceased to operate the emergency passenger vessels, as the Army took over the task of carrying displaced persons.

The Merchant Ship Sales Act also provided for placing surplus ships in a reserve fleet where they would be kept ready in case of future emergency. Some of the very old or badly damaged ships have been scrapped. Others are carefully preserved in protected waters and at little cost are kept in readiness for any national emergency. By June 30, 1949, there were over 1,900 ships in Reserve Fleet anchorages.

Before the war we had a merchant fleet of approximately 1,100 active seagoing vessels. During the war we built about 5,800 more. We lost over 1,500 during the war from both marine and war casualties, and another 300 were scrapped. By June 30, 1948, 1,100 ships had been sold to foreign nations, almost 1,600 put in Reserve Fleets, and about 1,900 were still in active service, of which nearly 700 were chartered vessels. An additional 500 ships were under Army or Navy control. Many of the Government-owned vessels under charter at that time were later returned to the Reserve Fleets, and most of those still under charter will be put in the Reserve Fleets when their emergency tasks are finished. This will leave a privately owned and operated fleet of about 1,200 to 1,300 vessels, not much larger than that in service before the war. These ships, however, are generally faster, larger, and more modern than those of the prewar fleet. A larger proportion of them are in foreign trade, since the domestic fleet is still only about one-half of its prewar size.

In preparation for a return to peacetime trade, the Maritime Commission resurveyed the trade routes essential to our economy and designated 31 routes covering most of the world's sea lanes. These are routes on which operators may obtain financial aid from the Government in maintaining regular service where they are in competition with low cost foreign operators. The Commission also made recommendations as to the number and type of ships that might be profitably employed on each route.

By the end of 1945 the emergency shipbuilding program had been completed with production of 2,710 Liberty and 531 Victory ships, 525 tankers, a number of C-types and others. War needs had required the building of cargo ships rather than passenger ships. Our postwar fleet therefore lacked passenger vessels and some special cargo types such as refrigerator ships. A study made by the Maritime Commission even before the war's end proposed a program of shipbuilding to remedy the defects of the postwar fleet and to provide for orderly replacement of vessels as they became obsolete. This pro-

gram called for building of 144 vessels in 10 years and a 25-year replacement program to prevent the fleet from becoming obsolete all at one time.

Increasing interest in the subject after the war led to a number of studies by Government and civilian groups on the need for a ship construction program. There were serious shortages of materials in the immediate postwar period, however, and many urgent national needs for available funds. A number of technical changes were also being made in the proposed ship designs. The combination of all these factors delayed concrete action on the shipbuilding program until the middle of 1948.

By that time shipbuilding in United States yards had fallen to a new low. During the year ending June 30, 1948, only 33 merchant ships of 1,000 gross tons and over were built in the United States, only 12 of which were for American flag operation. The number of shipyard workers employed in private United States yards fell far below the level of 100,000 estimated as the minimum needed as a nucleus for expansion in case of emergency. By August 1948 the Maritime Commission for the first time since its shipbuilding program began had no vessels under construction.

In that month, however, the Commission placed orders for five new passenger vessels, two of 29,703 displacement tons each for service to the Mediterranean, and three of 19,600 displacement tons each for round-the-world service. In May 1949 a contract was signed for building of a great new passenger liner of 48,000 gross tons for the North Atlantic passenger trade. All these vessels were to be built for the account of private operators, with the Government making up the difference between foreign and United States building costs and paying for national defense features in excess of commercial requirements. A number of other contracts for fine new passenger ships are being worked out with the companies which may purchase them.

The Maritime Commission has also designed, with advice and assistance from private operators and military authorities, a prototype vessel to serve as a standard vessel for replacement of ships which become obsolete. The ship has also been designed with a view to its suitability for mass production in case of any future emergency shipbuilding program. This vessel will be faster than the Liberty and Victory ships, but will have similar cargo capacity and will include many improvements in design suggested by experience in World War II. Another prototype vessel is being designed to serve both as a cargo vessel and as a naval auxiliary vessel suitable to quick conversion as an attack transport or cargo ship in case of emergency.

The American Merchant Marine of the future must be efficient and economical in order to carry on the best traditions of our maritime history and to prevent the decline of our shipping which proved so costly three times in the last half century. The tremendous expansion in United States trade after the war, which raised the value of our exports and imports to $20 billions in 1948, was largely due to the fact that nations whose resources and facilities had been destroyed by war needed far more goods than they had the ability to pay for and to transport. For several years the United States has been financing a large share of the purchases and has been furnishing much of the transport for the goods.

As the European nations are enabled through help of the Economic Cooperation Administration to resume production and to stabilize their economies, and as they return their merchant fleets to operation, the amount of cargo available for United States ships will drop. The decrease in the number of ships chartered by United States operators from the Government from 1,500 in June 1947 to 375 in June 1949 is evidence of the gradual

return of a more normal balance of trade. It will be further necessary for the United States to increase its share of imports as goods become available for purchase in other countries. If American shippers and travelers use American vessels, a reasonable share of this trade will be carried by United States vessels and should improve the economy of ship operations, since full loads in both directions are more economical than a heavy load in one direction and a return in ballast.

Since shipping is an important way many foreign nations have of acquiring American dollars, which they need to finance their purchases from us, some people believe that the United States should permit these countries to carry most of our trade in their ships. These people forget that it is not good business to permit your competitor to control the distribution of your product. American shipping lines make it their business to serve and promote American trade. Nor can we overlook the sudden and critical need for ships that always arises when war breaks out. We should have learned that lesson from two world wars. It is not sufficient for the United States to have a reserve fleet laid up in some river. We cannot rely on shipbuilding miracles to create a merchant fleet overnight. We need an active fleet with experienced personnel that can be immediately put to war service. It may prove to be a costly mistake if we again fail to maintain a merchant fleet of fast, superior, modern ships on all essential trade routes, capable of serving our foreign commerce in time of peace and our national defense in time of war.

QUESTIONS FOR DISCUSSION

How did merchant ships help the economy and defense of the American colonies?

How did American ships promote trade after the Revolution? How did the Government try to help shipping?

What was the result of our successful defense of our merchant ships against foreign attacks?

Why did we fail to develop steamships? What was the effect on our shipping?

Why did bad conditions among seamen hurt our shipping?

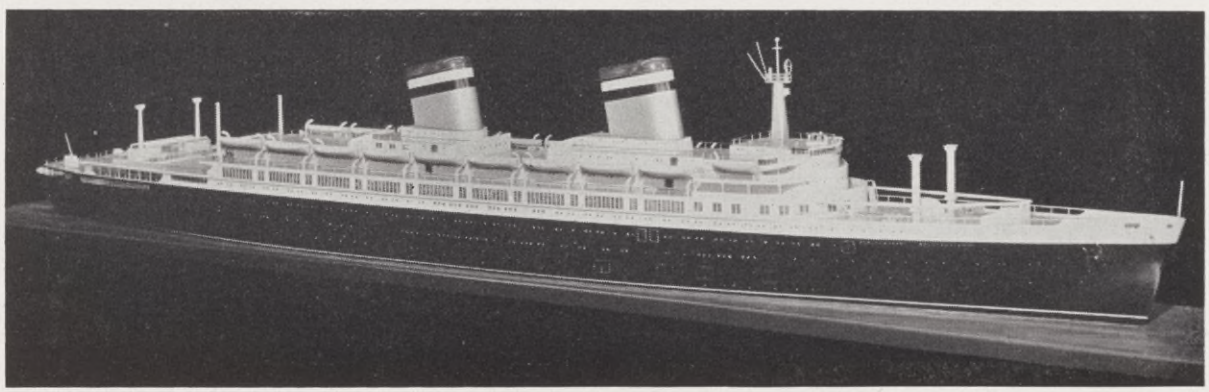
Why did Government aid fail to help? How did the weakness of our merchant fleet handicap us in World War I? Why did our shipbuilding program fail to meet our needs? Why did our shipping decline again?

How did the Merchant Marine Act of 1936 propose to help our merchant fleet? What did the Maritime Commission do to help the U. S. Merchant Marine?

In what ways was our Merchant Marine of more use in World War II than in World War I? What were its war tasks?

Why do we need a Reserve Fleet? How can we improve the efficiency of our merchant fleet? Should we let foreign nations carry our trade in time of peace?

Fast, luxurious new passenger liners have been designed for service on postwar travel routes.



PART II

MERCHANT SHIPS AND THE NATIONAL WELFARE

Merchant ships stand next to the armed forces in our line of defense.

Merchant Ships Serve National Defense

THROUGHOUT our history one of the most important tasks of the Merchant Marine has been to assist in the defense of our country in time of war. The United States has thousands of miles of coast line and many harbors whose main protection rests in our seapower. A basic support of our seapower is our Merchant Marine. Merchant ships stand next to the armed forces in our line of defense.

As a means of defense the Merchant Marine serves two purposes. It provides the Army and Navy with auxiliary vessels to supplement and serve the naval forces and to carry men and materials for war purposes. It also transports the raw materials and other products needed to support the civilian economy from which the armed forces draw their strength.

Until 1798 the Merchant Marine was the chief source of our seapower. We had no real Navy. Merchant ships served as privateers, privately operated but licensed by the Government to raid enemy shipping. Yet without naval protection merchant ships were subject to constant attack

by hostile powers. A permanent Navy had to be created to protect merchant shipping from foreign interference.

That naval power alone was not enough to protect our interests was shown in the Spanish-American War. The strength of our merchant fleet had declined so that we had to buy foreign ships to carry our soldiers and supplies. President Theodore Roosevelt had to hire merchant ships from foreign countries to carry supplies for our Navy on its world tour. In World War I we were severely handicapped by our lack of merchant ships. We had to send most of our men and supplies across the Atlantic in British and French vessels.

World War II gave us another object lesson in the value of a merchant fleet in time of war and in the great danger of letting our fleet become weak. World War II was the first two-ocean war in our history. The Merchant Marine was the main link between the production fronts and fighting fronts all over the world. The dual task of the Merchant Marine in wartime was clearly revealed. The Army and Navy took merchant ships to serve as transports, airplane carriers, hospital ships, fleet oilers, submarine tenders. Merchant ships carried soldiers and weapons to Europe, Africa, China, Russia, and Australia. Merchant ships also brought in raw materials like bauxite for plane manufacture and sugar for civilians who manned the factories. They carried weapons and supplies to our Allies.

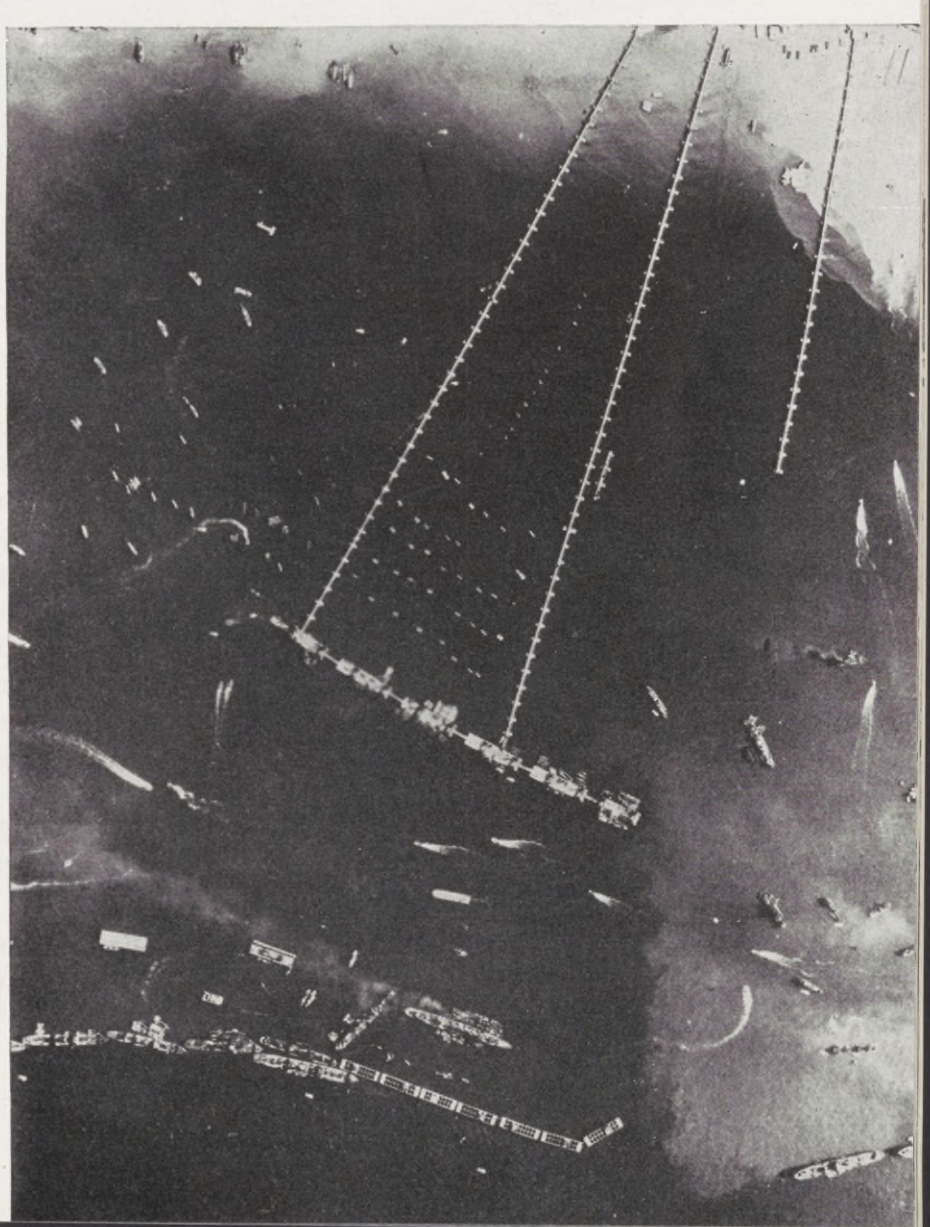
These ships were taken from coastwise trades and from the foreign trade fleet. With their luxurious fittings ripped out and bunks installed, passenger liners like the S. S. *America* were converted into troop transports. The Navy took fast new tankers from the oil companies to carry fuel for the fighting ships. Many of the new C-type cargo ships were converted into hospital ships and warship tenders. Merchant ships bristled with guns, and naval armed guards stood ready to ward off attacking submarines and planes. Degaussing belts were installed to protect them from mines, and other protective devices were used to help them get their cargoes safely to their destinations.

There were not enough ships in the Merchant Marine to answer the ever increasing demands of war. The Maritime Commission doubled and redoubled its shipbuilding program. Special types such as frigates and airplane carriers were built to help the Navy fight German submarines. Large ships adapted from passenger designs were built to carry troops. Thousands of standard Liberty cargo ships were turned out to carry millions of tons of war cargo.

Another Government agency, the War Shipping Administration (WSA), was created in February 1942 to control the operation of these ships. As much as three-quarters of WSA tonnage was put at the service of the Army and Navy. These ships helped build up military powerhouses in Africa, the United Kingdom, and the South and Southwest Pacific. As the war progressed, demands for tonnage changed. The invasion of Axis-held North Africa was the first large-scale action supported by WSA ships. Hundreds of merchant ships were in the first attacks on North Africa and in the invasion of Sicily. Toward the end of 1943, huge convoys shuttled back and forth across the Atlantic building up an invasion force in the British isles.

In June 1944 the greatest sea-borne invasion in history crossed the English Channel. First in line were 32 American merchant ships to be sunk off the beachhead to form a breakwater. They were manned by 1,000 American merchant seamen and officers who volunteered for the work. The ships were charged with explosives for quick scuttling. They sailed through mined waters, filed into position off Normandy under severe German shelling, and were sunk to form the artificial harbor. Behind the breakwater, piers that had been built in England were towed in to handle the unloading of men and equipment. Ten oceangoing tugs, operated by the WSA and manned by merchant seamen, towed the harbor units into position. All merchant officers and seamen in the operation were commended, and the 10 tug masters were decorated. One hundred and fifty American ships were kept in cross-Channel service after the invasion.

