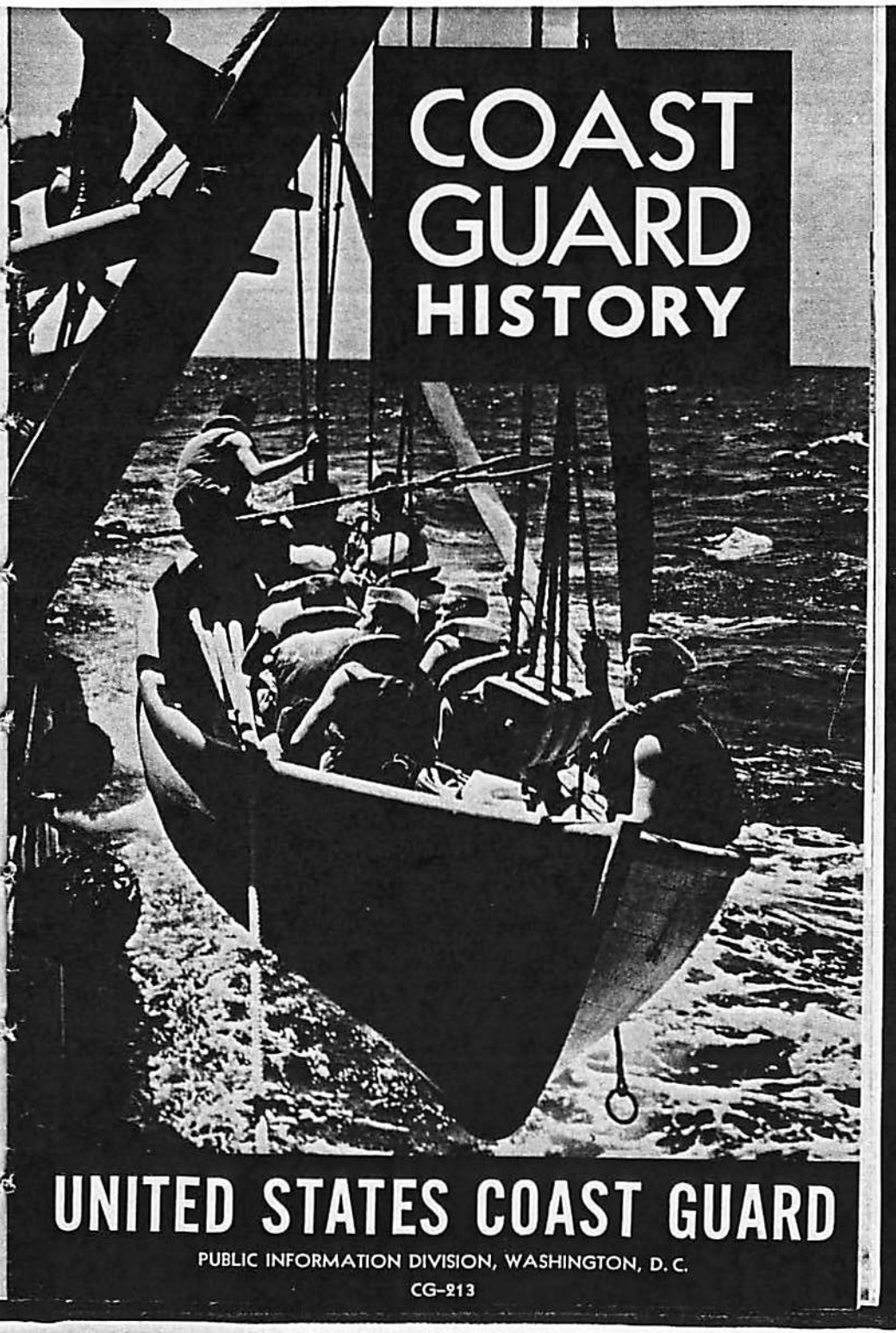


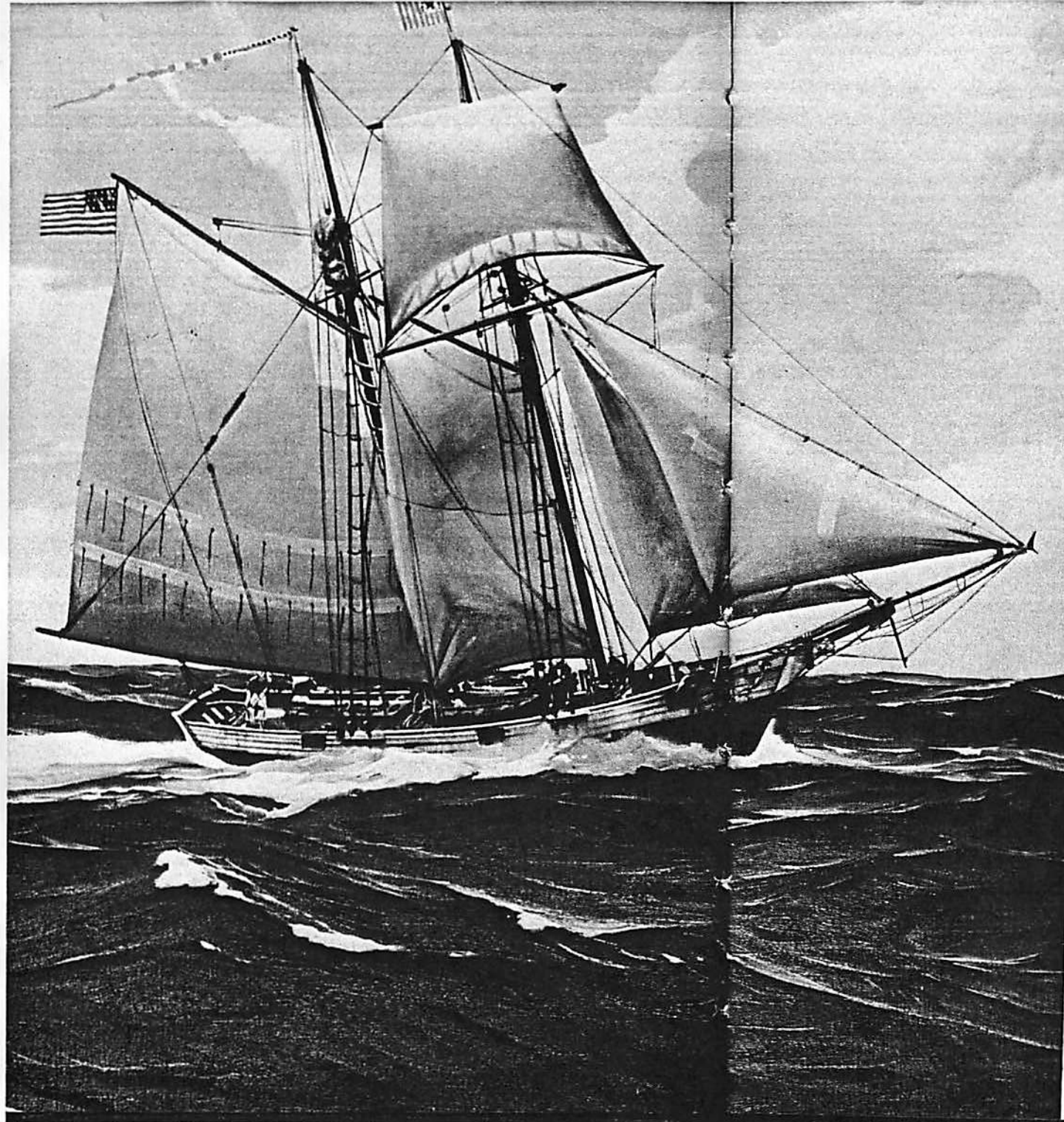


COAST GUARD HISTORY

UNITED STATES COAST GUARD

PUBLIC INFORMATION DIVISION, WASHINGTON, D. C.

CG-213



How the first cutter fleet was launched

THE history of the Coast Guard goes back more than a century and a half to the beginnings of the United States. The Nation dates from the Declaration of Independence, July 4, 1776, but the constitutional government we know today did not start until 1789. That was the year George Washington was inaugurated as first President and that the first Congress convened in New York, the first capital. The very next year, on August 4, 1790, Congress passed and Washington signed a bill authorizing the construction of "ten boats" for guarding the coast against smugglers.

This was the beginning of the Coast Guard. It was known in those first days, however, as the Revenue Marine. Later it was called the Revenue Cutter Service. Not till 1915 was it given its present famous name. But despite name changes it has kept its identity as an organization, and in point of continuous service the Coast Guard is considered the oldest of the Nation's sea-going armed forces.

The father of the Coast Guard was Alexander Hamilton, the first Secretary of the Treasury. It was he who asked Congress to provide a fleet of armed cutters to insure the collection of tonnage dues and import duties from vessels entering United States waters.

Smuggling, you must remember, had been a popular activity during the struggle to throw off British "taxation without representation." Colonials had considered evasion of duties imposed by the Parliament overseas an act of patriotism—such as the Boston Tea Party. Patriots had been smugglers; smugglers had been patriots. And respectable citizens like John Hancock and Samuel Adams, both signers of the Declaration, engaged in smuggling.

By the time the Revolution was over, smuggling was a habit, and it was Hamilton's job to stop it, if the young nation wasn't to go bankrupt. It was easy enough to show people that the customs duties instituted by Congress were taxation with representation, but it was not easy to make people see smuggling as a crime and smugglers as criminals. Faced with public apathy, if not outright sympathy, toward smuggling, Hamilton decided to resort to a fleet to enforce the customs laws.

Hamilton asked "that there be ten boats, two for the coasts of Massachusetts and New Hampshire; one for Long Island Sound; one for New York; one for the Bay of Delaware; two for the Chesapeake (these of course to ply along the neighboring coasts); one for North Carolina; one for South Carolina; and one for Georgia."

\$1,000 per cutter

The "ten boats" were to be cutter types—that is, heavy-keeled schooners that could carry plenty of sail for speed. "Boats of from thirty-six to forty feet keel will answer the purpose, each . . . armed with swivels," Hamilton told Congress. "The first cost of one of these boats, completely equipped, may be computed at one thousand dollars."

The first cutter was the two-masted *Massachusetts*, built and launched at New-

buryport, Mass., in 1791. Her deck, divided into long quarterdeck and deep waist, measured 50 feet from her Indian figurehead to her square-cut stern. The beam was 17 feet 8 inches; the depth 7 feet 3 inches. She "measured" 70½ tons and was armed with six swivel guns, which made her the most formidable ship in the cutter fleet. The 51-ton *Scammel*, the 50-ton *Active* and *Pickering*, the 40-ton *Diligence*, and the 35-ton *Argus*, *Vigilant*, *Virginia*, and *South Carolina* had only four guns apiece. The *General Greene*, a 30-ton sloop, had but three.

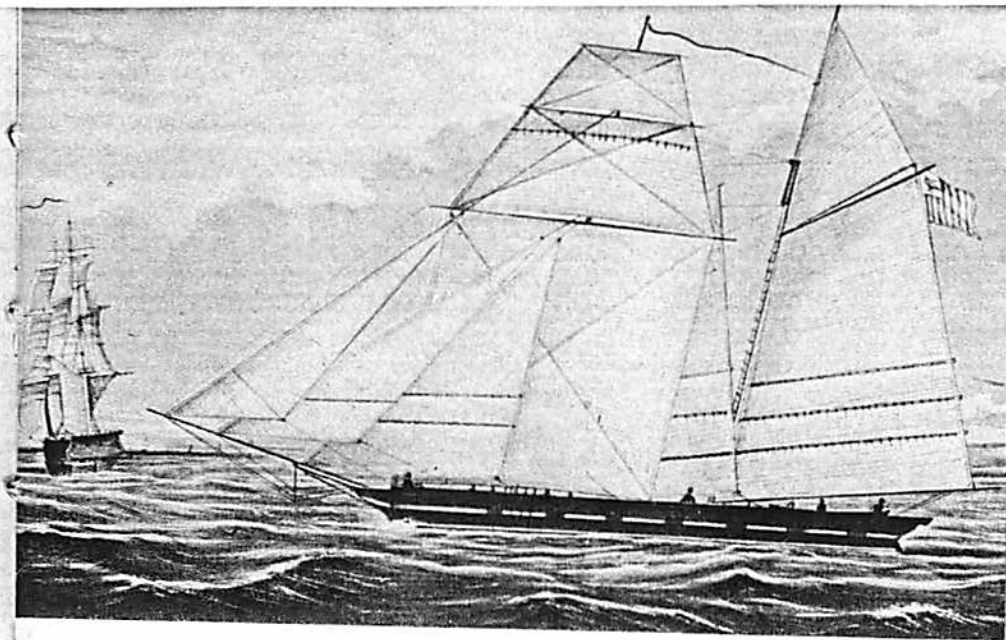
Rum, brandy or whisky

To sail these ships, Hamilton engaged crews of "respectable characters." For each cutter, Congress authorized one master, not more than three mates, four mariners, and two boys. The masters received \$30 a month, first mates \$20, second mates \$16, third mates \$14, mariners \$8, and boys \$4. All received rations, which included among other items a "half gill of rum, brandy, or whisky, 1 qt. salt, 2 qts. vinegar, 2 lbs. soap, 1 lb. candles."

In 1799, masters and mates were given the titles of captain and first, second, and third lieutenants. These were the equivalent of the Navy titles lieutenant commander, lieutenant, lieutenant junior grade and ensign, which came into Coast Guard usage in 1920.

It was Hamilton's idea to give the officers commissions that would "not only induce fit men the more readily to engage, but will attach them to their duty by a nicer sense of honor."

The first man commissioned "a Master of a Cutter in the Service of the United States" was Hopley Yeaton of New Hampshire. On March 21, 1791, he took the double oath—to support the Constitution



This print of the cutter *Forward* shows how she looked to an artist of her day.

and detect and prevent frauds against the revenue—that Coast Guard officers still take, and was given command of the cutter *Scammel*. During the Revolution he had fought as Captain John Barry's third officer aboard the frigate *Raleigh*.

Two other cutter masters also were veterans of the Continental Navy—John Foster Williams, who commanded the *Massachusetts*, and David Porter, who commanded the *Active*.

Uniform of the day

What uniforms these earliest Coast Guardsmen wore we can only guess, because in the beginning the Revenue Marine was loosely organized under the administration of local collectors of the customs and no uniform regulations are known earlier than those of 1830. The assumption is that the original cutter crews

dressed much like men of the Revolutionary Navy, disbanded in 1785.

Masters probably wore cocked hats over hair tied up in short cues, blue swallow-tail coats with gold buttons and epaulets, knee breeches and boots. Buttons were usually arranged in groups of four on lapels, pocket flaps, cuffs, and coat skirts to indicate the rank of sea captain. Other symbols of authority were side arms and a speaking trumpet through which to call orders to the crew and to hail ships to stand by for boarding.

The mariners (or sailors, as we call them now) also wore their hair in pigtails, which they tarred for protection against the salt water. The traditional broad sailor's collar was designed to catch drippings from the waterproofed cues. When really dressed up, the mariners sported hard black hats with flat brims and pill-box crowns, but at

sea they more likely wore knitted caps both for warmth and for the streamlined effect. Short blue jackets with brass buttons, and trousers that were bell-bottomed so they could be easily rolled up or worn over boot tops, probably completed the ancient mariner's uniform.

However they dressed, one thing sure about the Revenue Mariners—they must have been good sailing and fighting men.

Cutters vs. French privateers

FOR nearly eight years Hamilton's fleet of cutters was the young Nation's only navy. The regular Navy was not organized until 1798. At the time, a diplomatic war of nerves France was waging on the United States had broken out into an undeclared shooting war at sea. French privateers, preying on American shipping, seized more than 340 of our ships.

During the ensuing hostilities, Congress ordained in 1799 that "Revenue Cutters shall, whenever the President of the United States shall so direct, cooperate with the Navy of the United States." On August 4, 1949, Congress put it more strongly: "The Coast Guard as established January 28, 1915, shall be a military service and a branch of the armed forces of the United States at all times. The Coast Guard shall be a service in the Treasury Department, except when operating as a service in the Navy."

President John Adams, anticipating the act of Congress, had placed the cutters under the orders of Benjamin Stoddert, first Secretary of Navy, in 1798. Among their early assignments was patrolling be-

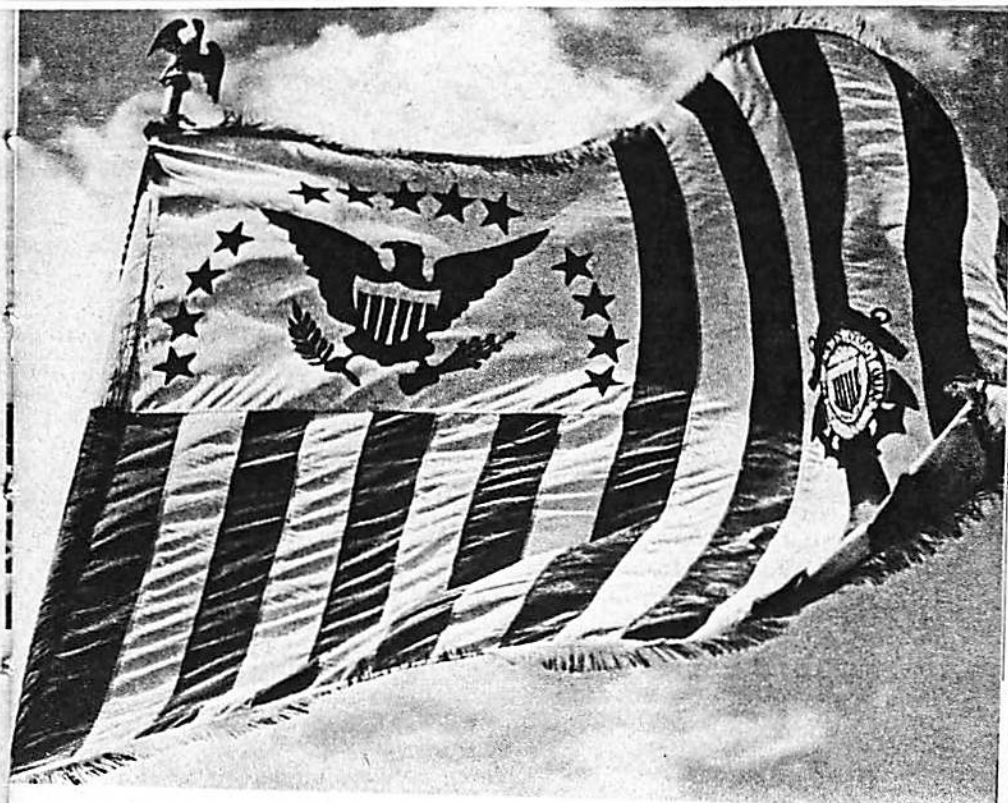
They made smuggling less profitable and less popular. For their work they were given increases in pay and subsistence in 1793, and again in 1796. Then between 1795 and 1801 the 10 original cutters were gradually replaced with 13 larger ships that carried more and heavier guns and bigger crews. The evolution leading to the great, 20th Century Coast Guard was finally underway.

tween Nantucket and Cape Henry, and escorting the new frigate *Constitution* on her maiden cruise. In this period, too, cutters performed the first convoy duty, guarding American merchantmen from the privateers.

In 1799, Stoddert ordered four fleets of 20 ships to sea against the French raiders. In this force were eight cutters. Of 20 French ships captured by the combined fleets, 16 were taken by cutters. The 187-ton cutter *Eagle* set something of a record by capturing five French ships, recapturing seven American ships, and assisting in the capture of 10 others.

The bigger they came

The *Pickering*, sister cutter of the *Eagle*, fought a notable engagement with the privateer *L'Egypte Conquise* on October 18, 1799. The Frenchman was fitted out and doubly manned expressly to capture the *Pickering*. Against her 14 nine- and 4 six-pounders and crew of 250, the cutter had only 14 four-pounders and 70 men. But after a 9-hour battle, the bigger ship hauled down the Tri-Color and surren-



The Coast Guard ensign, as it appears today, has changed slightly since 1799.

dered. Later, in 1800, the *Pickering* was lost with all hands in a storm.

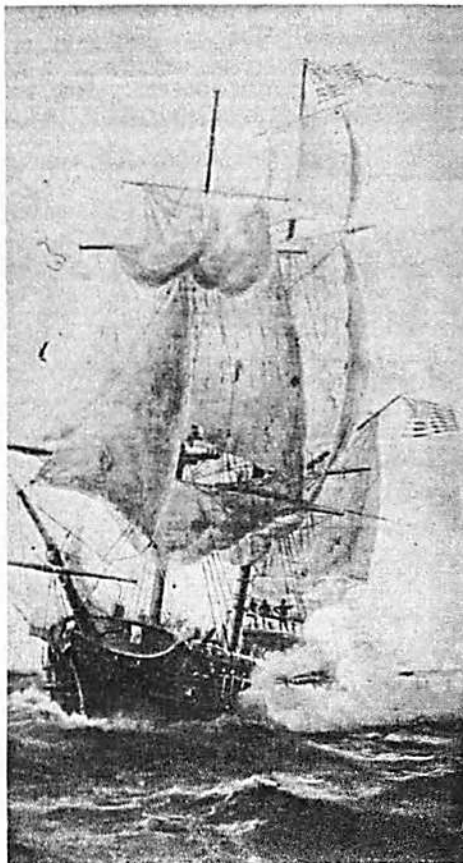
About this time, cutters began to fly what we know today as the Coast Guard ensign and pennant. In authorizing these banners in 1799, Congress ruled: "Whenever any ship or vessel, liable to seizure or examination, shall not bring to, on being required to do so or on being chased by any cutter or boat, which has displayed the pendant and ensign prescribed for vessels in the Revenue Service, the master of such cutter or boat may fire at, or into, such vessel, after such pendant and ensign has been hoisted and a gun fired by such cutter as a signal . . ."

Secretary of the Treasury Oliver Wolcott described the ensign and pennant in a letter to his collectors in 1799 as "consisting of sixteen perpendicular stripes, alternate red and white, the Union of the Ensign to be the Arms of the U.S. in dark blue on a white field." The stripes stood for the States that comprised the Nation at that time. The original 13 States were commemorated by an arch of 13 blue stars in a white field. The only change in the ensign was made in 1927 when the Coast Guard seal of shield and anchors was centered on the middle of the seventh red stripe. This distinctive emblem on the ensign had been authorized in 1910.