On January 1, 1944, nearly 2 million tons of shipping were used by the Army



Merchant ships were sunk to form a breakwater to protect the steel roadways supported on floats over which the Allies sent their invading forces into Normandy in June 1944.

Liberty ships and tankers too old or too badly damaged to keep sailing serve to protect the artificial harbor off Normandy.

in the European area. By September this amount had increased to 6½ million tons. By the latter part of the year, it became possible, by means of new ships, to give the armed forces in the Pacific the supplies needed for a sustained drive. The year 1945 saw our maritime power at its highest point and the surrender of the Axis powers.

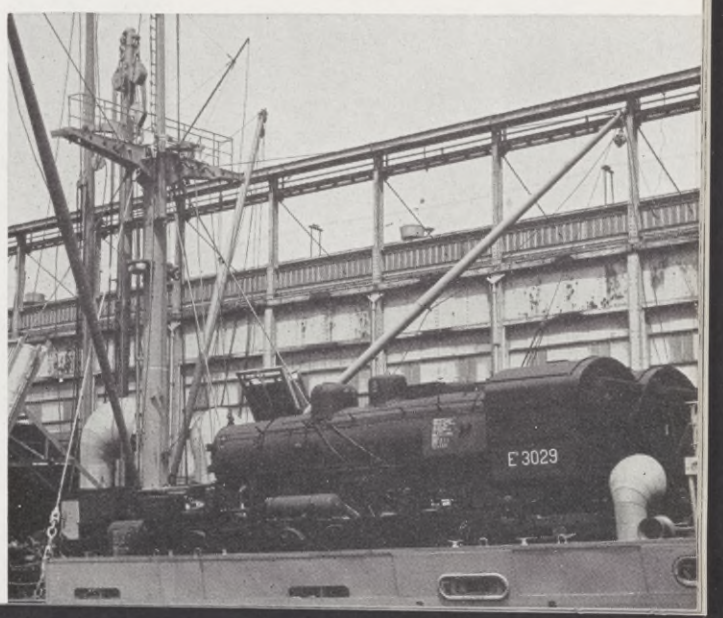
Merchant ships transported most of the 7 million American fighting men and 140,000 civilians to the battle zones, but getting our troops overseas was only a small part of the shipping job. With every man who left our shores there had to be from 5 to 12 tons of equipment shipped with him. From 1 to 5 tons had to be shipped to him each month in food, clothing, and ammunition. An infantry division can easily expend 300 tons of ammunition in a single day of combat.

Heavy military equipment had to be shipped—locomotives and other equipment for the railroad we built and operated in the Middle East; the bulldozers, cranes, and road graders for the airfields we built on scores of Pacific islands; the tanks with which Patton smashed through France and the trucks that raced after him with supplies; the oceans of gasoline and lubricants without which none of this motorized equipment could move an inch.

In the course of the war the total cargo sent from the United States, excluding

bulk liquid cargo carried for the Army and Navy, was 268,000,000 long tons, of which 64,730,000 tons were petroleum and bulk liquids. Seventy-five percent of this cargo was carried in ships under WSA control. We were no longer buying and borrowing ships as in 1898 and in 1918 but were transporting to battlefronts all over the world FOUR-FIFTHS of the supplies for the entire United Nations war effort.

In addition to the job of carrying finished products and weapons overseas, our merchant ships brought back strategic and essential commodities needed for war industries and civilians. During the war we imported 70,652,000 tons of dry cargo and 35,118,000 tons of petroleum products. One of the important items was bauxite—more than 3½ million tons of it in 1943. That bauxite was turned into sheets of aluminum which were fashioned into the planes that bombed Nazi Germany and Japan into submission. We needed leather to make millions of pairs of field shoes, combat boots, flying jackets, and other gear needed by our fighting men. Our ships went everywhere to take on loads of hides. We imported cattle hides from Iceland and Somaliland and elk hides from French Oceania. From arctic wastes to tropic jungles came products for America's war industries. We imported corundum ore from Mozambique, tungsten from Portugal, tin ore from the French Cameroons and Bolivia, cryolite from Greenland, uranium from the Belgian Congo, wool from Tibet, mica from China, and rubber from Ceylon.



Tanks, trucks, and locomotives were part of the heavy military equipment carried to the battlefronts by merchant ships.

In 1943 also merchant ships carried 261,000 tons of cocoa, 4,444,442 tons of sugar, 969,000 tons of coffee for civilian use. They brought honey from Iraq and licorice from Afghanistan. Merchant ships helped maintain the American standard of living even in the midst of a global war.

The cost of building and operating the wartime merchant fleet has been estimated at $20 billion. Its contribution to victory cannot be measured in dollars. The importance of the part this fleet played in successfully waging the war has been testified to by military and naval leaders, including Generals Eisenhower and MacArthur and Admiral King.

The Merchant Marine was able to fulfill its role as an arm of national defense in World War II because the Merchant Marine Act of 1936 had given us a start toward an efficient merchant fleet. At the start of the war there was a core of established shipyards, experienced ship operators, and seamen whose knowledge and skill supported the greatly expanded wartime programs of shipbuilding, ship operation, and seamen's training. Thousands of inexperienced workers who learned to build and sail merchant ships made a great and patriotic contribution to the war job of the Merchant Marine. But their efforts rested on the foundation of the peacetime merchant fleet. Had that peacetime fleet been stronger and more efficient, the war job might have been accomplished with less cost in time, effort, and money. The efficiency and strength of the Merchant Marine in peacetime will continue to be a decisive factor in the contribution that it can make to the future security of our Nation.

QUESTIONS FOR DISCUSSION

Why do we need merchant ships in time of war?

How do the Army and Navy use merchant ships?

Why are merchant ships important to civilians in time of war?

What part did the Merchant Marine play in the fighting in World War II?

What were some of the cargoes carried by merchant ships during the war?

How was the Merchant Marine able to fulfill its role as an arm of national defense in World War II?

An endless stream of supplies was carried by ship to back up every overseas invasion.

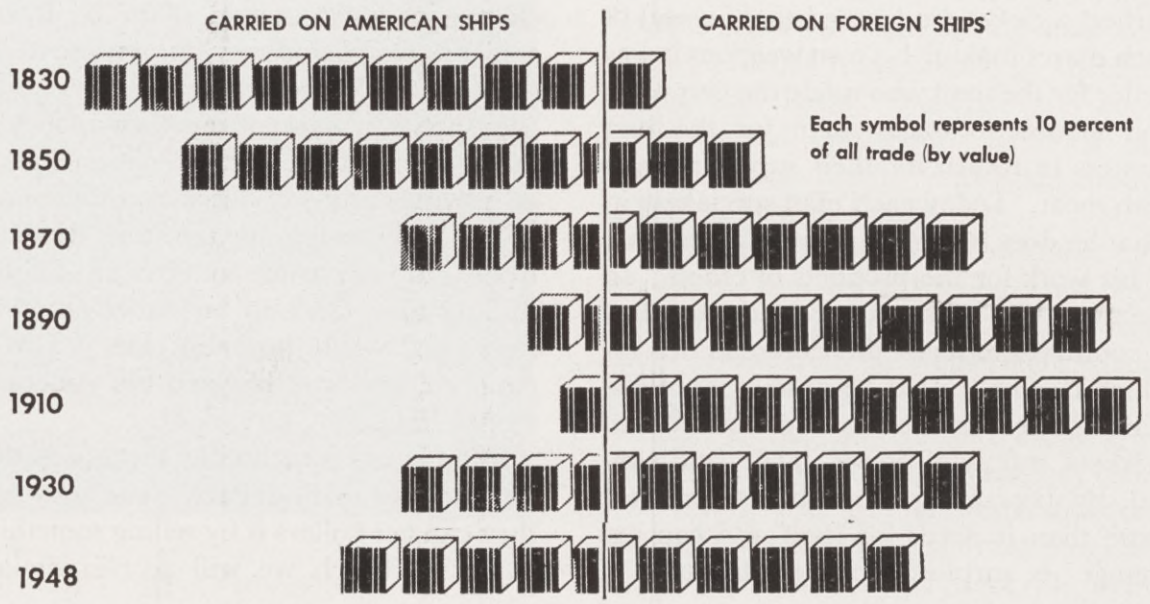
Merchant Ships Serve Foreign Trade

IN time of peace merchant ships serve our domestic economy and foreign trade, just as in war they serve our national defense. Foreign trade is the exchange of goods and services between countries. A very large part of the goods we exchange with other countries must be carried across the water in ships.

In the past the amount of our foreign trade carried by our own ships has varied—from 90 percent in 1800 to only 10 percent in 1910. Before World War II they carried about 25 percent; immediately after the war the percentage rose to 67, but by June 1949 it had fallen to less than 50. There are several important advantages in carrying our trade in our own ships. American ships which carry American trade and passengers in peacetime can be used for national service in time of emergency. If we have modern and efficient ships operated by experienced companies and manned by experienced men, they will be ready to carry our goods even though ships of other countries may be withdrawn from our service. At the outbreak of both World Wars and on a number of other occasions when we were dependent on foreign ships to carry our trade, we were suddenly deprived of essential transportation of our goods when the emergency forced foreign countries to direct their ships to other uses.

Another important advantage of having our own ships carry our trade is the improvement in service available to American merchants. The shipping services of each country are designed to serve the needs of that country first. In the past

In the past, the amount of our trade carried by our own ships has varied. Before World War II it was about 25 percent. Our postwar goal is 50 percent.



our goods have been delayed or carried on long, roundabout routes to their destination because no foreign shipping service was exactly suited to our needs. By determining what trade routes are essential to our trade and how many ships are needed to carry our trade over these routes, the Government seeks to give the American people the type of service that will best suit their needs and promote their interests. With ships under our own control, we are also able to prevent unreasonably high freight rates and unfair discrimination against our trade.

We have no desire to monopolize the carriage of our own trade, even if that were economically possible. But we have found that we cannot afford to leave the carriage of most of our trade to foreign ships. The Maritime Commission has set as a possible goal the carriage of 50 percent of our postwar trade in American ships.

Why is foreign trade important to us?

Foreign trade is one of the bases of modern society, which depends on a system of specialization. In even the earliest society men learned that instead of each man's making his own weapons it was better for the man who made the best bows and arrows to make them for the best hunters in return for their supplying him with meat. Today each man specializes in what he does best, exchanging the product of his work for the products of others. In the same way each country and section of a country produces the commodities for which it is best fitted because of favorable climate, nearness of raw materials and markets, supply of power, labor, and capital. By specializing, a country can produce more than it needs for itself and can exchange its surpluses for the surpluses of

We export products which we specialize in making, such as automobiles.

other countries. This exchange between countries is foreign trade. The exchange helps to raise the standards of living everywhere for more people can get more goods at lower cost than if they were dependent on their own efforts.

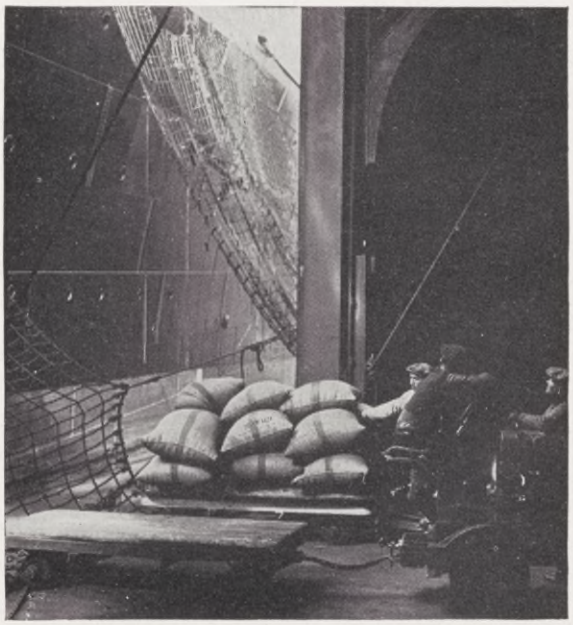
When a boy exchanges ten marbles for a jackknife, he is using a form of trade called "barter." Since this type of direct exchange of goods would often be inconvenient, we use money to represent the value of goods and services. Other countries, however, cannot use their money to buy our products. Every nation has its own money and will not accept the money of any other nation for use in its domestic trade. If you tried to give an English shilling to a clerk in an American drug store, he would probably say, "This is America, and you have to use American money here."

If foreigners want to buy our goods they have to pay us in dollars. The only way they can get dollars is by selling something to us for which we will pay in dollars.

The foreign country can then use these dollars to buy our goods. Since foreign trade is carried on usually between individual businessmen in different countries, who would find it very difficult to keep exchanging one kind of money for another, the financing of foreign trade is handled by foreign exchange banks.

What are some of the advantages of buying and selling in other countries?

We can buy from other people products that we do not have in this country. Our largest imports are foodstuffs and raw materials. Our industries require vast amounts of raw materials to keep running. Some of these raw materials are not obtainable in America or may be obtainable only in small quantities or at high cost. We must, therefore, import them. We import manganese and molybdenum for hardening steel, chromium for manufacture of furniture and soda fountains. Coffee was our leading import in 1944 and 1945. In 1945 alone American merchant ships brought the equivalent of 90 billion cups of coffee into this country. Tin, tungsten, nickel, rubber, wool, cocoanut are other imported raw materials.



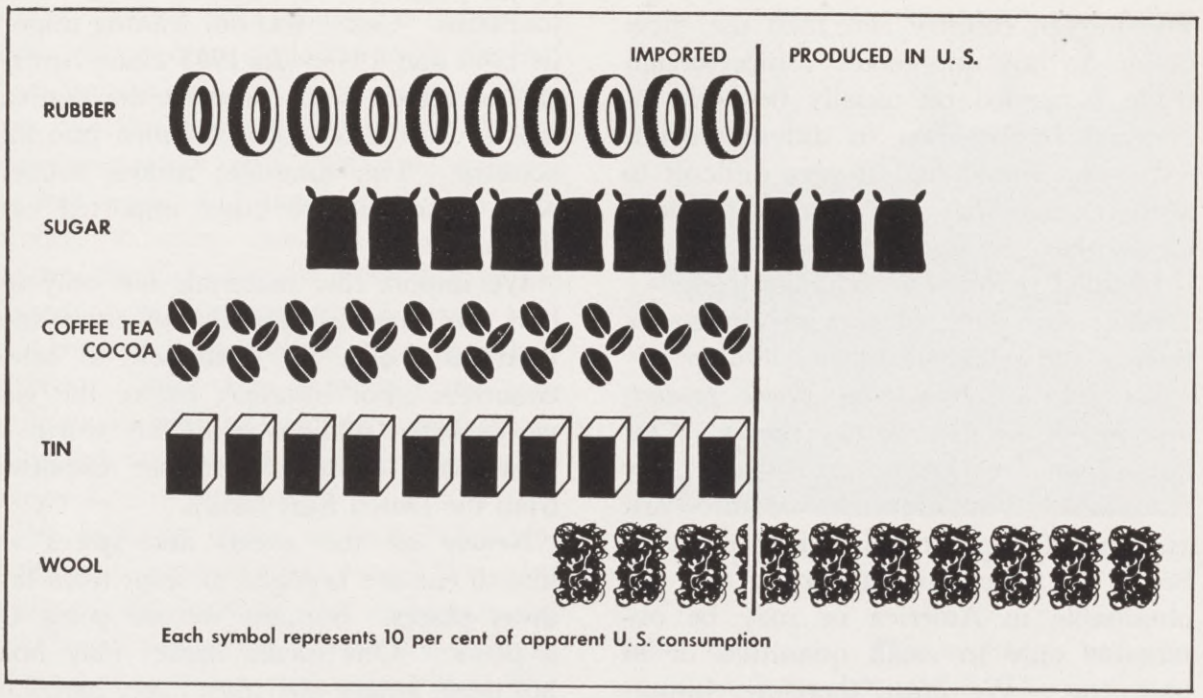
We import articles such as coffee which we do not specialize in producing.