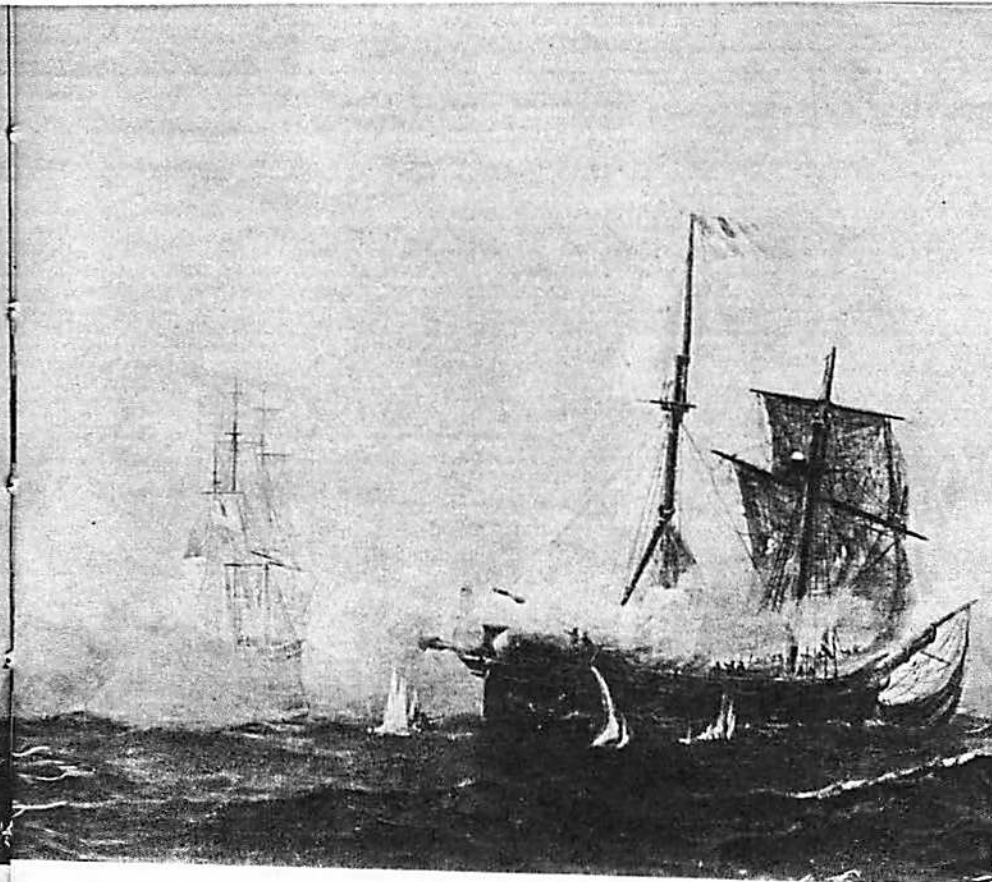
Cutters win glory in the War of 1812

NINE cutters, averaging 125 tons, each with 6 to 10 light guns and crews of 15 to 30 men, fought in the War of 1812. The war was not a week old when the cutter *Jefferson* captured the *Patriot*, the first prize to fall into American hands. Altogether, the cutters took 14 enemy ships. The *Madison* brought in the 300-ton brig *Shamrock*, and shortly afterward the schooner *Wade*, carrying \$20,000 in gold and silver. The *Vigilant* took the British privateer *Dart* in a running battle between Newport and Block Island.

But Britain was a great sea power and was able to send strong squadrons into American waters. Frequently the cutters, seeking contact with the enemy, found



The cutter *Eagle* overpowered the French



privateer *Mehitable* and her prize *Nancy*. In War of 1812, she herself was taken.

themselves up against bigger, more heavily armed warships.

On June 12, 1813, under cover of night and fog, three barges from the British man-of-war *Narcissus* tried to take the 75-ton cutter *Surveyor* by surprise in the York River, Va. Though outnumbered 50 to 15, the cutter crew wounded seven and killed three of the enemy before the *Surveyor* was captured. British Capt. John Crierie was so impressed by "the determined way in which her deck was disputed, inch by inch," in hand-to-hand fighting, that he

◀ The cutter *Madison*, 1813

returned to Capt. William Travis of the cutter "the sword you had so nobly used."

Another lively battle ensued when the 6-gun cutter *Eagle* encountered the 18-gun brig *Dispatch*, raiding shipping off Long Island. The cutter crew ran its ship aground on an island and then dragged her 4-pounders to the top of a bluff where they had the drop on the enemy. When ammunition ran low, five of the crew returned to the *Eagle* for more, but only three of them made the round trip. Aboard the ship, they replaced the ensign that had

been shot away. The British fired a whole broadside at them, and the Americans salvaged the small shot that riddled the hull. Back on the bluff, they made cartridges of bits of cloth and pages from the cutter's log and fired the shot back at the British. So telling was this fire that the enemy, unable to land to take the bluff, was forced to withdraw. Later, the cutter was refloated, but as she limped toward port the warship returned to the battle and captured her easily. Incidentally, today's cadets train aboard a modern *Eagle*.

Warring against piracy and slavery

INTERLUDES of peace between wars were all too brief for the cutters. No sooner was the War of 1812 brought to a close, in 1815, than they were ordered to sea against pirates and slave ships. The cutter *Active* captured a number of privateers in Chesapeake Bay between 1816 and 1819. The *Dallas* captured others off Savannah in 1818.

In 1819, the *Alabama* and *Louisiana*, on their way to stations in the Gulf of Mexico, overtook and easily captured the Mexican privateer *Bravo*, commanded by La Farge, a lieutenant of the notorious pirate Jean La Fitte. Then the two cutters wiped out Patterson's Town, a pirate den on Breton Island. This practically ended organized piracy in the Gulf, though occasional raiders came up from the West Indies and Central and South America. The *Louisiana*, with a United States and a British warship, took five pirate ships in 1822.

500 slaves freed

The *Dallas* captured a slave ship in 1820, and the *Alabama* took three slavers in 1822. In all, nearly 500 Negro slaves were liberated by cutters enforcing the law forbidding their importation.

There was more trouble in the wind in 1832, when South Carolina "nullified" the tariff on imports entering through her ports. Five cutters were dispatched to Charleston to enforce the collection of customs, and President Andrew Jackson declared: "If a single drop of blood shall be shed in opposition to the laws of the United States, I will hang the first man I can lay my hands on upon the first tree I

can reach." Ships arriving with sugar from Havana anchored under the guns of the cutters and their cargoes were impounded in Fort Moultrie until the import duties were paid. The crisis was ended with Henry Clay's tariff compromise of 1833.

In 1836, the Seminole Indians went on the warpath in Florida and eight cutters were ordered to the scene. The *Washington* arrived just in time to land men and guns to save Fort Brook after the Seminoles had ambushed and massacred all but one of the soldiers defending the fort. This was the first amphibious landing by combined forces in United States history and anticipated by more than 100 years similar operations carried out by the Coast Guard in World War II.

The cutters continued cooperation with the Army and Navy in Florida for two and a half years, blockading rivers, carrying dispatches, transporting troops and ammunition, and providing landing parties for the defense of settlements. When peace was finally restored all hands were rewarded with a grant of a quarter square mile of public land in Florida.

Reorganization, 1843

Under Secretary of the Treasury John Spencer, the Revenue Marine was set up as a bureau within the department along lines similar to the present Coast Guard establishment. It had accounting, engineering, personnel, operations, intelligence, and legal branches, and a captain was detailed to head the bureau.

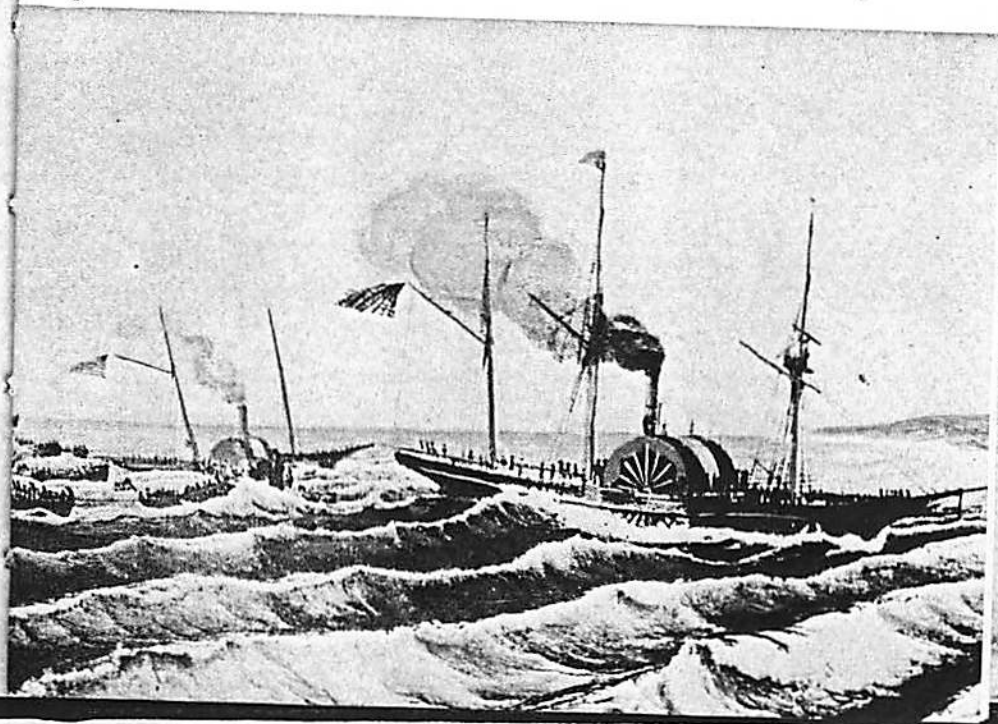
About the same time, the service began building cutters with iron hulls and auxil-

ary steam power. The first, the *Legare*, was launched in time to be ordered into action in the Mexican War in 1846. The *Forward* and *McLane* aided Commodore Perry in carrying out an amphibious assault at the mouth of the Tabasco River in 1847. In the operation, however, the *McLane* ran aground and had to be pulled off, which may be why Perry reserved his praise for the *Forward*. "I am gratified," he wrote, "to bear witness to the valuable services of the Revenue Schooner *Forward*." No word for the Steamer *McLane*.

Ill-starred steamers

Not only the *McLane* but all the first steam cutters were ill-starred. The *Bibb*, like the *McLane*, *Dallas*, and *Spencer*, equipped with a novel and untried under-

water paddle-wheel, began to leak so badly on her way to Mexico that she had to be beached. The *Polk* leaked on launching and was never used. The *Spencer*, found defective, was used as a lightship at Hampton Roads. The *McLane* had her machinery removed and was converted into a lightship in 1848. The *Woodbury* and *Van Buren*, tho not steamers, were condemned as not worth repairs. The *Legare* was withdrawn from service because of a dangerous boiler and transferred to the Coast Survey. The *Walker*, also turned over to the Coast Survey, was run down and foundered off Barnegat. Modern engineering officers say that, considering early steamships used sea water in square-shaped boilers with no safety devices, it's a wonder they didn't all just blow up.



On both sides of the Civil War

THE side-wheeler *Harriet Lane*, built in 1857 at a cost of \$140,000, was the first successful steam cutter and one of the famous ships of the Civil War. In this period of divided loyalties a number of officers and men resigned to join the Confederacy, and five cutters in southern waters were seized for the South. But the *Harriet Lane* fought under both Stars and Stripes and Stars and Bars.

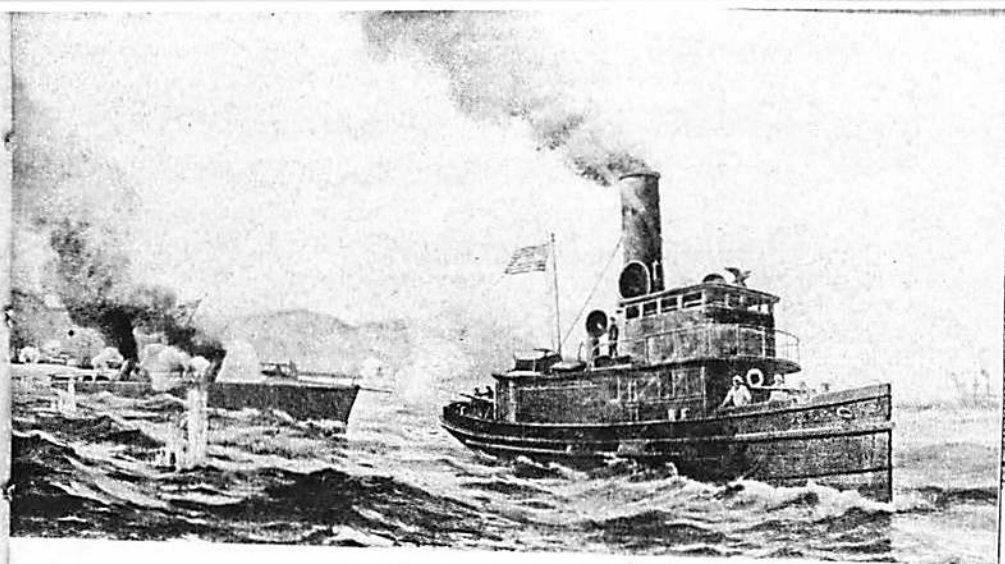
She is also credited with having fired the first shot of the war in April 1861, on the eve of the bombardment of Fort Sumter. As part of a force sent to relieve the beleaguered fort, she came upon the southern steamer *Nashville* trying to run into Charleston harbor without showing her colors. The cutter fired a shot across the steamer's bow, and according to the cutter's captain, "it had the desired effect."

Later, the *Harriet Lane* participated in the first Union victory, the capture of Fort

Clark and Fort Hatteras, which were bases for blockade runners in Hatteras Inlet. Then, transferred to the Navy, she served as the flagship of Admiral David Porter, whose grandfather had been a master of one of Hamilton's original ten cutters. At Galveston she was captured and finished the war as a Confederate ship.

By November 1864, the cutter fleet consisted of 11 screw propeller steamers, 3 side-wheelers and 14 sailing vessels. They helped enforce the blockade and lent support to the Army and Navy striking into the South.

The cutter *Naugatuck* escorted the *Monitor* when she sailed out into Hampton Roads, March 9, 1862, to do battle with the Confederate iron-clad *Merrimac*. The cutter *Miami* saw action at Willoughby's Point, where she landed President Lincoln on Confederate-held soil the day before the fall of Norfolk.



A brief war in an era of peace

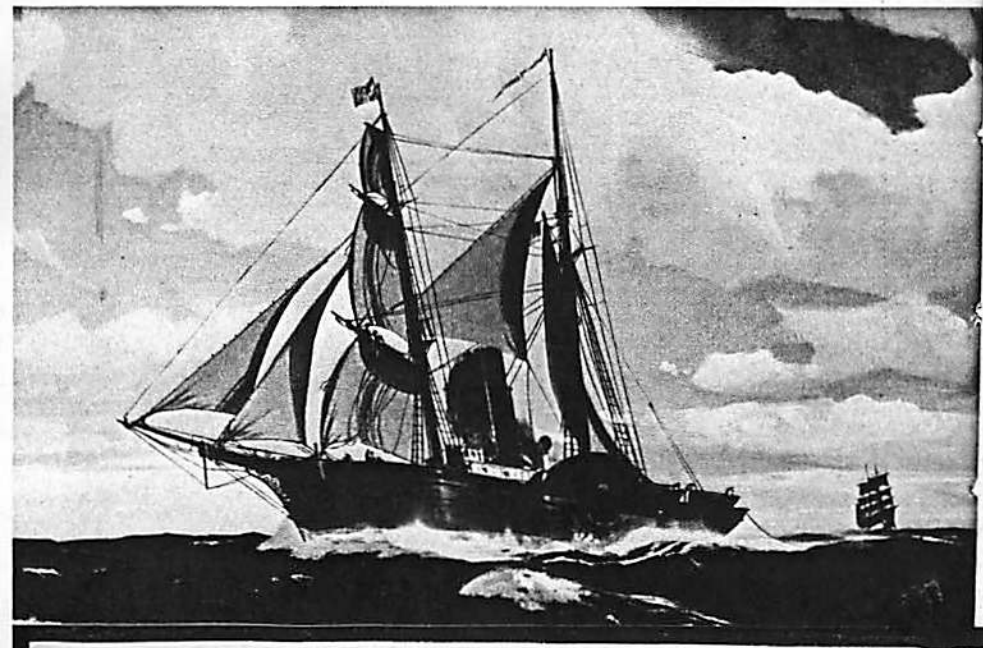
AFTER the close of the Civil War in 1865, the cutters enjoyed a relatively long period of peace, interrupted only by the eight-month Spanish-American War in 1898. The outbreak of this war found the cutter *McCulloch* enroute to San Francisco via the Mediterranean and the Suez Canal. At Singapore, she was ordered to join Dewey's forces in the Philippines. There she distinguished herself in the Battle of Manila Bay and afterward raced to Hong Kong with news of the American victory so that it could be cabled to the world.

The cutter *Windom* became involved in a naval battle off Cuba while helping cut the Cienfuegos cable, which linked Havana with the outside world. In another battle at Cardenas, the cutter *Hudson* braved deadly fire from Spanish guns to tow the crippled Navy torpedo boat *Winslow* from under enemy shore batteries and certain destruction.

Altogether, there were 18 cutters in the war with Spain. Thirteen operated from East Coast bases, eight of these blockading Havana with Admiral Sampson's fleet. Four others and the *McCulloch* were in the Pacific. Three more were in yards being fitted for battle when the brief war ended.

In the peaceful periods before and after the Spanish war, the Revenue Cutter Service underwent changes that presaged the tight-knit, efficient, dependable organization that the Coast Guard is today. Regulations of 1871 provided for regular inspection of cutters and for physical and professional examination of officers. In 1876 a system for training cadets to become officers was instituted. Finally, in 1915, the Revenue Cutter Service and the Lifesaving Service were merged and the new organization, headed by a captain commandant, was called the Coast Guard, the name it has borne ever since.

◀ The *Harriet Lane* at sea. Above: The *Hudson* rescuing the *Winslow*



The high cost of victory in World War I

PLAN ONE, ACKNOWLEDGE.

That was the dispatch received by all Coast Guard units on the morning of April 6, 1917. It meant that the United States was at war with Germany and that the 15 cruising cutters, 200-odd officers and 5,000 men of the Coast Guard were to go into action with the Navy. The naval action was almost exclusively undersea warfare and the Coast Guard was in the thick of it, convoying cargo ships and screening transports.

One of the most famous antisubmarine units of the Atlantic Fleet was Squadron 2, Division 6, composed of the cutters *Ossipee*, *Seneca*, *Yamacraw*, *Algonquin*, *Manning*, and *Tampa*, based at Gibraltar.

On April 28, 1918, the *Seneca* was escorting ships toward Gibraltar when at 2:45 in the morning the convoy ran into a pack of three U-boats. The British naval sloop *Cowslip* was nearly broken in two by a torpedo. Under the circumstances, the *Seneca* would have been justified to steam on, looking to the safety of the other ships and herself. But she stopped three times to put off lifeboats and pick up 81 survivors.

In another of the *Seneca's* convoys the British collier *Wellington* was torpedoed. She was abandoned but remained afloat. Her crew refused to reboard her, though 19

of them relented when 20 of the *Seneca's* men manned her and got up steam for Brest. Her captain said he couldn't see others doing duty that was his. In the night a gale came up and at 4 a.m. the *Wellington* went down. At daybreak, the British destroyer *Warrington* picked up seven seamen and one Coast Guardsman in a lone lifeboat and floating on make-shift rafts another seven seamen and eight Coast Guardsmen. Eleven of the *Seneca's* complement, including two Navy petty officers, and five of the collier's crew were lost.

"Seldom in the annals of the sea," declared the British Admiralty in praise of the *Seneca*, "has there been exhibited such self-abnegation, such cool courage and such unflinching diligence in the face of almost insurmountable difficulties." If that sounds like Winston Churchill, perhaps it is because he was the Admiralty's chief at that time.

Shortly afterward, the cutter *Tampa*, bound for England after having brought a convoy safely into Gibraltar, disappeared

with a loud explosion. A little wreckage and 2 unidentifiable bodies were the only traces ever found of the ship and 111 Coast Guardsmen and 4 Navy men aboard her. It is believed she was hit by a torpedo.

During a fire and explosions at a Morgan, N. J., shell-loading plant in 1918, Coast Guardsmen relaid damaged rails so that a train load of TNT could be saved.

An unarmed surfboat answering the distress call of the tug *Perth Amboy*, under fire from a surfaced submarine off New England, apparently was enough to scare the U-boat off.

A tower look-out at the Chicamacomico, N. C., Coast Guard Station saw the British tanker *Mirlo* torpedoed 7 miles off shore. The station's motor surfboat made three trips through burning gasoline and northeast seas in gathering darkness to save 36 British seamen.

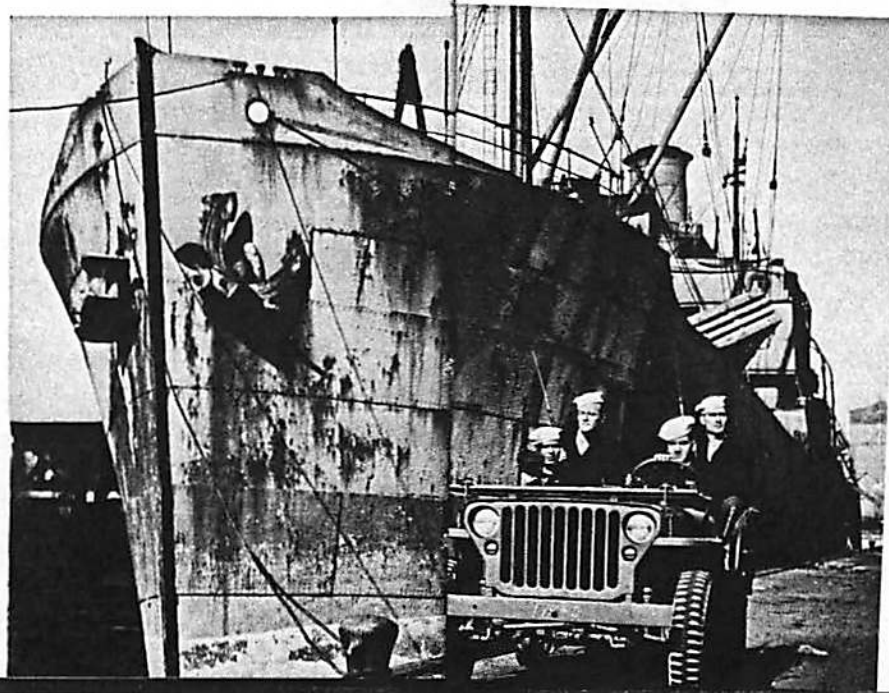
The Coast Guard suffered greater losses, in proportion to its strength, than any of the other United States armed forces in World War I.