We import raw materials not only for our own use but for manufacture into products which we then sell to other countries. For instance, before the war we exported millions of dollars worth of tires made from raw rubber imported from the Dutch East Indies.

Nearly all the sweets and spices we like to eat are brought in ships from faraway places. Suppose we are going on a picnic. Our picnic basket may hold hot dogs, ginger ale, spice cake, bananas, and candy. Our hot dogs are seasoned with mustard brought from China. The ginger in the ginger ale comes from Jamaica. The spice cake takes cloves from British East Africa, cinnamon from Ceylon, nutmegs from the Netherlands East Indies. The bananas are from Central America. The candy may contain dates from Iraq, nuts from Portugal, China, and Brazil, chocolate and cocoa from Central and South America and Africa. The whole world contributes to that American picnic!

We also import Norwegian sardines, tuna fish from Costa Rica, herring from Newfoundland, Russian caviar, olives from Spain, cheese from the Netherlands, champagne from France.

Many of our flowers and crops grow from seeds brought from foreign countries—grass seeds from Australia and New Zealand; vegetable seeds from England, Spain, the Netherlands, France, Denmark,

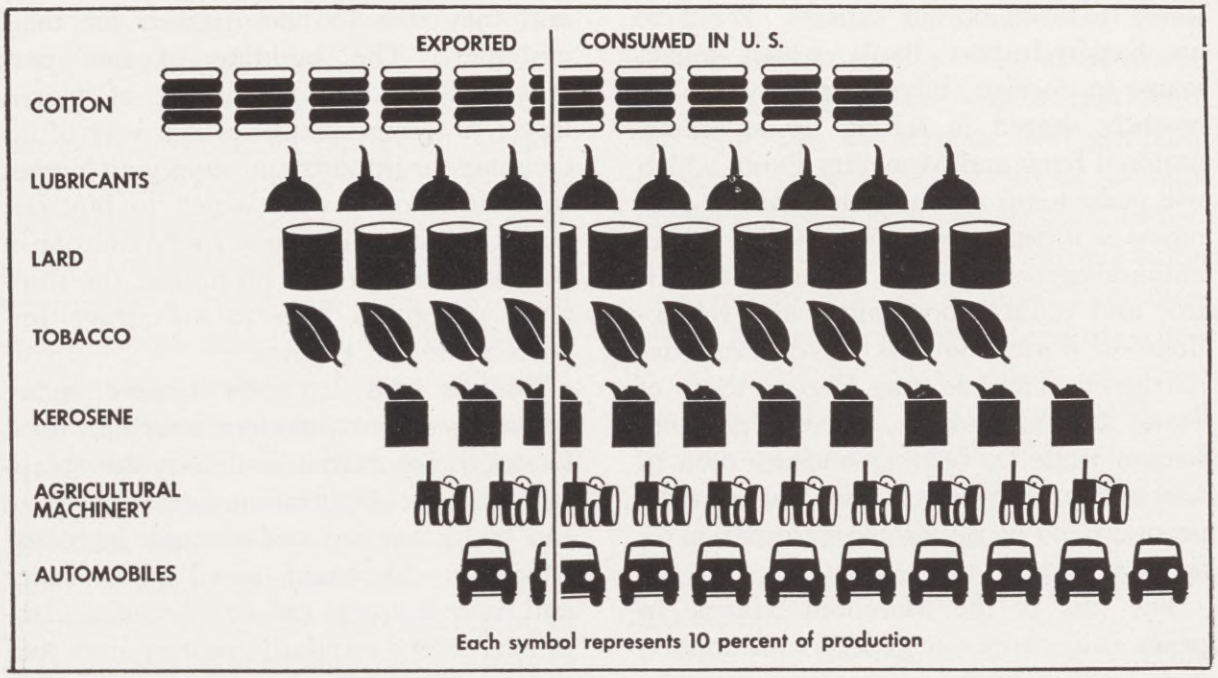


These are some of the raw materials which we import from other countries.

Canary Islands, and India; tree and shrub seeds from El Salvador; tulip bulbs from the Netherlands; other seeds from Austria, Italy, and the Dominican Republic.

Through foreign trade *we can buy things that can be produced at a lower cost in another country.* Lace making requires a great deal of hand work. It can be made cheaply in a country where wages are low and sold at a profit in a country where wages are higher. Americans in an average prewar year bought 92 million dollars worth of imported laces. It would have cost far more than that to have made the lace in this country. Sugar can be grown in a tropical country like Cuba and imported at a lower cost than it can be produced here. Both countries are benefited by the trade: Cuba finds a market for her product and America pays less for sugar than it would cost if it were raised at home.

By selling to others products of which we produce more than we need, we provide other countries with things they want and give employment to our workers who produce the goods we export. We are the world's leading export nation. In 1938, 14.1 percent of the world's exports came from the United States. We produce more than we consume. Unless we sell the surplus, we will have to reduce our production and pay rolls, which will cause unemployment. Our productive capacity increased during the war. Increased trade will be necessary to absorb increased surpluses. Because other countries desperately need our goods to repair war damage, we now have an opportunity to increase our trade. The Department of Commerce predicts that we may carry on a trade in excess of $10 billion annually in the next few years. Until the war-torn nations have rebuilt



These are some of the products which we sell to other countries.

their industries, they will have little surplus to exchange for our goods. They will therefore need loans from us to be able to buy our products. When they are producing again, they must be able to sell us their products in order to get the money with which to pay back the loans. Trade must be a two-way affair.

Trade does not consist just of buying and selling things like wheat and automobiles. If your Aunt May goes to Paris, she changes her dollars into francs to pay for her hotel, food, and other expenses. The dollars she exchanged are then available to a French importer who may wish to buy an American refrigerator. When we buy "invisible services" from other countries, such as travel or education, we are also importing. This type of import not only improves our standard of living but is an important way of exchanging cultural ideas. It contributes to understanding between peoples, just as helping all people to obtain a fair share of the world's goods is one of the best ways to keep economic stability and world peace.

There are, however, many restrictions on the free operation of foreign trade. One country, in an effort to build up a domestic industry which cannot compete with a lower-cost industry in a foreign country, puts a tax called a tariff on the importation of the foreign product to raise the price and make it sell for the same or more than the domestic product. The other country in return puts a tariff on an American export product.

Our Government and the governments of other countries are seeking ways to lower tariff barriers and to remove other restrictions on world trade. One way is by making "reciprocal agreements" by which we agree to lower the tariff on our imports from a country which will agree to

lower its tariffs on our exports. We have an Export-Import Bank, which makes loans to foreign buyers, and we have recently shared in setting up an International Bank and Monetary Fund, which will make loans and help stabilize the currency of member countries. Other international agreements will be sought to control and reduce monopolies and restrictions on trade. Several Government departments such as the Departments of State and Commerce actively promote foreign trade by helping business men to find markets in which to buy and sell their products and by publishing information on foreign trade.

The task of the Merchant Marine in peace is to carry our exports and imports and actively promote our foreign trade. Shipping companies maintain offices in the countries to which their ships travel, and they seek to find markets for their customers. The building of fine passenger liners and promotion of tourist travel to foreign countries is a way of increasing our imports and supplying foreign countries money with which to buy our goods. Since ships must carry cargoes in both directions to be profitable, the shipping companies help to encourage imports as well as exports.

Traders and travelers receive many advantages from a modern merchant fleet. Ocean transportation is already the cheapest form of transportation, and its low cost can be further reduced through increased efficiency. Increased speed gives faster and more frequent sailing schedules. Improved safety standards protect lives and cargoes. Specialized types such as refrigerated ships permit traders to buy and sell perishable products. Other special

When we travel in foreign countries we spend dollars which foreigners use to buy our products. American passenger ships are promoting trade when they promote travel. (Ship scenes below.)

types provide a variety of services adapted to particular needs.

Cost of operation is one of the basic factors in providing shipping service. Many foreign countries whose wage scales and living standards are lower than those in the United States can offer shipping services at a lower rate than American operators can afford. The advantages to our foreign trade of having adequate American shipping services available make it advisable to offset the handicap of higher American costs. By paying the difference between the foreign costs and American costs, the Government makes it possible for American ship operators to offer services at the same rate as that of their foreign competitors.

Cost is also an important factor in the competition between ships and airplanes. Only time can tell whether ships will be outmoded by airplanes in carriage of cargo and passengers in foreign trade. In the immediate future, however, airplanes will be able to carry only a very small percentage of the world's total cargo tonnage. One small cargo ship can carry 6,400 tons of cargo from San Francisco to Australia and return in two months, at a cost of about $120,000. It would take 144 four-engined airplanes to carry this same cargo, at a total cost of about $29,000,000—250 times the cost of the surface ship. Furthermore, the planes would require the services of three tankers to carry fuel for them.

In the case of perishable and lightweight products such as exotic flowers and vegetables, where speed is of most importance, or in the case of very expensive goods such as industrial diamonds, where transportation charges are only a fraction of the total cost, the airplane will probably be used. In cases of low-cost heavy bulk products such as coal, petroleum, lumber, wheat, no other means of transportation is so economical as a ship. Passengers whose first requirement is speed may well travel by plane. Many others will want the more leisurely trip by sea, with all the variety and relaxation of a sea voyage. Modern and efficient ships will continue to be the carriers of a very large proportion of our total trade for many years to come.

American merchant ships have a job to do in peace that is as important to the promotion of our foreign trade as the job they do in war is important to our national defense. The modern, efficient, and economical fleet that will best serve American traders and travelers is the fleet that will be ready in an emergency to serve the Nation.

QUESTIONS FOR DISCUSSION

What are the advantages of carrying our foreign trade in our own ships?

Why is foreign trade important to us?

Why do we export some products and import others?

Should we export more than we import?

How does the Government help foreign trade?

How does the Merchant Marine help foreign trade?

Will airplanes take the place of merchant ships in foreign trade?

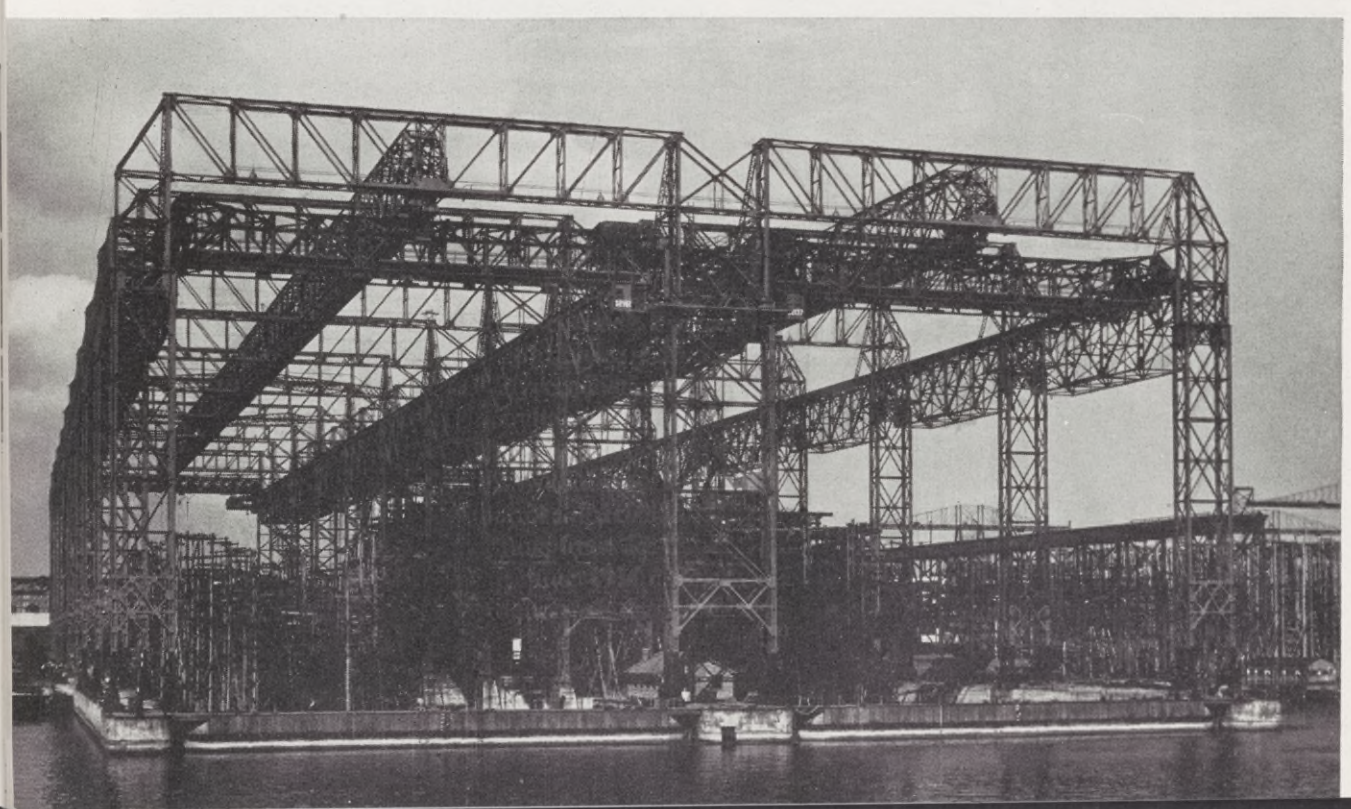
Building Merchant Ships

THE shipbuilding industry is an indispensable part of the Merchant Marine. The seaworthiness, operating economy, and suitability of purpose of a merchant ship depends on the skill and efficiency of its designer and builder. Our great periods of maritime prosperity came when our shipbuilders turned out vessels that were faster and finer and more economical to run than the ships of any other country. By constantly seeking new and improved methods of building better ships at lower cost, shipbuilders cut down the difference between our costs and those of other countries and decrease the amount of subsidy necessary to equalize these costs. Just as an American shipping industry is needed to meet the needs of American traders, so an American shipbuilding industry is needed to design and build ships especially suited to the needs of American shipping.

A strong and active shipbuilding industry is particularly important in time of war. It would not be economically possible to keep in active operation in peacetime enough ships to fill all the demands of war. Even a reserve fleet kept in readiness for an emergency will not answer all war needs. New ships must always be built. As we found out in World War I, however, it may be impossible to start an emergency shipbuilding program from scratch and finish it in time to be of any use.

What is needed is a group of shipyards actively engaged in building merchant ships, whose workers are skilled in their trades, whose methods are the most efficient, whose management is most forward-looking and progressive. In time of emer-

Shipyards which had been active before the war were able to help expand production to meet war needs.