In World War II its manpower hit the peak

IN World War II the Coast Guard hit its peak strength. It had 802 vessels (over 65 feet) of its own, and in addition manned 351 Navy and 288 Army craft. Shore stations increased from 1,096 to 1,774. And at the end of June 1945, its personnel numbered 171,168. Of these nearly half served on ships. There were only 10,000 more men ashore than at sea, many of the shore billets having been taken over by 45,000 temporary reservists and 10,000 Spars. Killed in action were 572.

Between World Wars the Coast Guard had grown. This was due in part to prohibition, for, though enforcement of the laws against smuggling liquor was unpopular, unpleasant, and dangerous, the Coast Guard had never before enjoyed such generous appropriations. Despite retrenchment after prohibition, the service was three times its World War I size in 1940 and well equipped to handle events that foreshadowed our entry into World War II.

When the war broke out in Europe in September 1939, Coast Guard ships, planes, and stations were ordered to carry out extensive patrols to insure that merchant ships in our waters did not violate the neutrality proclaimed by President Roosevelt. The next summer, the Coast Guard began its port security operations



World War II port security guard

under the revived Espionage Act of 1917 and the newly enacted Dangerous Cargo Act. In March 1941, the Coast Guard took 28 Italian, 2 German, and 35 Danish ships into protective custody and interned their crews to prevent scuttling and sabotage. Shortly afterward, 10 250-foot cutters were turned over to Britain under lend-lease. At the same time cutter patrols were operating in Greenland, which was in the United States' Western Hemisphere defense zone.

Submarine war again

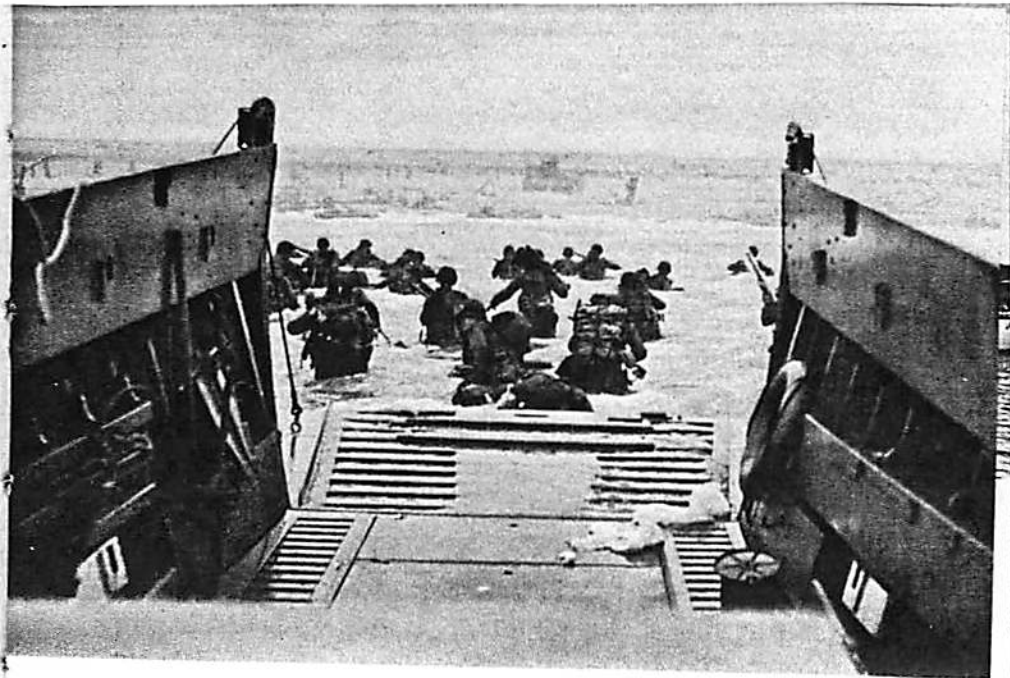
On November 1, 1941, the Coast Guard was ordered to operate as part of the Navy. The next month Pearl Harbor was bombed and we were in the war. The cutter *Taney* was in Pearl Harbor when the bombs fell.

As in World War I, a big part of the Coast Guard's task was antisubmarine warfare. Coast Guard cruising cutters and

escorts, as well as its sea frontier patrols and pickets along the coast, helped win the Battle of the Atlantic. These ships destroyed 11 U-boats; Coast Guard aircraft sank another. Besides, more than 4,000 survivors of torpedoings and other enemy action were rescued from the Atlantic and Mediterranean by Coast Guardsmen.

The 165-foot *Icarus* blasted a U-boat to the surface not far off the Atlantic Coast and took its crew prisoners. The *Campbell*, after a night-long battle with a submarine wolf pack, rammed and sank one of them for sure, and probably scored on the others with her depth charges. The *Spencer* was credited with two subs, and the *Duane* for an assist.

But there were losses, too. The *Hamilton* capsized while in tow after she had been torpedoed off Iceland and had to be sunk by gunfire. The *Acacia* was sunk in the Caribbean; the *Escanaba*, *Leopold*, *Muskeget*, and *Natsek* in the Atlantic; the



Serpens in the Pacific. Only two of the crew survived the *Escanaba*. Not long before, the *Escanaba* had spent eight hours in sub-infested waters rescuing survivors from a torpedoed transport. Some of her crew went over the side in darkness to tie lines to men who were too weak to climb aboard.

Another of the spectacular war duties of the Coast Guard was manning the landing craft that hit the invasion beaches with assault troops. Guadalcanal, Attu, North Africa, Salerno, Anzio, Tarawa, Makin, Kwajalein, Eniwetok, Normandy, Southern France, Luzon, Guam, Saipan, Iwo Jima, Okinawa—the Coast Guard made all those stops, and a lot in between. The Coast Guard's years of experience operating small boats through the surf made it the logical organization to train and supply crews for landing craft—from the smallest barges to the giant LST's (landing ship,

tanks). Coast Guard crews served also on many of the big assault transports which carried the barges and troops within striking distance of the beachheads.

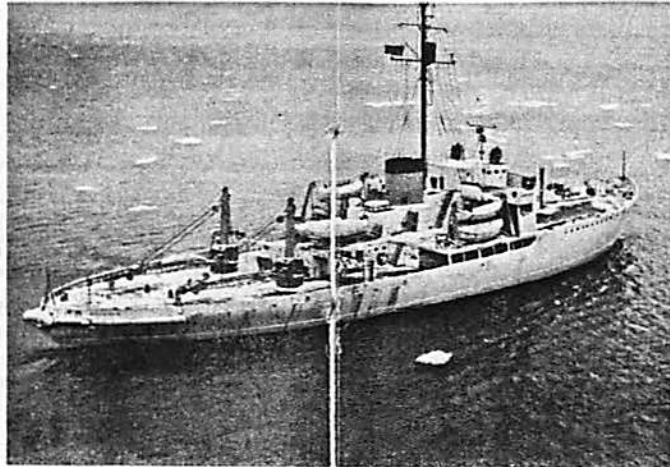
On D-day in Normandy, Coast Guard 83-foot cutters were given special life-saving assignments. Under fire from German defense guns, they saved 1,468 survivors of sunken landing barges.

Coast Guardsmen distinguished themselves on other fronts. In September, 1941, the cutter *Northland* swooped down on the sealer *Buskoe* and frustrated a Nazi attempt to set up a weather station in Greenland, effecting the first naval capture in World War II. Then there was the beach patrol, guarding 40,000 miles of shoreline. Beach-pounder John Cullen detected four Nazi saboteurs landing on Long Island from a submarine. Their capture led to apprehension of four others landed in Florida.

◀ One of 11 Coast Guard kills. Above: D-Day in Normandy



A trim "Secretary" class cutter, 327 feet in length.



Icebreaking is the job of the

rugged 290-foot Mackinaw.



A 255-foot cutter on Bering Sea patrol in Alaska.

How Hamilton's fleet has grown in 160 years

THE Coast Guard fleet that has been back on its peacetime job under the Treasury Department since June 1, 1946, is a far cry from Alexander Hamilton's "ten boats." There are now more than 60 distinct classes of ships and nearly 20 different types of aircraft. The word cutter no longer means a topsail schooner like the *Massachusetts* of over a century and a half ago. Technically, the Coast Guard cutter today is a ship that is over 83 feet and not an auxiliary. But

generally, cutter means only one thing to the public—a Coast Guard ship, any Coast Guard ship.

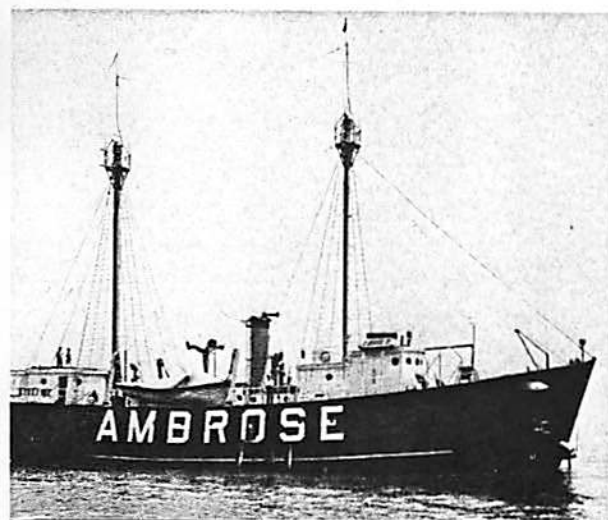
The largest cruising cutters are 327-footers, sometimes called the "Secretary" class because they are named for past Secretaries of the Treasury. These have been augmented by 311-footers built during the war as Navy seaplane tenders. There are also 255-foot and 250-foot classes of cruising cutters. Then there are smaller patrol cut-

ters, ranging from 165-footers to 83-footers.

Special duty vessels account for a great number of types. There are icebreakers that keep inland waterways open in winter; buoy tenders that keep navigation aids in working order. There are also ocean and harbor tugs, riverboats, freighters, and sedentary lightships. There is even a square-rigger, used as a training ship.

The reason for this variety of ships is the variety of duties described in the following.

Ambrose lightship marks the entrance to New York.



The famous 83-foot cutter,

built for speedy patrol duty.



No sea is too rough for this rugged buoy tender.