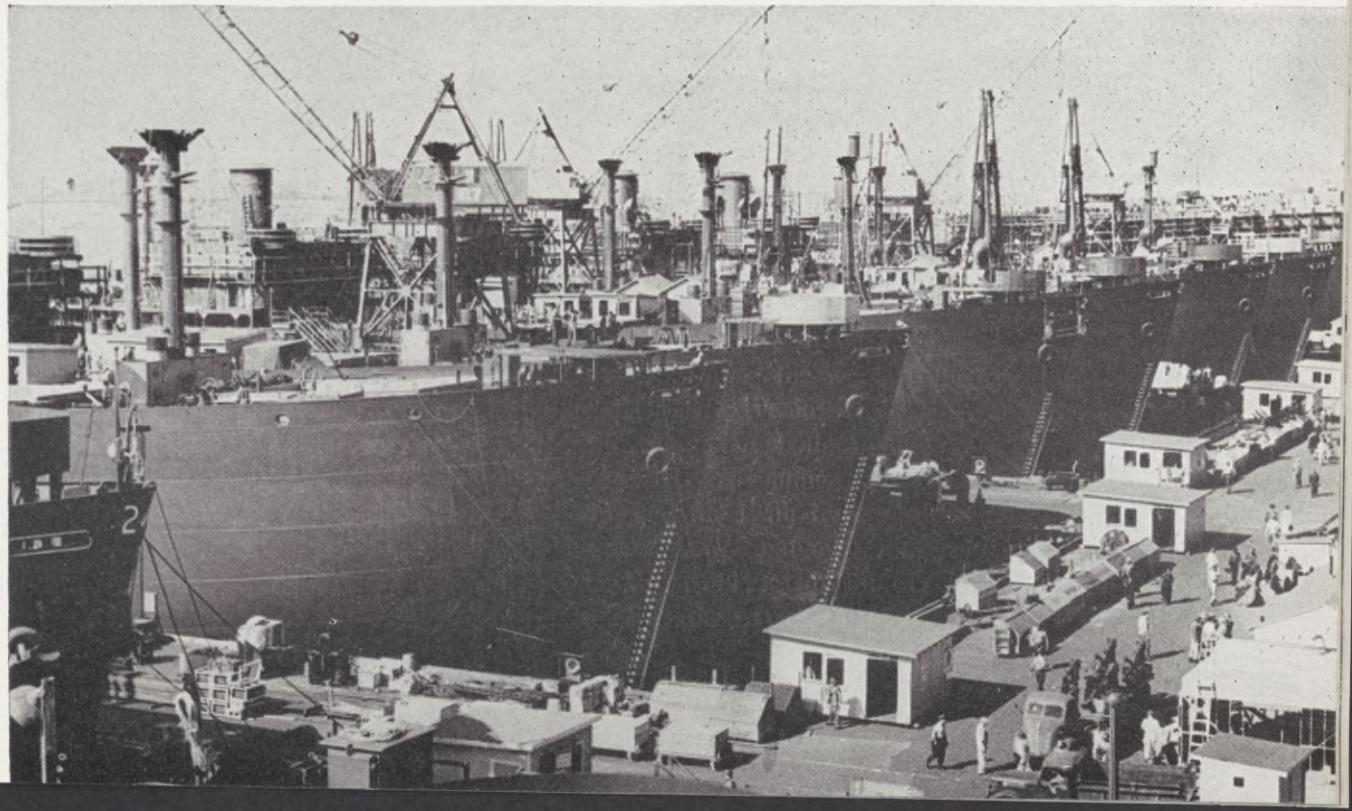
gency the knowledge and skill of this group can be expanded to meet the inflated demands of war, as was demonstrated in World War II.

In 1937 there were only 10 shipyards in the country, employing 60,000 workers, which were capable of building 400-foot oceangoing ships. In 1941, under the spur of the Maritime Commission's shipbuilding program, there were 40 such yards. This group of experienced shipbuilders was expanded to nearly 80 yards, employing 700,000 workers, before the war was over. New yards were built by old experienced shipbuilders. Others were built, with the help of experienced builders, by constructors who had never built a ship before but knew how to organize materials and men and how to apply mass-production techniques to a new field. Not only along the coasts but on the shores of the Great Lakes and on inland rivers ships were built and sent to the ocean.

The demand for ships multiplied. It was not possible to build enough ships of the C-type. They required complicated steam turbines and Diesel engines which the Navy needed for warships. The Liberty ship was the answer, This type was adapted from an old British tramp steamer. Before we entered the war, the British had ordered 60 of these ships to be built in the United States, and two shipyards had been built to produce them. These yards were able to go on building ships for the United States and to pass on to other yards the benefits of their experience. The Liberty ship, a modification of the British type especially adapted to mass production, was relatively easy to build and required simple reciprocating steam engines for which production facilities were available.

Emergency shipyards were constructed to build the standardized Liberty ship. Traditional methods of shipbuilding were streamlined. Formerly ships were built

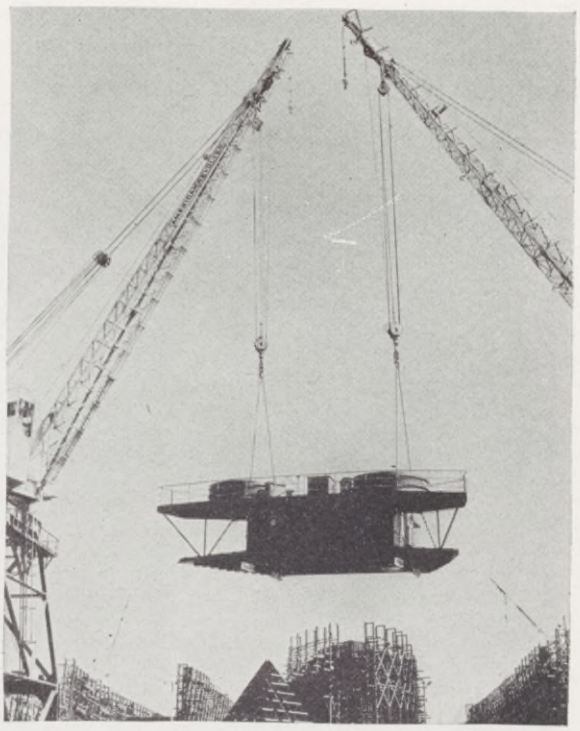
Emergency shipyards established to build Liberty ships contributed new mass production methods to the task of building ships in a hurry.



The Liberty ship, though slow, was easy to build. These ships carried the major part of the war cargoes transported overseas.

plate by plate. Each piece was cut in accordance with a model and then the piece was riveted into place. But Liberty ships were built in huge sections. In shops close by the launching ways an entire forepeak or deck housing would be welded together and lifted into place by giant cranes. Sometimes two to four cranes, each capable of lifting 50 tons, would be used together. The shipbuilders were able to employ some of the speedy assembly-line methods used so successfully by America's automobile industry.

On every side the shipbuilding program was hampered by shortages. Basic raw materials like steel and copper were being competed for by every war program. There were not enough plants experienced in manufacturing ship parts. There were not enough skilled workers. The Maritime Commission set up a central buying organization to obtain materials and parts



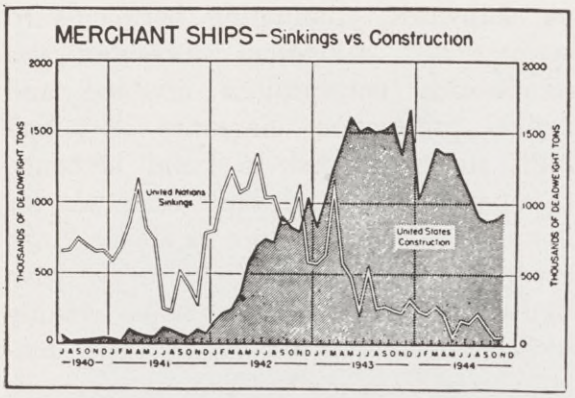
Two cranes lift a completed deckhouse onto the hull of a ship on the ways. Such methods speeded up production of ships.

Skilled and unskilled workers pooled their efforts to build ships for war.

for shipyards, eliminating between-yard competition. One-man workshops and nation-wide corporations doubled and tripled production. Factories that had built stoves learned to build lifeboats. Companies that had built furniture for homes now built furniture for ships. From every part of the country anchors, drive shafts, ventilators, nuts and bolts, welding rods, engines, and a thousand other materials and parts poured into the shipyards in a scheduled stream to meet the needs of the individual yards. From every state men and women, young people and old, dropped their jobs as clerks, housewives, teachers, and flocked to the shipyards where they were taught to weld, to wire electrical panels, to build ships. Housing and other special services had to be provided for these workers.

By the end of 1943 the shipyards were building ships ten times faster than the

Materials and parts were sent by plants all over the country to shipyards, where they were stored until needed on the ships.



By the end of 1943 American shipyards were building ships faster than the Axis was sinking them.

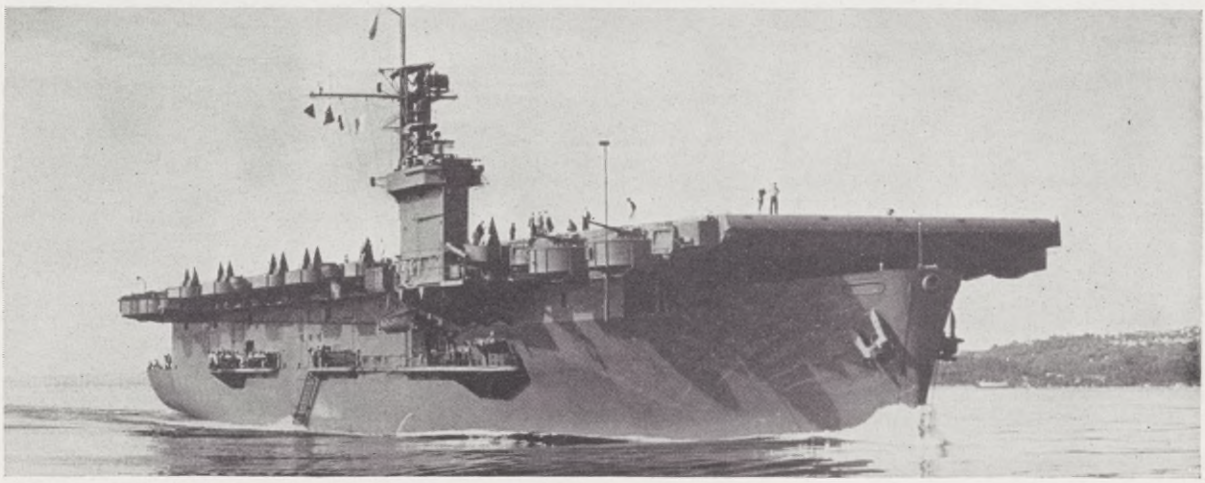
Axis was sinking them. They not only replaced with new tonnage all the American ships sunk by the Germans in 1942 and 1943, but also replaced the huge losses suffered by Great Britain and other Allied nations in the four-year period 1939–43. From 1942 through 1945 the yards built 5,000 oceangoing vessels. Though we had planned to build only 50 ships a year, merchant yards turned out 208 ships in a single month, December 1943.

It took 243 days to build the first Liberty ship, the *Patrick Henry*, delivered into service three weeks after Pearl Harbor. Six months later average construction time in all Liberty shipyards was 122 days for each vessel. This time was slashed to 55 days in another 6 months, and by December 1943 it was taking only 39.2 days to build a Liberty ship. One record-breaking Liberty ship, the *Robert E. Peary*, was delivered in 7 days.

By 1944 production of the slow Liberty ships was cut down as better engines became available. A new standardized vessel was developed—the Victory ship. It was about the same size but much faster than the Liberty ship. The first Victory was delivered on February 29, 1944. By February 1946, 531 of these vessels had gone into service as cargo and naval attack ships, and transports.

The shipyards also were busily producing C-types, tankers, and other vessels. By the end of 1943, 521 C-type ships had been built. The original 10-year shipbuilding program had been completed in 6 years. By the end of 1945, 705 tankers

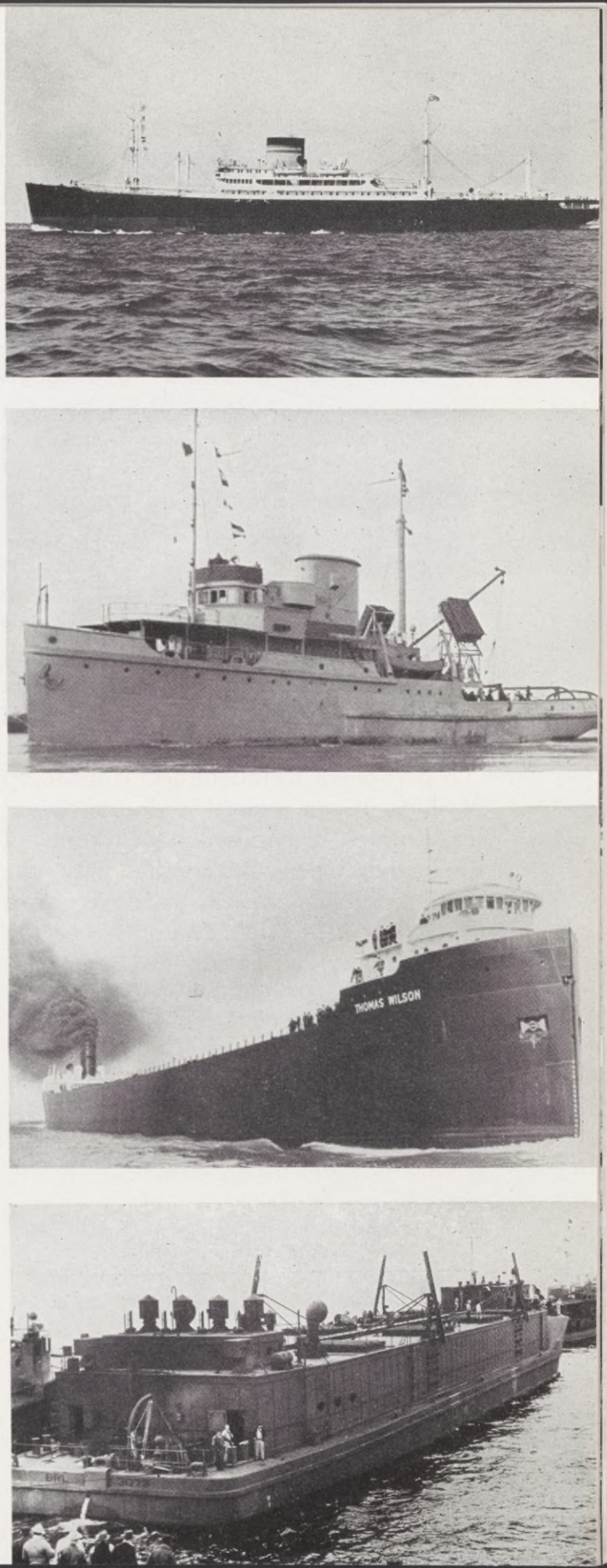
The "baby flat-top" was a cargo ship converted for service as a small airplane carrier.



of all types had been built to transport the fuel oil without which our Navy and mechanized land forces could not have fought. The shipyards also built 451 specially designed attack cargo ships, tankers, and transports for the armed forces, and 50 "baby flat-tops" (escort aircraft carriers) that were built for the Navy. When the war was over the United States Merchant Marine was larger than the combined merchant fleets of all other countries—it contained more than 6,000 oceangoing ships, of which 5,500 had been built in the 5 years 1940–1945.

When the war job was finished, the shipbuilding industry returned to its peacetime job, the building and maintenance of a balanced merchant fleet. The Merchant Marine consists of ships of every size and type, from small tugs to great ocean liners. A well-balanced fleet must have enough of each type of ship to meet varied operating requirements.

The most important ships of the merchant fleet are the cargo ships. They may carry a few passengers—from 8 to 200 depending on their size—but they are primarily built to carry goods in their deep cargo holds. A large part of our modern merchant cargo fleet is based on the Maritime Commission's standard C design, with variations in size, speed, and carrying capacity to suit the services for which they are intended.



A balanced Merchant Marine must have many types of ships. Top to bottom: a combination cargo-passenger liner; an oceangoing tug; an ore ship; a concrete refrigerated barge.

At present there are not enough passenger ships and refrigerated cargo ships in the fleet, for these types had to be neglected during the war in favor of building more cargo ships. To remedy this lack, new passenger ships containing the most up-to-date features are now being built to carry American travelers.

Tankers are ships which carry liquids in bulk. A great many large, fast tankers, built just before and during the war, plus a large number of tankers now being built by private operators, will be available to carry the enormous quantities of petroleum products required by our machine age.

Other types of ships that have an important place in a balanced fleet are bulk ore carriers, colliers that carry coal, barges that furnish cheap transportation for bulk cargoes on inland and coastal waters.