Keeping a weather eye out at sea

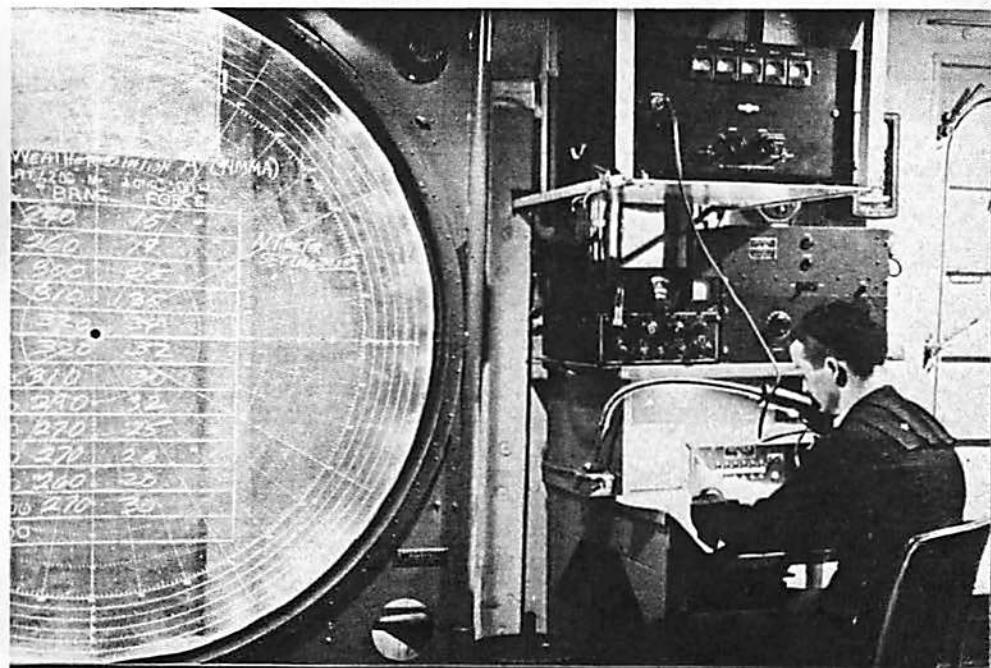
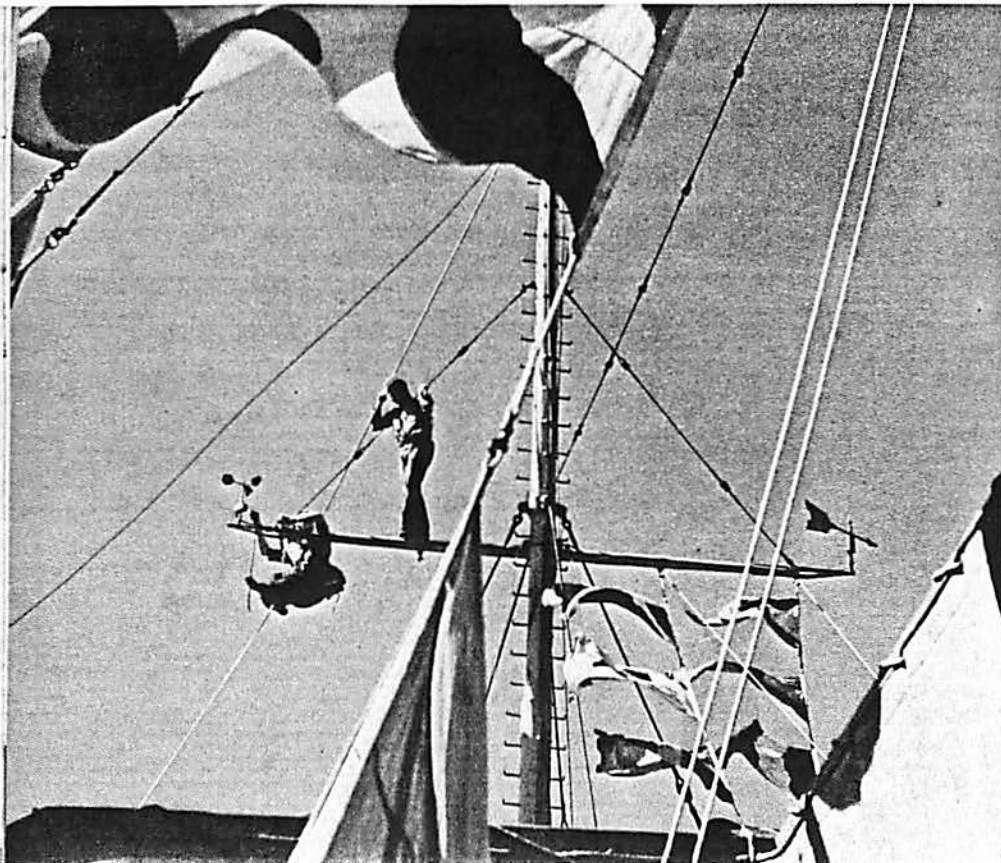
ONE of the big jobs of Coast Guard cruising cutters is serving as ocean station vessels. This requires them to cruise for 21-day periods in areas 10 miles square so that meteorologists can gather on-the-spot data to relay to the Weather Bureau. Forecasts and storm warnings based on such data permit trans-ocean ships and planes to avoid dangerous climatic conditions, but the cutters who do the work have to stick to their posts and ride out the heaviest seas in foulest weather.

Weather patrols were instituted in 1940, when two Coast Guard cutters were assigned to observation stations between Bermuda and the Azores. Before that merchant ships had supplied the information, but this had been curtailed when the outbreak of the war in Europe forced ships of belligerent nations into radio silence.

Toward the end of the war there were 11 Coast Guard ocean stations in the Atlantic, acting as plane guards and radio beacons as well as watching the weather. These dwindled after the war, so that by 1946 there was only one. Five Pacific stations, which the Coast Guard took over from the Navy in 1946, were reduced to two.

Increasing commercial trans-ocean air traffic, however, has necessitated an increase in ocean station vessels. Of 13 Atlantic ocean stations in the program of the International Civil Aviation Organization, Congress in 1948 authorized the operation of 7 by the Coast Guard, and 1 jointly by the Coast Guard and Canada. The two Pacific ocean stations continue between the West Coast and Hawaii and the West Coast and the Aleutians.

What these ocean station vessels mean



for ocean air travel, over and above the weather reports they supply, was demonstrated in October 1947, by the cutter Bibb. She was on her ocean station 800 miles east of Newfoundland, when the flying boat Bermuda Sky Queen, bound from Ireland to Newfoundland, flew over her. A hundred miles beyond, the plane had spent so much of its fuel bucking headwinds that it would not have been able to make land. So it turned back and, despite 35-foot waves, landed near the Bibb.

A large raft put off from the Bibb made three round trips, taking passengers from the plane to the ship. Returning on the

fourth trip, the raft, with 16 persons aboard, began to drift away. A motor surfboat from the Bibb went after it, but both the small craft were swamped. Quickly, the Bibb bore down on them and men over the side of the cutter in landing nets whisked the people from the raft and the surfboat out of reach of the sea. Twenty-two persons spent the night on the plane after darkness made further rescues impossible. These were taken off next morning. Four days later, the Bibb steamed into Boston with 69 survivors. A broom was lashed to her mast. She had made a clean sweep.

◀ Weather ship radio man gives data to passing plane. Above: Adjusting anemometer

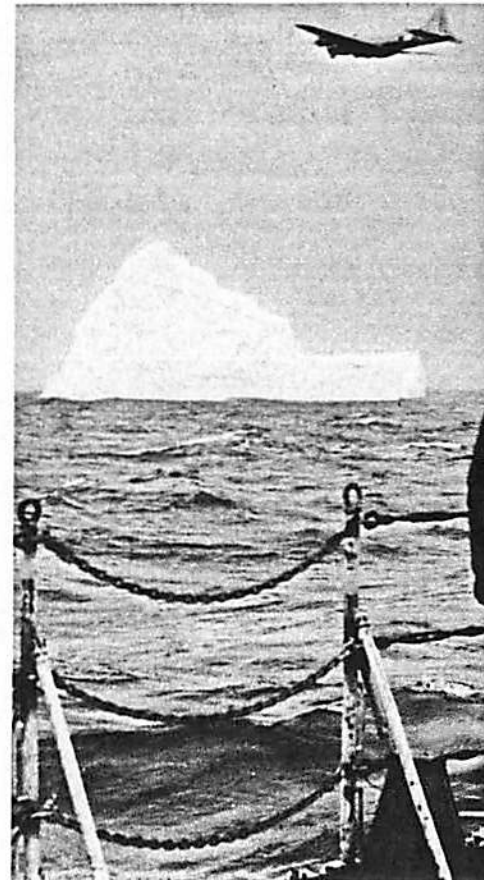
Hunting down icebergs is a chilly job

IN 1912, the British liner *Titanic*, built at a cost of \$7,500,000, left Southampton for New York on her maiden crossing of the Atlantic. Her passengers and crew numbered 2,207. Only 690 ever set foot safely on shore again. The remaining 1,517 went down with the ship when she struck an iceberg as she neared Newfoundland.

It was after this tragedy that a conference of the principal maritime nations, meeting in London in 1914, decided to institute an International Ice Patrol, the cost to be defrayed in fixed proportions by the nations benefitted. The Coast Guard, however, had actually started ice patrols in 1913.

Icebergs in the fog

The area patrolled is 45,000 square miles or about the size of the State of Pennsylvania. During the ice season, which runs from April to July, the area is heavily blanketed with fog and every year an average of 428 bergs drift southward toward the busiest steamer lanes in the world. Considering the vastness of the area, the generally poor visibility and the great number of bergs, it is not inconceivable that one may occasionally get into the shipping lanes unobserved, despite the most up-to-date scientific developments



Planes team up with cutters to detect

and detection equipment used by Ice Patrol cutters and planes. Yet, in all the time the Coast Guard has performed this duty, no ship has been lost through collision with an iceberg.

In both World Wars, however, when submarines were more of a menace than icebergs, Ice Patrol was suspended so that cutters could perform more important escort duty. There was but one major mishap—in the second war. The British ship *Svend Foyn* hit a berg in March 1943.



icebergs in the fog-bound North Atlantic.

Before she sank, 145 persons aboard her were rescued by Coast Guard and other craft.

During most of World War II, a detachment of Coast Guardsmen experienced in Ice Patrol was based at Argentia, Newfoundland, to serve as a clearing house for ice formation. The movement of bergs was reported to them by planes and escorts that encountered ice while performing other duties. Finally, regular patrols were resumed in 1946.

They have to go out, don't have to come back

THE modern Coast Guard came into being January 28, 1915, with the merger of the Revenue Cutter Service and the Lifesaving Service. It was a logical consolidation, since both services had worked closely within the Treasury Department for upwards of a century with but a common aim—to protect life and property from the ravages of the sea. Actually, the Lifesaving Service had been established within the Revenue Marine Division in 1871, but seven years later had been made a separate bureau. During the separation, however, cutter officers supervised the drilling and inspection of lifesaving station crews.

The cutters' concern with maritime safety dates back to 1831, when the first winter cruise was ordered to aid seafarers and ships in distress. Cutters were charged in 1836 "to aid persons at sea, in distress, who may be taken aboard," and in 1843 to preserve property found aboard wrecks and to secure the cargoes for the owners.

Humane Society, 1785

Lifesaving operations from shore date from the founding of the Massachusetts Humane Society, a volunteer group, in 1785. The society built its first lifeboat station at Cohasset in 1807. In 1849, a



Motor lifeboat (left) and motor surfboat (right) are both self-bailing rescue craft.

Congressional appropriation provided the collector of customs at Boston with \$5,000 to buy boathouses and equipment for the society. The next year, Congress appropriated \$10,000 to build Government lifeboat stations along the New Jersey coast and to provide "surfboats, rockets, carronades, and other apparatus for the better preservation of life and property from shipwrecks on the coast."

Surf-cars and cannon

One of the first stations was built at Spermacetti Cove on Sandy Hook, N. J., in 1849. It has been preserved as a Coast Guard museum. Inside this structure of weather-beaten shingles about the size of

a two-car garage are relics of long ago, including the station's yellowed log books, fragments of wrecked ships, early surfboats, watertight dinghies called surf-cars that were operated like breeches buoys, and a variety of cannons and projectiles for shooting lines aboard wrecked ships.