A part of our merchant fleet is made up of ships in our coastal and intercoastal trade which demands a wide variety of sizes and types. Before the war the majority of ships in this trade were over age, and it is probable that only a part of the deficiency can be supplied from war-built ships.

All of these types of ships must not only be built and replaced when necessary but also kept in repair. All merchant ships require constant attention and overhauling to keep them in good condition. The ship repair yards form an important part of the shipbuilding industry. Workers in these yards are especially skilled and versatile. During the war the ship repair yards saved and sent back into action many a vessel that seemed fit only for the scrap heap.

The dangerously weak and obsolete merchant fleet which existed at the time of the enactment of the Merchant Marine Act of 1936 has been built up by American shipyards into the largest fleet in the world. Many of the emergency ships are not suitable for operation in competitive peacetime trade. Others are among the best ships afloat. But we must not make the mistake we made after the first World War when we failed to keep our fleet up to date. The shipbuilding industry must be a progressive one, keeping up with latest developments, both to improve the economy of peacetime operation of ships and to provide ships most suited to the requirements of the armed forces.

QUESTIONS FOR DISCUSSION

Why is it important to have the ships of the U. S. Merchant Marine built in American shipyards?

Why should we try to find better ways of building ships?

Why are shipyards important in wartime?

Why were we able to build ships faster in World War II than in World War I?

What were some of the methods used to build ships quickly in World War II?

What were some of the difficulties that had to be overcome?

Why did we build slow Liberty ships for World War II?

What other types of ships did we build during the war?

Why do we need many types of ships in the Merchant Marine?

Why are repair yards necessary?

Why should we keep our merchant fleet up to date?

Port and harbor activities which contribute to the prosperity of many cities are mainly supported by an active Merchant Marine.

Operating Merchant Ships

SHIP operators are the men and companies who manage the business of running ships. A shipping line is a group of vessels maintaining service over a particular trade route. One operator may own several shipping lines. Ship operators may own or charter (hire) their ships. They solicit cargo and passengers both in this country and abroad and assist businessmen in finding markets for their goods. They arrange for loading and unloading of their vessels and maintain schedules that will provide the service best suited to the needs of their customers. They arrange for provision of food for crews and passengers and for the upkeep and repair of the ships. They hire the crews who man their ships, usually through seamen's unions, with which they work out collective-bargaining contracts.

In peacetime shipping is a private industry, but as it serves the needs of commerce and defense, it is also an instrument of national policy. The Merchant Marine Act of 1936 states that the rights of private enterprise to do business where the profits are greatest must be set aside in time of war so that the needs of the armed forces for ships may be met.

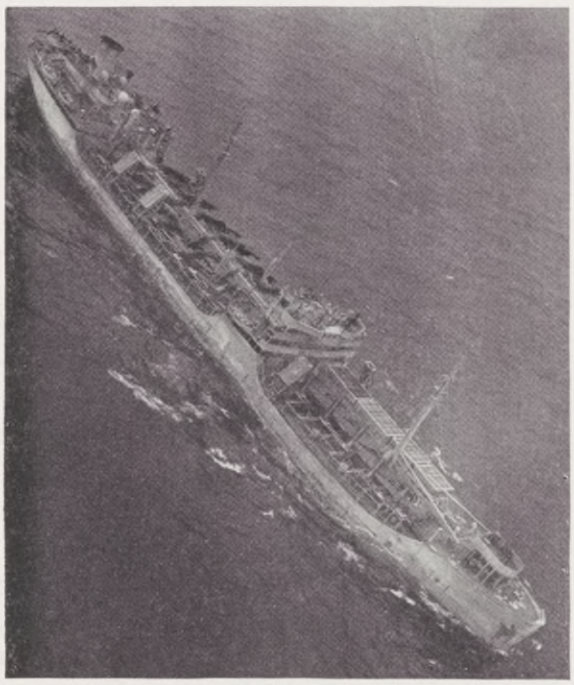
In time of war the Government usually takes possession of the country's ships, either by buying or hiring them. It then employs operators as agents to run the ships and pays them a fee for their services.

During World War II 130 operators acting as agents for the War Shipping Administration operated the 5,000 vessels of the wartime fleet. They carried out the many details of running the ships, but the Government determined the cargoes and destinations. Many shipping men during the war served in Government agencies, contributing their experience to the demands of a tremendous task.

They were faced with many difficulties—inexperienced crews, strange ships and routes, types of cargo never carried before, and the complications of operation in convoy through all the hazards of wartime oceans. They found ways to make a ship carry more cargo than ever before. Planes were loaded on raised decks above the low "well decks" of tankers. Extra fuel oil was carried in the ballast tanks of cargo ships. Locomotives were loaded on decks. Time spent in port was cut down from an average of 25 days in January 1944 to 17 days in October 1944, the equivalent of adding over 100 ships to the fleet.

During 1943 these agents supervised the shipping of 47 million tons of dry cargo and 15 million tons of petroleum products to the battle fronts. Their ships brought 19½ million tons of strategic materials into the country for war industries.

The Government could not have handled this world-wide shipping job without the knowledge, the skill, and the organization



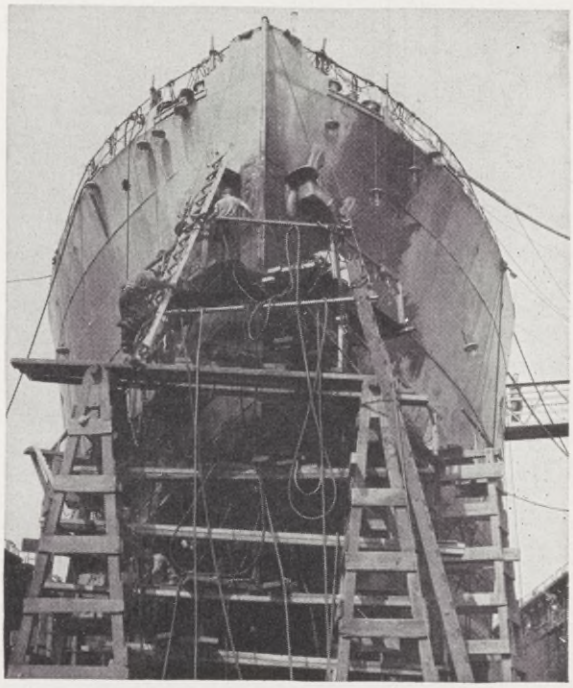
Special decks were laid on tankers to carry war planes and other dry cargo.

The transportation of war materials for the war in the Pacific was directed by ship operators.

of the ship operators who had directed the peacetime activities of our Merchant Marine. The record of the cargo carried is evidence that they did their job superlatively well.

In carrying on their peacetime business, American ship operators are handicapped by the fact that they must pay high American costs for labor and materials while they must compete with foreign operators whose costs are lower. Sometimes the difference in costs is great enough to force them out of business. In order to keep American ships operating on a route that is considered economically essential to American commerce or necessary to national defense, the Government may pay the ship operators the difference between the foreign and the American costs. This permits the operator to stay in business, but in return he must agree to maintain a a service that the Government considers to be in the national interest.

To avoid cutthroat competition the American ship operator may also make agreements with competing shipping lines regulating freight rates, frequency of sailings, and routes to be followed. These agreements are subject to the approval of the Maritime Commission to prevent creation of monopolies or undue restraint of trade and to protect Government investments in parity payments to builders and operators.



Repairs are an important expense item in the upkeep of merchant ships.

The adequacy of the Merchant Marine to serve our commerce and defense depends in large measure on the success of the operators in providing efficient and economical shipping service in peace and in planning for more and better services for American traders and travelers. If they can accomplish this task in peace, they will be available as in the past to do their part in time of emergency.

QUESTIONS FOR DISCUSSION

What do ship operators do in peace?

What do they do in war?

Why does the Government direct the operation of ships in wartime?

What were some of the difficulties faced by ship operators during World War II?

How were ships able to carry more goods in wartime than in peace?

How are American ship operators in foreign trade at a disadvantage in carrying on their business in peacetime?

How does the Government help the ship operators?

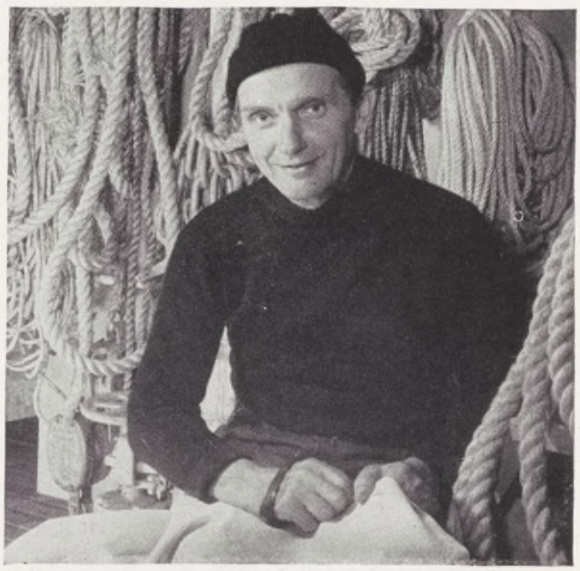
How do American ship operators cooperate with foreign operators to prevent unfair competition?

Manning the Merchant Fleet

AMERICAN seamen are a hardy and independent breed of men. Their skill and enterprise in the days of sail raised our Merchant Marine to the leading position among the world's merchant fleets. At best their living and working conditions were far below conditions among landsmen. They laughed at danger and built up a tradition for bravery that has been constantly renewed.

Just as the group of skilled shipbuilders and ship operators who had guided the peacetime Merchant Marine were the foundation on which an expanded war program was based, so the 55,000 seamen and officers who manned our Merchant Marine in December 1941 were the heart of the force of 250,000 men who manned the wartime fleet.

When war broke out we needed men to man the ships being turned out by the shipyards, to sail them through oceans alive with bombs and torpedoes, to get the goods through and bring the ships back for more. Men who had been seamen and



A merchant seaman must have many skills.

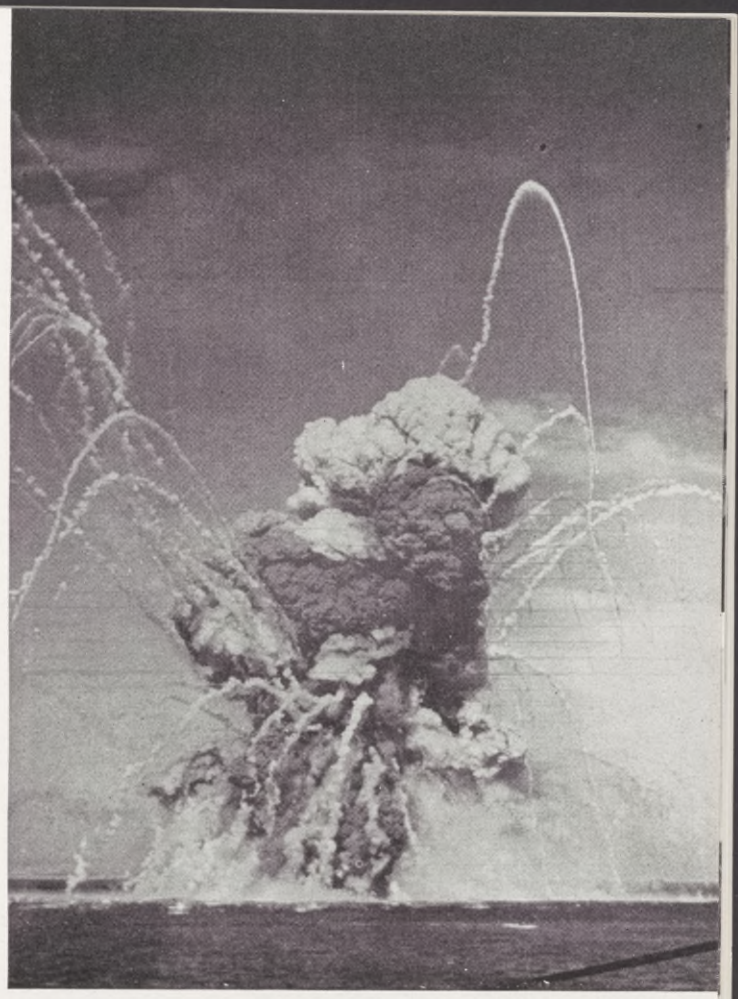
Many inexperienced boys were trained as seamen to meet war needs.

had left the sea were called back; 100,000 came. Seamen were deferred from the draft so long as they sailed in merchant ships, and they were guaranteed the right to get their old jobs back after their work as seamen was done. Pools of seamen were kept ready in port cities throughout the world. In 1944 and 1945 there was an average of over 1,000 men in these pools, ready to be rushed to any ship delayed by need of men. But all these methods of obtaining men were not enough.

The seamen's training program which had been established in 1938 was expanded as the shipbuilding program had been expanded. Huge training stations were built at Sheepshead Bay, N. Y.; Avalon, Calif.; and St. Petersburg, Fla. Special training and upgrading courses were started for experienced men. Thousands of young boys and men who had never set foot on a ship came to learn as quickly as possible the elements of seamanship. Other young men took the intensified course of cadet training at the U. S. Merchant Marine Academy, Kings Point, N. Y., learning to be officers of merchant ships. From 1938 to December 1, 1945, more than 260,000 men graduated from the various training courses.

There were no strikes of seamen during the war. Oldtimers and newcomers alike sailed doggedly through the worst the enemy could throw at them. Wolf-packs of enemy submarines. massed bombers diving to attack, freezing cold and raging storms could not stop them. Many ships were sunk—up to VJ-day over 700 American vessels were lost from war causes alone.

There were over 5,600 seamen dead or missing and many taken prisoner. The

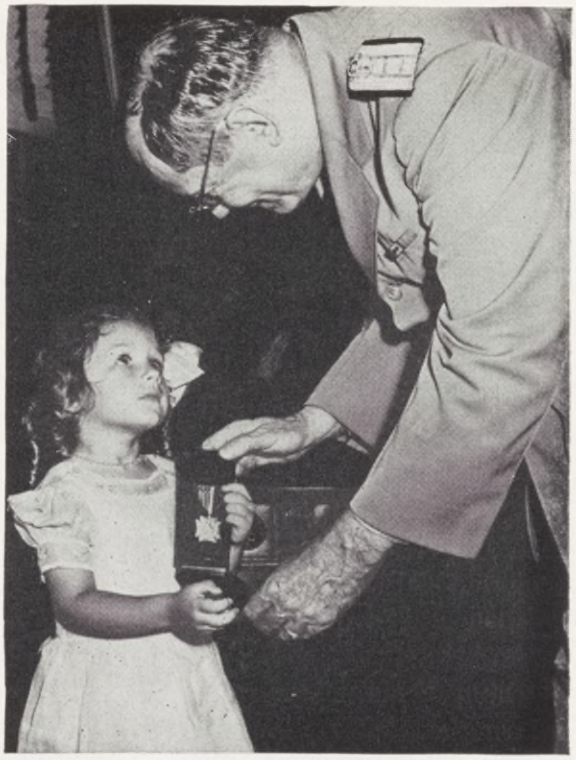


Seamen were front line fighters in World War II. When a cargo ship carrying munitions was hit by a Nazi bomb, the seamen did not have a chance.

others kept sailing. For deeds of heroism 145 Distinguished Service Medals and 426 Meritorious Service Medals have been awarded to seamen. Mariner's Medals for those who were killed, wounded, or suffered serious exposure have been given to 6,454 seamen, many of them posthumously. These men were fighters, and they won their battle to keep the sea lanes open, to keep the goods moving in a steady stream.

The importance of the part that seamen play in the wartime job of the Merchant Marine is reason enough for providing them with a decent living wage and working conditions in peace. Moreover, the

Survivors of torpedoed ships were lucky if they were rescued before being seriously harmed by exposure.



Many seamen did not live to receive the medals awarded them for heroism.

safety and efficiency of our ships in peacetime depend largely on the skill of our merchant seamen. Only an industry in which wages and working conditions are comparable to other industries will attract the fine type of men needed to uphold the high traditions of the sea.

When the Maritime Commission was established in 1936, it was charged not only with building ships but with establishing minimum wages for seamen and ensuring reasonable working conditions, good food, clean quarters, and safety aboard ship.

In a report to the Congress in 1937, the Maritime Commission stated: "Any plan that is adopted for the rehabilitation of the American merchant marine must take into account the deplorable situation with regard to labor. * * * no matter how many new vessels are built, the effort will have been in vain unless something can be done to increase the efficiency of our crews and restore order on our ships."

In 1938 the Maritime Labor Board was established to settle as promptly as possible " all disputes on rates, pay, and working conditions." It was a non-governmental agency that functioned until collective bargaining agreements were signed between the seamen's unions and the ship operators. The Board fulfilled its function and went out of existence some time before we entered the war.

During the war, labor relations with shipyard workers and merchant seamen were handled by appropriate divisions of

the Maritime Commission and War Shipping Administration. Bonuses for wartime duty and related matters were handled by the Maritime War Emergency Board.

Since 1789 the United States Public Health Service has been charged with providing medical care for merchant seamen through marine hospitals and relief stations. These facilities were not adequate during the war. The WSA, the Coast Guard, the Navy, and the United Seamen's Service worked out a health program which provided for medical examinations, control of communicable diseases, and the placing of pharmacist mates on board cargo ships to look after the health of the seamen. In addition the United Seamen's Service, which was a member of the War Chest service group and was aided by the Government, the maritime industry, and the general public, established clubs, rest homes, and hotels for seamen all over the world to give them hard-earned rest and recreation in port.

Seamen were classed as civilians throughout the war in spite of the dangers which they shared with the armed forces. Aside from reemployment rights they had none of the special provisions made for service men, such as priorities for buying surplus property, bonuses, unemployment insurance, education payments, or medical benefits for dependents. Their monthly wages were higher than the pay of men in comparable ratings in the armed services but with no assurance of 12 months'

The United Seamen's Service sponsored clubs, rest camps, and hotels for seamen in this country and abroad during the war. Better recreation on shore makes for better workmen at sea.

Today's merchant seamen get the best of food.

steady employment. It was lower than the pay of most workers in war industries who were not required to suffer the physical hardships of a life at sea and the constant danger of what amounted to a front line position in the war.

To prevent recurrence of the bad conditions among seamen after World War I, a bill has been introduced in Congress to provide some benefits such as unemployment insurance, education and medical benefits. Through the efforts of seamen's welfare groups established before and during the war, a greater number of services are now being offered to make the seamen's life ashore more pleasant. Increases in basic wages and decreases in working hours have been won by the seamen's unions to make up for loss of extra war pay and to bring seamen to the level of workers in shore industries in this country.

Today American merchant seamen are the highest paid in the world. Although their wages are no higher than those of many other American workers, they receive about twice as much as even the highest paid foreign seamen. These high wage scales and the high standards of food and living quarters set for American seamen on modern American ships are one of the reasons that the Government must give financial aid to ship operators to enable them to compete with foreign ship owners whose crews receive lower wages.

The maintenance of high standards for American seamen is a matter of justice to fine American workmen. It is also a means of providing the Merchant Marine with skilled workers who will be ready in war and in peace to man our merchant ships.

QUESTIONS FOR DISCUSSION

Why did we have to have more seamen when World War II broke out?

How were they recruited and trained?

How did merchant seamen help to fight the war?

Why is it important for seamen to have good wages and working conditions?

What services were provided for seamen during the war?

Do seamen have the same benefits as men of the armed forces? Do you think they should have? Why?

Why does the Government help to pay seamen's wages?

Why is it important to have well-trained seamen in peacetime?

The Government and the Merchant Marine

THE importance of the Merchant Marine in the support of national defense and in the promotion of foreign trade has been demonstrated again and again in the course of our history. Normally, shipping is a private industry, and as such its prosperity should be of concern mainly to its owners and investors. Yet it is also an instrument of national policy, and its prosperity is therefore of concern to the whole nation. As a service industry essential to the armed forces and to all the other industries which depend on trade by sea, the Merchant Marine affects the lives of so many people that it has a right to seek support from all those people through the national treasury if necessary.

The necessity for seeking Government support is due to the conflicting nature of the demands made upon the Merchant Marine. It must be at the same time a commercial enterprise and an instrument of national policy. As a commercial enterprise its first requirements are economy and reliability. As a promoter of foreign trade it must sometimes maintain operations on an important route in spite of financial loss. As an auxiliary to the armed

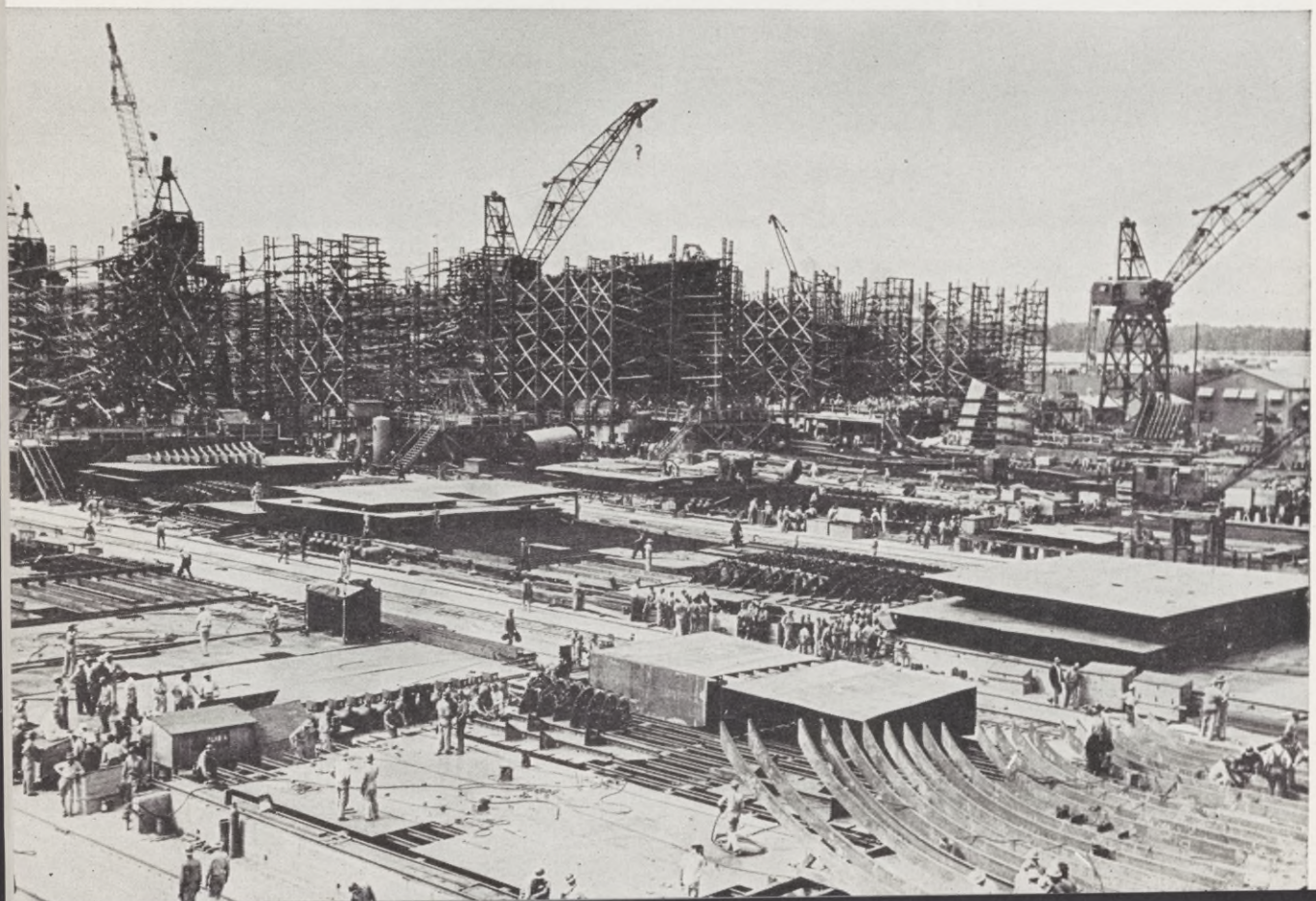
In peace merchant ships serve our foreign trade; in war they serve as an auxiliary to our armed forces.

forces it is subject to requirements for defense features like high speeds or extra bulkheads that increase costs of operation. In time of emergency ships may be taken over by the Government, subjected to hard usage, loss, and damage. Trade routes may be disrupted and business contacts broken.

In addition to these conflicting requirements which make it impossible to operate shipping as a strictly private enterprise, ships engaged in foreign trade are further handicapped by the necessity of competing in an international market. Unlike railroad operators, whose competitors' costs are based on the same standards, shipping operators must pay wages and material costs according to American standards and sell their services in competition with foreign operators whose costs are lower. Some industries, like the automobile industry, have been able to compete successfully in foreign markets, but they have the advantage of a very large home market which makes the economy of mass production possible. During war the need for standardized ship types and unlimited cargo capacity makes the use of mass production techniques economical, but in normal times the requirements for ships are so restricted that it is impossible for shipping operators to lower costs to any great extent through mass production.

Nevertheless, only a very small percentage of our Merchant Marine receives Government aid. Only those ships operating on an essential trade route in competition with a lower-cost foreign operator may receive a subsidy. Ships in domestic trade along the coasts are subject to service in

In war the Government builds shipyards and ships to meet urgent needs for carrying cargo.



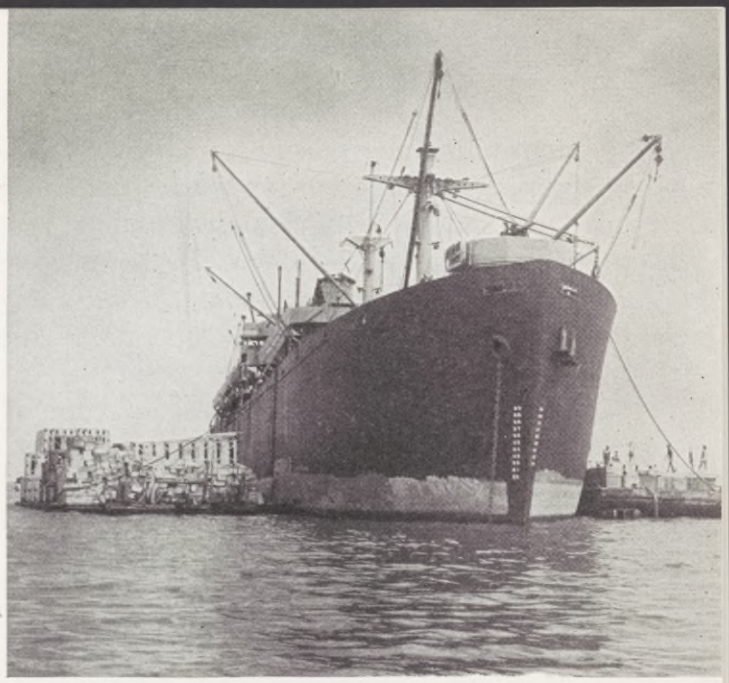
time of emergency, but they receive no subsidy since they are protected from foreign competion. Parity payments to the Merchant Marine cost the public much less than parity payments made to agriculture, or than the tariffs placed on many imports to protect American industries.

As ship constructors build better ships, as ship operators improve the economy of operation, as seamen give better and more efficient service, as American traders and travelers give their business to American ships, costs will be lowered and our ships will be better able to compete with those of other nations. But so long as the welfare of the country requires that shipping service be maintained in spite of loss, it will be necessary for the Government to come to the aid of the Merchant Marine.

In War

The aid given to the merchant fleet and the amount of control exerted over it by the Government varies greatly according to the requirements of national interest. In time of war, the Government usually takes full control of the Merchant Marine. It directs the building and operation of ships. This is made necessary by the demands of war, which require that ships be built and used without regard for the rights of private ownership or economic need. Only the Government is able to finance the building and operation of thousands of ships without regard to profit except in terms of victory.

During World War II the Government, through the Maritime Commission, directed the building of shipyards, determined in consultation with the military agencies the numbers and types of ships to be built, bought raw materials and



The Government directs the use of ships during time of war in accordance with civilian and military needs.

parts for the ships, aided in training shipyard workers. In all these activities the Commission had the assistance of established shipyards.

Operation of these ships was handled by another Government agency, the War Shipping Administration, especially created for the job. All of the duties of the Maritime Commission relating to the operation of ships were transferred to this agency. The two agencies worked very closely together. Many officials of one agency were also officials of the other. The War Shipping Administration had the responsibility for purchasing and requisitioning vessels for its own use or for the use of the Army and Navy or other Government agencies; for repairing, arming, installing defense equipment on WSA vessels and Allied vessels under lend-lease; for converting vessels to troop transports, hospital ships, and for other special purposes; for training and providing ship personnel; for provisioning, loading and unloading, operating and

controlling movements of ships; for administering marine and war insurance laws and funds; and for controlling port and terminal facilities. By employing private ship operating companies to carry out the details of ship operation, the Government had at its disposal the experience and established organization of these companies.

The War Shipping Administration also directed the merchant fleet's postwar job of relief and rehabilitation and provided for the orderly return of merchant ships to peacetime tasks. Upon termination of this agency on September 1, 1946, the Maritime Commission took over the remaining tasks of the Administration and regained all the duties and functions delegated to it under the Merchant Marine Act of 1936.

The Government cooperated with other Allied nations to pool their ships for the common purpose of fighting a bitter war. To prevent duplication and waste of effort, in January 1942 ships of the Allied nations were put under the strategic control of the Combined Shipping Adjustment Board. In 1944 they were pooled under the United Maritime Authority in order to distribute shipping fairly among the United Nations during the period of readjustment as the war drew to a close. The United Maritime Authority continued to direct the operation of Allied shipping for 6 months after the end of the war, when tasks of reconstruction were most urgent.

When the Economic Cooperation Administration was set up to carry out the Marshall Plan for aid to European nations, provision was made for carriage of one-half the goods sent from the United States under ECA authorization by United States flag ships.

In Peace

In time of peace the Maritime Commission is required by law to provide necessary regulation of rates and practices of the shipping industry and to give such aid to the building and operation of the merchant fleet as is needed to help it perform its job as a servant of foreign trade. It is not the purpose or policy of the Government directly to operate merchant vessels except in cases of emergency such as war. Moreover, it would cost far more for the Government itself to own and operate all the ships in the Merchant Marine than it costs to help those lines which could not otherwise maintain essential services against foreign competition.