For over five years these early stations were manned by volunteers, called together like a volunteer fire department whenever there was a shipwreck. In 1854 keepers were appointed for the stations at an annual salary of \$200. Not till 1871 was the Secretary of the Treasury authorized to employ surfmen to man the stations.

In the 70 years between 1871 and 1941, cutters and lifeboat stations rescued

203,609 lives and nearly \$2,000,000,000 in property from shipwreck and flood. To do this magnificent job, men of the old services and the new have had to put to sea in the worst possible weather. "All I know is the regulations book says you have to go out," declared one old timer. "It doesn't say anything about coming back."

Special breed of men

Usually, though, Coast Guard crews do come back, their missions accomplished. One of the reasons is that years of experience in launching small boats through dangerous surf has developed a special, rugged breed of men. Another reason is that the equipment is specially developed, too.

Take the lifeboats, for example. There are a number of types, each designed and

built by the service for a particular task. There's the 26-foot surfboat that weighs nearly a ton and is propelled by oars. The same boat comes in a power model, and both types are self-bailing. Then there are two models of motor lifeboats, a 36-footer and a 52-footer. These are self-bailing, self-righting, and virtually unsinkable, and they have enclosed, heated compartments.

Newcomers among rescue craft are the versatile amphibious trucks, or DUKWs, as they are called. These vehicles can do 55 miles per hour on paved roads; then, without stopping, partially deflate their tires for better traction on sand and do 12.4 miles per hour across beaches and into the water where they can make six miles per hour. In reversing this process, they can reinflate their tires, again without stopping, when they return to the paved roads.

A breeches buoy is an old but still workable way to get shipwrecked sailors to shore.



Aviation extends a helping hand

AVIATION has given the helping hand of the Coast Guard a longer reach. Rescue operations that were once restricted to coastal waters because of the limited range of earlier equipment, can now be carried out far at sea. Giant Mariner flying boats can go 1,500 miles from shore, alight on the ocean to pick up survivors of an accident or someone from a ship who needs medical attention ashore, and return to land. Converted Flying Fortresses, flown by Coast Guardsmen, can carry lifeboats lashed to their fuselages and drop them as far at sea as 1,250 miles.

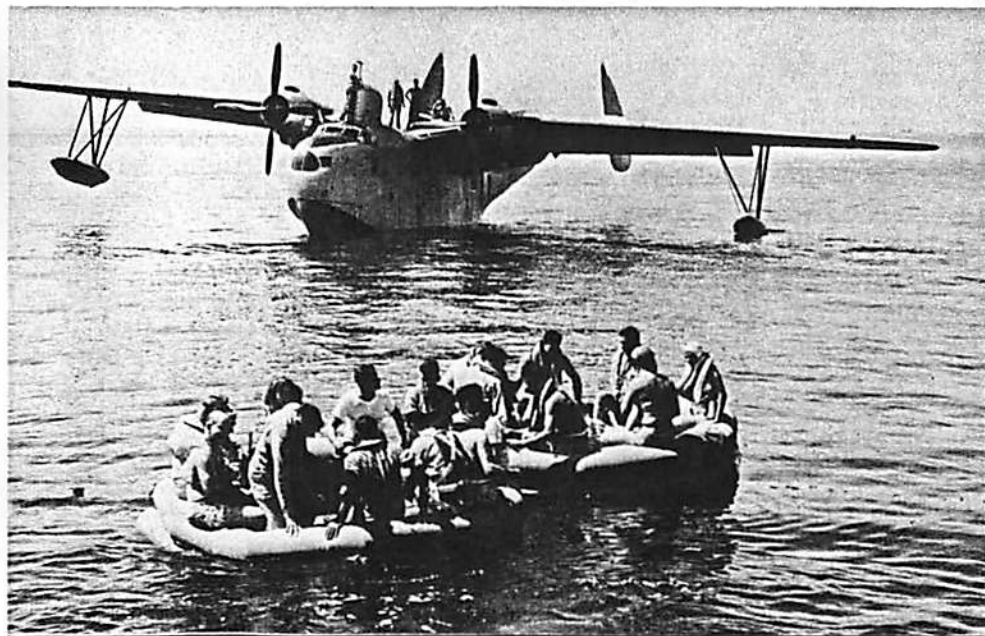
Another type craft that has increased the Coast Guard's effectiveness as a rescue agency is the helicopter. The ability of these flying windmills to hover and to take off and land straight up and down makes possible rescue operations in

areas that are inaccessible to conventional types of air and surface craft.

The Coast Guard pioneered in the use of helicopters and in November 1943, set up a helicopter training base at the Coast Guard Air Station at Floyd Bennett Field in New York. A year later, 150 mechanics and over 100 pilots had been graduated from this special school.

In 1945, a Coast Guard helicopter hopped into the snow-covered wastes near Goose Bay, Labrador, and brought out the crew of a cracked-up Royal Canadian Air Force plane. The next year a Belgian airliner crashed near Gander, Newfoundland, in wilderness that was inaccessible except to a helicopter. This rescue was a combined operation with the helicopter ferrying the 18 survivors to a nearby lake where a Coast Guard flying boat took

Coast Guard Mariner flying boats can land at sea to pick up drifting survivors.



them aboard and flew them on the last lap to civilization.

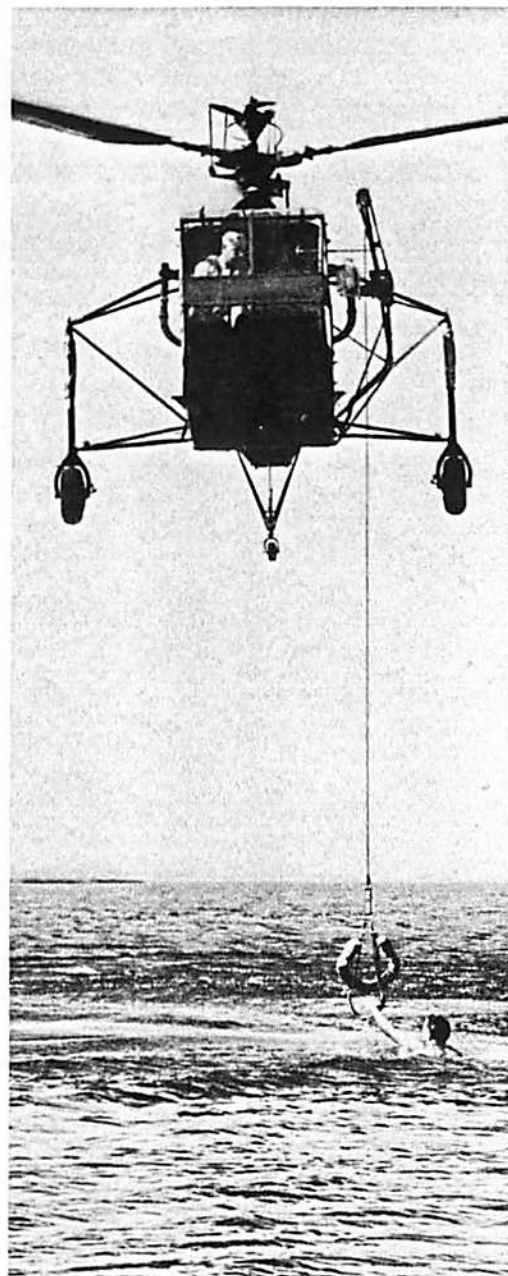
The Coast Guard has had a hand in aviation from the very beginning. When the Wright brothers made their historic first flight at Kitty Hawk in 1903, three members of the nearby Kill Devil Lifeboat Station stood by to lend a hand. One of them snapped a picture of the plane while it was in the air, and after the flight, when a wind flipped the plane over and threatened to wreck it, all three grabbed it and helped secure it safely.

Air group formed, 1916

By 1916, the Coast Guard had its own aviation division, which has grown until today it has nine air stations, three air facilities, and six air detachments.

Since 1938, the Coast Guard has looked out for trans-oceanic airliners in its traditional activities to insure safety at sea. After a British plane was lost on the New York-Bermuda run in 1939, the Coast Guard set up a continuous radio guard on the route. This minimized the danger a month later when a Bermuda clipper iced up badly. By 1940, the Coast Guard had developed an "Outline of Procedure" which provided coordination of safety operations by all agencies concerned, maintenance of a ship and plane position center, activation of the Coast Guard's distress organization, and transmission and dissemination of information.

Finally, in 1944, an interdepartmental, interagency Air-Sea Rescue Agency was set up with the Coast Guard Commandant at its head. This agency engaged in research and development work while Coast Guard and other air and surface units carried out rescue operations. After the war, the work was continued by the Coast Guard as a Search and Rescue activity.



Helicopter hovers, lets down life-lift.

Guideposts that bring ships home

WHEN the men who venture to sea get into trouble, the Coast Guard goes out and brings them in. But even when ships are not in distress, the Coast Guard brings them in—guiding them past rocks and shoals, through darkness and fog until they are at last safe in port. This is done by means of navigational aids—lighthouses, lightships, buoys, fog signals, radio beacons—which the Coast Guard maintains. There are over 36,000 aids. About two-thirds of them are buoys. More than 500 of them are fully manned lighthouses.

The first lighthouse in America was built in 1716 on the site of the latter-day Boston Light. Before that only bonfires or blazing barrels of pitch on headlands guided ships to port at night. Shipwreckers would duplicate the crude beacons on lonely stretches of coast to lure ships onto the beach where they could be looted.

Boston also had one of America's earliest fog signals, a loud cannon which started booming in 1719. The first buoys had appeared in the Delaware River by 1767. The earliest lightship station was that at Craney Island in Hampton Roads, Va., where a decked over small boat was moored in 1820. The first outside lightship was stationed off Sandy Hook in 1824.

In Colonial times, aids to navigation were built and maintained by the various localities. The Sandy Hook Light, for example, was built with the proceeds from a lottery and maintained by a tax on vessels entering New York harbor. The responsibility for aids was taken over by the Federal Government in 1789, when the Lighthouse Service was established in the Treasury Department. The Service was under Treasury's Revenue Marine Bureau (1845-52) and its Lighthouse Board (1852-1910), which passed to Commerce in 1903. The Service was a Commerce bureau (1910-39) until returned to Treasury and the Coast Guard.

The tallest light in service is the 191-foot Cape Charles, Va., tower. The Cape Hatteras Light in North Carolina, three feet taller, had to be abandoned in 1935 because of encroachment by the sea. But the highest light, though it has only a 43-foot tower, is perched 422 feet above the Pacific on Cape Mendocino, Cal. It can be seen 28 miles away.

The toughest job of the aids to navigation branch of the Coast Guard is maintaining upwards of 25,000 buoys distributed along the inland and coastal waterways of



Port Huron lighthouse is one of more than 500 the Coast Guard maintains, fully manned.

the United States, Alaska, Hawaii, and the Virgin Islands. They have to be checked constantly, given refills of compressed gas and air to keep their lights and whistles working, hauled out periodically for scraping and painting, and occasionally repaired, replaced, or remoored after a buffeting by the sea. To do this work the Coast Guard has a busy fleet of over a hundred buoy tenders and a number of yards with buoy maintenance shops.