At the end of World War II the Government was operating some 5,000 vessels. As rapidly as possible these were returned to private peacetime use. This followed the course pursued after World War I, when in accordance with congressional directive all the shipping lines held by the Government were sold to private concerns. The Government now owns a large number of vessels built for use in World War II, but these are now part of its Reserve Fleets. Some of these vessels have been available for private operation under charter. This will continue to a diminishing degree until expiration of the Merchant Ship Sales Act of 1946, which enables the Maritime Commission to sell and charter ships of the wartime fleet. Ships requisitioned from private owners at the beginning of the war have been either returned to

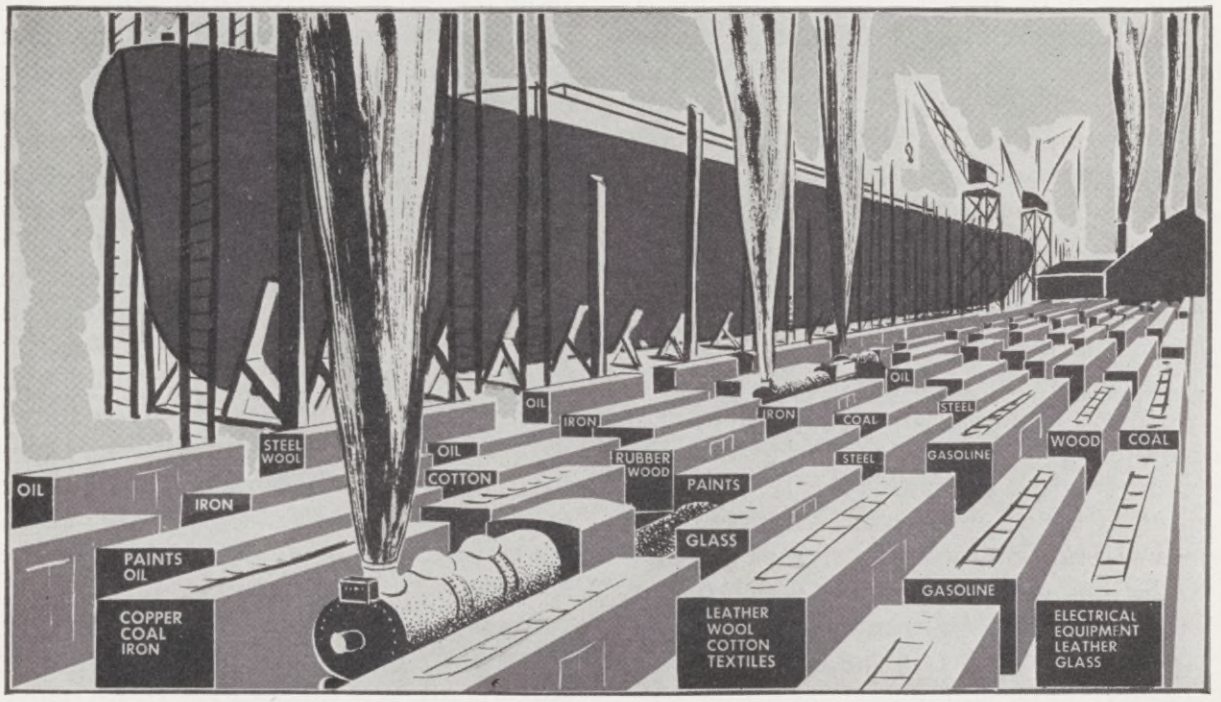
their owners or, with few exceptions, compensation for their use has been arranged.

Aid given by the Government to the Merchant Marine in the past has taken various forms, both direct and indirect. An indirect aid is designed to help shipping or shipbuilding without the payment of money directly to shippers or shipbuilders. For instance, taxes on goods imported in foreign ships encouraged importers to insist on their goods being carried in American ships. Free importation of shipbuilding materials such as steel lowered the cost of building ships in this country. The reservation of coastwise shipping to American vessels gave them a field of operation protected from foreign competition.

Direct aids are grants of money paid directly by the U. S. Treasury to private industry. This type of aid is usually called a subsidy. Subsidies to shipping were for many years disguised as mail contracts. These contracts were usually in excess of the actual cost of carrying the mails and were really intended to help merchant shipping. Some of the contracts carried provisions designed to promote the building of better and faster American ships, and some construction loans were granted for this purpose. Some of the contracts required that ships operated with the aid of subsidies should be suitable for use and available in a national emergency.

These mail contracts and other forms of Government assistance to shipping never fully succeeded in accomplishing their purpose. There was often so much disagreement as to the type of aid to be given that no effective aid was provided. Most of the laws expired before they could be given a fair trial, and often there were no effective

Industry and labor in every part of the country benefit from the activities of the Merchant Marine.



restrictions on the way money granted was spent.

The Merchant Marine Act of 1936 sought to correct some of these deficiencies. This act provided for payment of outright susbsidies, no longer disguised as mail contracts. There were two kinds—construction-differential subsidies and operating-differential subsidies.

The purpose of the construction-differential subsidy is to promote the building of a modern Merchant Marine by making it possible for an operator to buy a ship built in an American yard at a price comparable to that which his foreign competitor would have to pay for a similar ship built in a foreign yard. The subsidy is based on the difference in cost of building a similar vessel in a foreign yard and cannot exceed one-half of the total cost of building the vessel, plus the cost of any special defense features required by the Government. The ships must be built in an American yard for use on trade routes designated by the Maritime Commission as essential and must be suitable for use as naval auxiliaries. Contracts are given to the lowest bidder, who must report on his costs and profits in building the vessel. Restrictions are placed on salaries of shipyard officials and on methods of accounting. If the builder makes more than 10 percent over the contract price in the course of a year, the excess earnings must be paid to the Government.

To help an operator buy a new ship, the Maritime Commission may contract for a shipbuilder to build a vessel, designed according to the operator's needs, and also meeting the requirements of national defense. The Commission then sells the ship to the operator at a discount, which places the purchase price of the vessel at a figure equal to its cost of construction in a foreign country. The shipping operator may pay to the Maritime Commission 25 percent of the purchase price of the ship in cash, paying the rest of the amount in 20 yearly installments. The Commission holds a mortgage on the vessel and may requisition it at any time in an emergency.

The Government may promote new ship construction by domestic, industrial, and tramp ship operators, who are not entitled to subsidies, by paying for national defense features and providing mortgages of up to 87½ percent on the cost of new vessels, and by granting trade-in allowances on obsolete vessels.

The operating-differential subsidy is similar to the construction subsidy. It can be paid only on application of United States citizens operating vessels competing with foreign operators on a route deemed essential to the United States. The subsidy is based on the difference between the foreign and American costs of labor, repairs, insurance, upkeep, and food. The wages of American seamen, while no higher than those paid to many American workers, are much higher than wages paid to most foreign seamen. Their food and living conditions must meet higher standards. This is a serious handicap to American ship operators who must compete with foreign shipping companies for world trade. The operating subsidy paid by the Government is designed to enable an American ship operator to operate his ships at costs no greater than those of his foreign competitor. The operators who receive an operating subsidy are required to deposit in a joint account with the Commission an annual payment equal to the depreciation on the subsidized vessels. These sums are tax-deferred and may be spent only to replace vessels.

In some respects the term "subsidy," as applied to operating-differential subsidy agreements, is a misnomer. In exchange

for receiving these payments, which put him on a cost parity with his foreign competitor, the American operator undertakes to provide a specific number of sailings on the trade route he services. Whether or not he makes a profit from his operation depends upon his own operating efficiency and trade conditions. The so-called subsidy does not guarantee the American operator a profit, nor does the Government participate in any losses he may sustain.

Furthermore, if the earnings of a subsidized vessel over a 10-year period average more than 10 percent annually, the operator must pay half of the excess to the Government, up to the full value of the subsidy. At the end of the first 10-year period for 10 subsidized lines, it was found that 5 would return all of the subsidy paid them and the others would return substantial amounts. From a total of about $63,000,000 accruing to the account of these 10 operators, approximately $46,000,000 will be returned to the Government. This means that the Government's contribution to these lines during the first subsidy period has averaged less than $2,000,000 a year, thus assuring the maintenance of an adequate merchant fleet at comparatively small cost to the public. Payment of operating subsidies, suspended during the war, was resumed on January 1, 1947. During the fiscal year 1949 there were over 1,200 subsidized voyages. This number will probably increase if our Merchant Marine is to carry about 50 percent of our future trade.

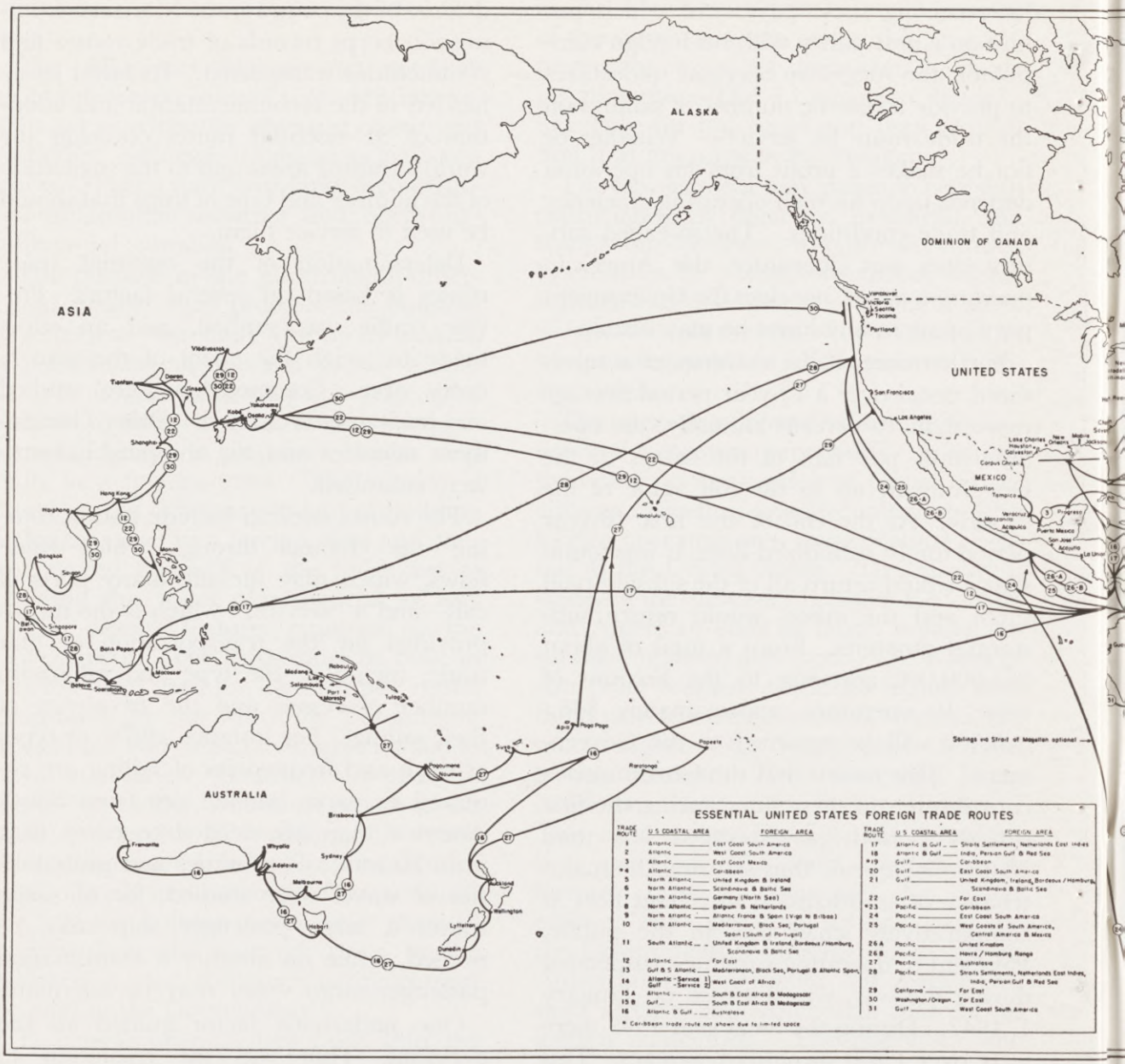
In addition to the payment of subsidies, the Government assists in the maintenance of the Merchant Marine in a number of other ways. In order to determine what routes are essential to the trade and defense of the country, the Maritime Commission keeps records of trade routes and commodities transported. Its latest study has led to the recommendation and adoption of 31 essential routes covering the world's trading areas and to the suggestion of the number and type of ships that should be used to service them.

Determination of the essential trade routes is based on several factors. Prewar traffic was studied, and an effort made to weigh the effect of the war in every area. Commodities were studied and trade trends charted. Other Government agencies and the shipping industry were consulted.

The routes selected include both a routing—the channel through which trade flows, which may include many ports of call—and a "service," which is the means provided for the transportation of that trade, including the type and minimum number of vessels and the frequency of their sailing. For instance, different types of ships and frequencies of sailing are required to carry bauxite ore from South America than are needed to carry fruit from Hawaii. Possibilities and probabilities of travel were studied, for on some routes a large passenger ship may be needed, while on another a combination passenger-cargo vessel may be adequate.

One underlying factor guided all the decisions. That was the resolution to make the American merchant fleet in foreign trade so efficient in service and cost that it would get its fair share of the business in every area and become as self-sustaining as possible.

In addition to determining essential trade routes, the Maritime Commission designs ships which will meet the require-



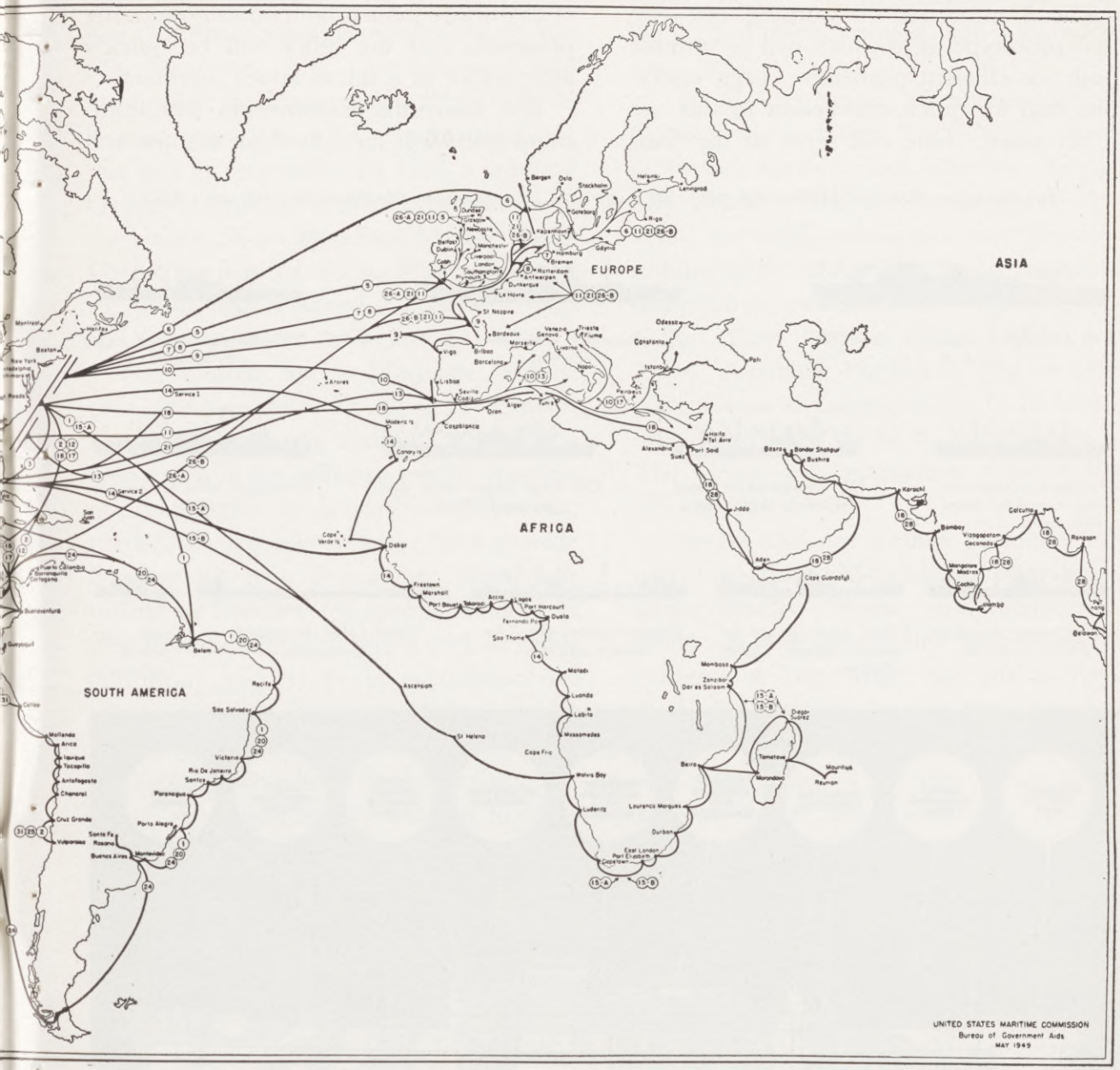
ESSENTIAL UNITED STATES FOREIGN TRADE ROUTES

TRADE ROUTE	U.S. COASTAL AREA	FOREIGN AREA
1	Atlantic	East Coast South America
2	Atlantic	West Coast South America
3	Atlantic	East Coast Mexico
*4	Atlantic	Caribbean
5	North Atlantic	United Kingdom & Ireland
6	North Atlantic	Scandinavia & Baltic Sea
7	North Atlantic	Germany (North Sea)
8	North Atlantic	Belgium & Netherlands
9	North Atlantic	Atlantic France & Spain (Viga to Bilbao)
10	North Atlantic	Mediterranean, Black Sea, Portugal & Spain (South of Portugal)
11	South Atlantic	United Kingdom & Ireland, Bordeaux / Hamburg, Scandinavia & Baltic Sea
12	Atlantic	Far East
13	Gulf & S. Atlantic	Mediterranean, Black Sea, Portugal & Atlantic Spain
14	Atlantic - Service 1 / Gulf - Service 2	West Coast of Africa
15 A	Atlantic	South & East Africa & Madagascar
15 B	Gulf	South & East Africa & Madagascar
16	Atlantic & Gulf	Australasia
17	Atlantic & Gulf	Straits Settlements, Netherlands East Indies
18	Atlantic & Gulf	India, Persian Gulf & Red Sea
*19	Gulf	Caribbean
20	Gulf	East Coast South America
21	Gulf	United Kingdom, Ireland, Bordeaux / Hamburg, Scandinavia & Baltic Sea
22	Gulf	Far East
*23	Pacific	Caribbean
24	Pacific	East Coast South America
25	Pacific	West Coasts of South America, Central America & Mexico
26 A	Pacific	United Kingdom
26 B	Pacific	Havre / Hamburg Range
27	Pacific	Australasia
28	Pacific	Straits Settlements, Netherlands East Indies, India, Persian Gulf & Red Sea
29	California	Far East
30	Washington / Oregon	Far East
31	Gulf	West Coast South America

* Caribbean trade route not shown due to limited space

Thirty-one routes, covering most of the world's sea lanes, have been designated by the U. S. Maritime Commission as essen assistance in maintaining

ments for trade and defense on these routes. These ships set high standards of safety, economy of operation, and quality of passenger, crew, and cargo accommodations. In cooperation with the Navy Department the Commission specifies types of ships suitable for defense and pays for special features required for this purpose. In setting up its original long-range building program providing for 50 ships a year for 10 years, the Commission designed the standard C-type cargo ships. There are a



tial to our trade and defense. American shipping operators in competition with foreign operators may receive Government service over these routes.

number of different C types, C1, C2, C3, C4, etc., varying in size, cargo and passenger capacity, and speed. One or two fast transport types, developed for war, are now being converted to passenger use, and new passenger types are also being designed.

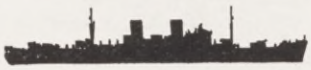
By making studies of new methods of cargo handling, new methods of ship propulsion, and new shipbuilding methods the Commission seeks to promote a more modern and efficient and economical Merchant Marine.

The Commission is working out two new prototype ships which will be suitable both for efficient peacetime cargo operation and for quick conversion to war use if necessary. One will serve as the basis of any future mass production shipbuilding program, and the other will be quickly adapatable as a naval attack auxiliary.

The Maritime Commission sets minimum standards for American seamen and

Here are a few Merchant Marine ship types. In many cases the type can be determined from the ship's name.

S. S. AMERICA—passenger; named for U. S. A.



P2—Passenger; named for U. S. generals.

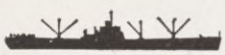
C3—Cargo-passenger; named by operator.

C1—small cargo-passenger; named for prominent capes.

C2—medium cargo; named for famous clipper ships.

C3—large cargo; name has key word "Sea."

C4—cargo; name has key word "Marine."



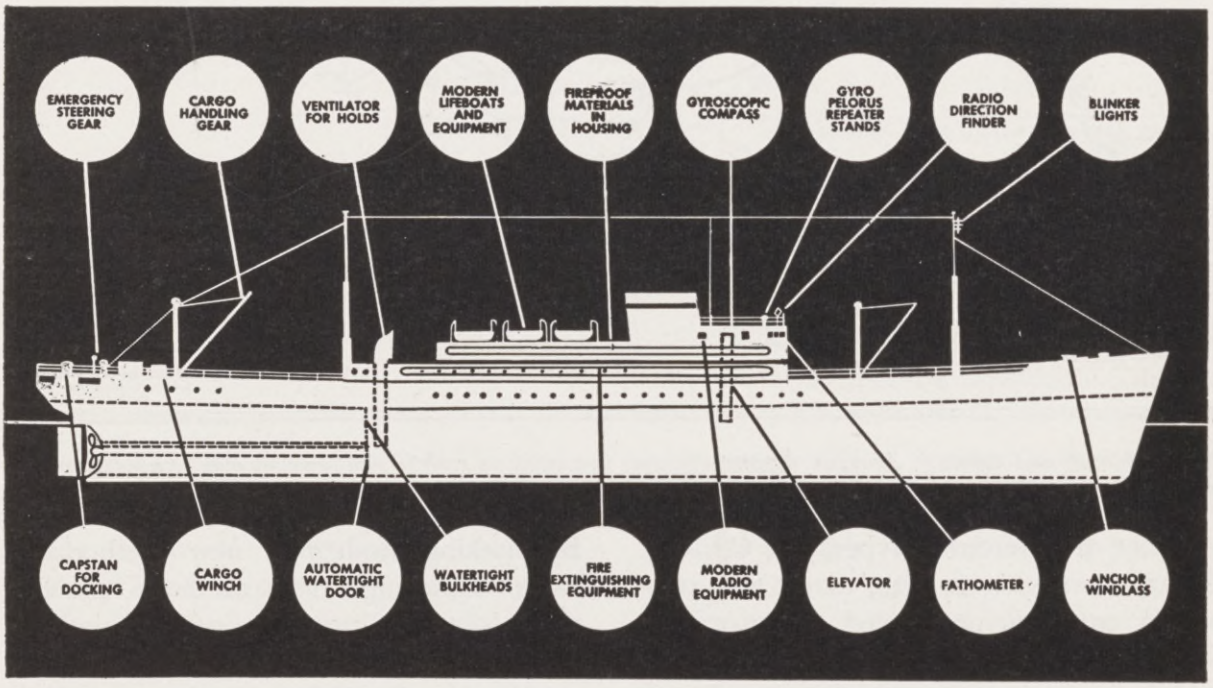
Liberty cargo; named for famous Americans.

Victory cargo; named for towns, colleges, United Nations.

Standard tanker; named for battles, missions.

Great Lakes ore; named by operator.

Ocean tug; named for lighthouses.



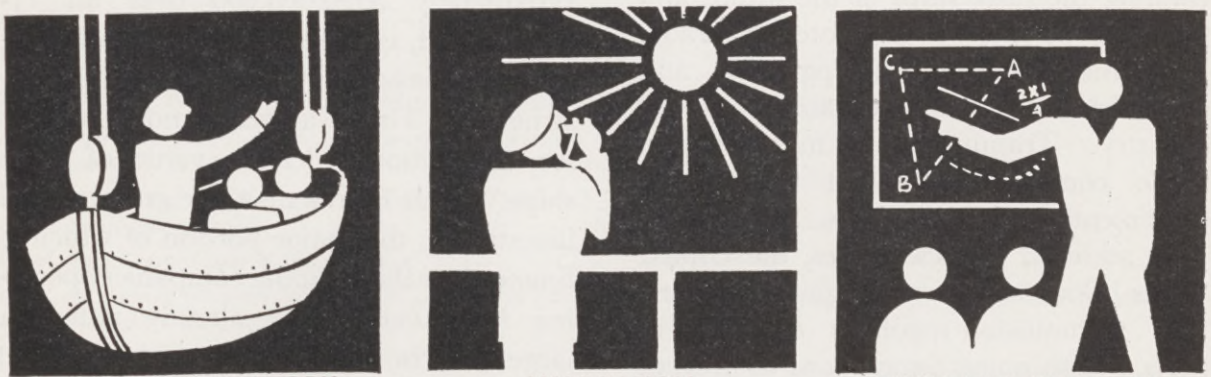
Ships designed for the modern Merchant Marine set high standards of safety, economy, and quality.

has contributed towards the great improvement in their working conditions in the past few years. The Commission is also responsible for training American citizens to man merchant ships. In carrying out this task it established in 1938 a training program composed of three principal units: the United States Merchant Marine Cadet Corps, the United States Maritime Service, and a unit designed to cooperate with the State maritime academies.

The United States Maritime Service provides the following types of courses: (1) USMS training stations, where new men entering the industry receive training in deck, engine, or steward's departments; (2) USMS upgrade courses which provide training for men desiring to raise their ratings or licenses; (3) special training in new navigational techniques such as radar and loran; and (4) special correspondence courses for men at sea, conducted by the USMS Institute. Several training ships are used by the schools so that trainees get actual sea experience in addition to classroom study. Approximately 285,000 men have been trained and upgraded since 1938.

The United States Merchant Marine Cadet Corps at Kings Point, N. Y., trains officers for the Merchant Marine. Young men between 17 and 21 years of age who meet the rigid scholastic and physical requirements are selected by national competitive examinations. Upon graduation they become Third Mates or Third Assistant Engineers and receive commissions as Ensigns in the U. S. Maritime Service and the U. S. Naval Reserve. The Corps has graduated some 8,900 officers since 1938.

Officers also are trained at four State maritime academies located in New York, Massachusetts, Maine, and California. Some of these academies have been in existence a long while, the one in New York, for example, having been founded in 1874. The newest is Maine's, which was started just 2 months before Pearl Harbor. The four academies receive



SMALL BOAT WORK NAVIGATION ENGINEERING INSTRUCTION

The U. S. Maritime Service trains seamen in the basic skills required of all seamen.

Modern seamen must be trained in technical skills required by modern ships.

financial aid from the Federal Government and offer courses similar to those of the Cadet Corps.

Upon all these training units fell the burden of providing most of the officers and crews who sailed the wartime fleet. After the war the training services turned to the job of training men for the peacetime fleet—men who will be skilled in running the finer ships of the future and who will be alert to promote our trade. Emphasis is placed on upgrading and specialist training for men already in the industry. Training of new men has been made commensurate with normal requirements for replacements.

In addition to these duties, the United States Government through the Maritime Commission regulates activities of ports and shipping associations to prevent discrimination or unfair competition. It may also provide insurance for shipbuilding and ship operation when the private market is unable to supply the necessary coverage. The Government participates in conferences with other governments to regulate international shipping. The Maritime Commission has the responsibility of investigating unfair or discriminatory practices against United States flag ships by other governments so that diplomatic action can be instituted when necessary to secure equal privileges for American vessels in world trade.

A number of other Government agencies in addition to the Maritime Commission have duties in connection with the Merchant Marine. The Coast Guard, for instance, investigates all marine casualties. Its Bureau of Marine Inspection and Navigation keeps records, licenses and certificates merchant seamen, and inspects ships to make sure that they are seaworthy and conform to safety requirements. The Public Health Service regulates sanitary standards for ships. The Customs Office of the Treasury Department collects taxes and duties on cargo.

The total cost of merchant ship construction-differential subsidies to the United States Government has been approximately $390,000,000 over an 11-year period, covering 256 ships, including the large passenger liners now under construction. This is a small amount to pay for the national defense value of these ships, which represent a far greater total investment, the major portion of which is financed by the shipping companies operating these vessels. As already noted, a large part of the operating subsidies are being returned to the Government at the end of the first subsidy accounting period.

The total net operating-differential subsidy payments to date have been less than 17/100ths of 1 percent of all Federal subsidies paid to business and farmers from 1934 to 1948. The value of the merchant fleet's contribution to victory in World War II cannot be measured in dollars.

Some people object to the payment of shipping subsidies, claiming that it is unfair to foreign operators who could carry our trade at lower cost. They point out that shipping is an "invisible service." By carrying our trade, other countries earn dollars which they can then spend for American goods. The Maritime Commission's program, however, assures the country of the merchant ships it needs to support its trade and defense. No foreign country can guarantee to provide us with these services. The subsidies are not intended to give our fleet an unfair advantage over the fleets of other countries whose shipping makes an important contribution to their national income. The subsidy is paid to equalize the higher wages paid to American workers with the lower wages paid to workers of foreign shipping competitors. This gives our shippers an equal chance in competition. The rest depends on the energy and efficiency with which they carry on their business and the patronage and good will of the American public.

Since it is the American public whose taxes pay for subsidies to the Merchant Marine, as to other industries, and since it is their trade and their defense that is being protected by merchant ships, it is to the interest of these citizens to see that their money is well and wisely spent and that they get full value for it. By shipping their goods on American ships, by using American ships when they travel, these citizens will be helping the Merchant Marine to pay its own way and to require less assistance from the Government. By giving it their interest and support, they will be making sure that their Merchant Marine will be strong and ready to serve them both in war and in peace.

QUESTIONS FOR DISCUSSION

Why should the Government help the Merchant Marine?

Are all the ships in the Merchant Marine aided by the Government?

What controls does the Government have over the Merchant Marine in time of war?

What control does it have in time of peace?

What are some of the ways in which the Government has helped merchant shipping in the past?

What is the purpose of construction and operation subsidies for merchant ships?

What must ship builders and operators do in return for subsidies?

How does the Government decide which trade routes are essential?

Why does the Government design ships?

Why does the Government have training schools for merchant seamen?

In what other ways does the Government help the Merchant Marine?

Should we pay subsidies to our merchant ships?

Why should the American citizen be concerned with the strength of our Merchant Marine?

GLOSSARY OF MERCHANT MARINE TERMS

Cargo—The load or the freight of a vessel.

Cargo vessel—A ship built to carry cargo.

Coastwise trade—Trade between the ports on the same coast.

Combination vessels—Ships designed to carry both cargo and passengers.

Crew—All employees on a ship.

Domestic trade—Trade between ports of the United States or between ports of the United States and ports of its possessions.

Foreign trade—Trade of the United States and its possessions with foreign countries.

Freight rate—The amount of money agreed upon for the transportation of goods.

Harbor—A portion of a body of water so protected as to be a place of safety for vessels. A *port* is a harbor plus terminal facilities.

Knot—The speed of a vessel expressed in nautical miles per hour. A nautical mile is about 1⅛ land miles.

Letters of marque—A license granted by the Government to a private person to fit out an armed vessel for the purpose of taking as a prize an enemy's ships or merchandise. A vessel so fitted out and licensed is called a *privateer*.

Liner—A vessel operating on a regular schedule and route.

Merchant Marine—The men and ships engaged in water-borne commerce.

Navigation—The science that enables a seaman to determine the position of a vessel and safely conduct it from one point to another on the ocean.

Seaman—One who works on a ship at sea, a member of the crew. Seamen's jobs are divided into four main groups—deck, engine, steward, and business. Officers responsible for running the ships must be licensed by the Government.

Ship operator—An individual or company which directs the running of a ship.

Subsidy—A government grant of money to assist a private enterprise determined advantageous to the public. A *construction differential subsidy* is money paid to the builder of a ship to equalize the difference in cost of construction between building in a foreign yard and building in a domestic yard. An *operating differential subsidy* is money paid to the operator of a ship to equalize the difference in cost of operation by foreigners and by a United States operator.

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For further information on the U. S. Merchant Marine, write to the U. S. Maritime Commission, Washington 25, D. C.


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