The electronic age

The operation of lighted aids is a lot easier now, however, than in the bygone days when smoky oil lamps had to be cleaned and filled and their wicks kept trimmed. Many present-day lights and fog signals are turned on and off by a remote

control called ANRAC (aids to navigation radio controlled). And there are other electronic wonders: RACON (radar beacons) which gives distance (up to 120 miles) and bearing of ships and planes from the beacons; and LORAN (long-range aids to navigation) which give latitude and longitude positions to air and surface craft. Present Loran stations, located in Greenland, Labrador, Newfoundland, Alaska, the Philippines and remote Pacific islands as well as continental United States, form a safety network over the North Atlantic and North Pacific. In 1948, Congress authorized the Coast Guard to expand its Loran networks to meet the needs of the armed forces and the maritime and air commerce of the United States.



Thawing out a buoy

Everything under the midnight sun

THE first American ship to reach Alaska, after its purchase from Russia in 1867 for \$7,200,000, was the cutter *Lincoln*. The flag flying from her mast and from cutters subsequently sent there was for many years the outward symbol of government in that remote region.

More than symbols, though, cutters performed many functions of government. For the Department of Justice they enforced the law, apprehended criminals, and transported "floating courts." For the Navy Department they gathered military intelligence. For the Post Office Department they carried the mail. For the Department of the Interior they carried teachers to their posts and checked up on sanitation. For the Department of Agriculture they guarded timber and game. For the Department of Commerce they made surveys of the coast and of regional industries.

Medical and dental care reached isolated villages, brought by cutters carrying Public Health Service doctors and nurses. Marriages were performed by the com-

manding officers of cutters. And though today Alaska has its local Territorial government, many of the foregoing functions are still carried out by cutters of the Bering Sea Patrol. In addition, they discharge the normal duties that the Coast Guard performs everywhere.

One of the notable Alaskan cutters was the *Bear* which served 41 years on the Bering Sea Patrol, carried Byrd to the Antarctic and still came out fighting in World War II. In the winter of 1897, she volunteered to go to the aid of whaling ships frozen in near Point Barrow. After sailing as far as she could, the *Bear* sent a rescue group mushing nearly 2,000 miles across the ice, driving a herd of 400 reindeer before them for food. They set out December 17, 1897; they reached the whalers March 29, 1898. For 4 months they kept order and staved off starvation among 500 natives and 300 marooned sailors until the *Bear* got through in July.

Among the laws enforced by the Coast Guard in Alaska are those governing seal-

ing. At the time of the Purchase in 1867, there were an estimated 5,000,000 seals. In the first three years of American rule, hunting was unrestricted in the seal breeding grounds in the Pribilof Islands. In one season 250,000 were killed. In 1870, the Government set a limit of 100,000 male seals a year and leased the hunting rights in the islands as a monopoly to the Alaska Commercial Co. for 20 years.

Slaughter on the sea

Ships that hunted seals at sea, however, had a free hand. They increased from 16 in 1880 to 34 in 1886 and moved into the Bering Sea. Because they took females and any seals they could get their harpoons into, there was a sharp falling off in the herd and the United States had to limit island hunting to 25,000 a year.

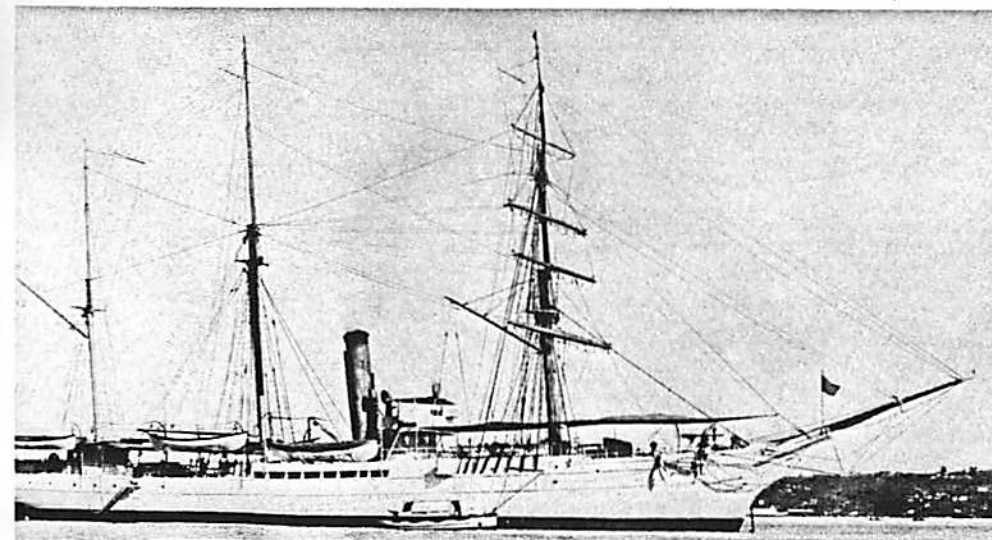
The problem of how to keep the seals

from becoming extinct was not settled until the United States, Great Britain, Russia, and Japan agreed in 1911 to ban commercial sealing in the North Pacific and Bering Sea. For its part, the United States undertook to hunt seals in the Pribilofs and to prorate the proceeds from the sale of pelts among the four treaty powers. Enforcement of the ban on deep-sea sealing was assigned to the Coast Guard's Bering Sea Patrol. In 28 years, seals increased from 132,279 to 1,872,438, and the Treasury had \$2,324,501 after paying the other nations their share of the fur profits.

Japan abrogated the pact in 1941. Only the United States, Britain, and Russia enjoy its benefits today. And the Bering Sea Patrol continues to police not only the sealing treaty but subsequent agreements and laws covering halibut, whales, walrus, and alien fishermen.



Men of the Bering Sea Patrol land supplies on a bleak, rocky shore in far Alaska.



◀ The *Bear*, Arctic veteran

Marine inspection and navigation

AS a sea-going police force, the Coast Guard is charged with the enforcement of law on the navigable waters of the United States and the high seas. This means all Federal laws. There are certain laws pertaining to ships and their operation, however, that are the particular concern of the Coast Guard.

For some years the Coast Guard supervised many navigation regulations for the late Bureau of Marine Inspection and Navigation of the Department of Commerce. Then the functions were transferred to the Coast Guard—temporarily in 1942, permanently in 1946.

From the time a merchant ship takes form on the drafting table until it is finally towed away to the scrap heap, its safety is looked after by the Coast Guard. A ship's blueprints, submitted for Coast Guard approval, must show sound construction of good materials, ample space and accommodations for crew and passengers, ready access to and egress from compartments, and adequate lifeboats, preservers and fire apparatus.

Annual inspections

Later, the promise of the plans must be fulfilled in the actual ship. The Coast Guard will inspect it annually and, if the vessel is well found and everything in working order, will issue certificates of inspection and approval. Among the ship's papers, which Coast Guard boarding officers examine, is a certificate of registration (or enrollment or license, depending on the type of trade engaged in) which identify the vessel as to ownership and

nationality. Change of captains must be endorsed on the certificate and the document must be surrendered in the event of loss or sale of the ship.

Smaller craft are given numbers. Lights, signals, and fire extinguishers are required by the Motorboat Act of 1940. It prescribes also type and number of life preservers for all motorboats and craft of more than 65 feet propelled by machinery other than steam.

Rules for operation

In addition to the physical character of vessels, the Coast Guard is concerned with how they are operated. Under the Load Line Act, ships of 150 gross tons and up must display load line markings and observe them in taking on cargo. Then there are the two sets of nautical rules of the road, which prescribe display of lights, sounding of signals, length of tows, steering, passing, anchoring, etc. The Inland Rules carry penalties for violations; International Rules do not. But if in investigating an accident the Coast Guard should find International Rules had been violated, this would be taken into consideration in fixing the blame.

The jurisdiction of the Coast Guard extends to ships' personnel. It sees to it that vessels are manned properly with respect to the number in the crew, their qualifications and their working conditions. After examining their professional qualifications, the Coast Guard issues licenses to officers and pilots, and certificates to seamen. Officers of American ships must be United States citizens and so must 75 percent of



Testing equipment, like this life-raft, is part of marine inspection duty.

the crew; 90 percent, with 10 percent aliens restricted to steward's department, in the case of passenger ships; 100 percent in the case of Government subsidized ships and cargo vessels.

The Coast Guard enforces also regulations governing the crew's quarters, watches, duties and—except in emergencies—the 8-hour day. A certain number of each crew must be certified lifeboat men. Coast Guard shipping commissioners, located in principal United States ports, afford facilities for engaging seamen by keeping a register of their names and qualifications. To protect seamen's welfare, no ship may clear port until the articles (a contract setting forth conditions of employment)

signed by the crew have been certified by a shipping commissioner.

Merchant Marine Investigating Units of the Coast Guard sit in major domestic seaports to conduct inquiries into marine accidents and to administer discipline in the merchant marine. Similar duties are performed by Merchant Marine Details in London, Bremerhaven, Naples, Trieste, and Piraeus.

In addition to the foregoing navigation laws, the Coast Guard is responsible for preventing oil pollution and obstruction of waterways, for supervising anchorages and for patrolling regattas. In wartime, it has broad port security powers under the Espionage and Dangerous Cargoes Acts.

Coast Guardsmen are made, not born

THE peacetime manpower of the Coast Guard is around 20,000—or about a tenth of its World War II strength. The service it renders, however, is out of all proportion to its numbers. Look at the duties detailed on the preceding pages. They are many, complex, and scattered widely to distant parts of the globe. Performance of these staggering chores by a relatively small, tight-knit organization is something of a miracle in efficient use of men and equipment.

Where every man counts

In the Coast Guard, every man counts. Every man must be a specialist—not in one job but several. The only way to get such men is to train them. This became apparent long ago as the service was growing up, having more and more duties assigned to it every year.

Back in 1876, a system was set up for filling third lieutenant (now ensign) vacancies from among cadets who had served a

2-year training and probationary period. In the summer of 1877, the old schooner *Dobbin*, refitted as a "school of instruction," sailed from Baltimore with the first class of cadets—nine of them. For 4½ months they tacked between the mainland and Bermuda, and then visited Provincetown, Portland, Me., and the Azores. In 1878, the 250-ton bark *Chase* was built as a cadet ship to replace the *Dobbin*. When the *Chase* put into winter quarters at New Bedford, Mass., the school was continued in a sail loft. In the winter of 1900, the *Chase* was quartered at Arundel Cove, Curtis Bay, Md., and a two-story wooden school was built there in the service's repair yard. The school moved to Fort Trumbull, New London, Conn., in 1910, and finally in 1932 into new buildings of its own a little farther up the Thames River.

Thus evolved the institution now famous as the Coast Guard Academy.

Cadets of the Academy represent the best of America's youth, selected on the



basis of physical and scholastic examinations. The four-year course is essentially that of an engineering college, with the addition of naval and military training in the cadet battalion ashore and practice cruises afloat. On graduation, the cadets are commissioned ensigns in the Coast Guard, awarded bachelor of science degrees and assigned to active duty.

Enlisted men of the Coast Guard also are highly trained. Immediately on induction, they are sent to "boot camp," as the Coast Guard's well-equipped primary

training stations are called, for basic training. Later, they may go to one of the many schools the Coast Guard maintains for training petty officers, or they may climb up the promotion ladder via the numerous correspondence courses of the Coast Guard Institute in Groton, Conn.

In short, the emphasis in the Coast Guard is on brains as well as brawn. Only this way is the Coast Guard able to carry out its manifold assignments, true to the traditions of more than a century and a half of service to America.

◀ The cadet battalion on parade. Above: Instruction in operation of Loran

