

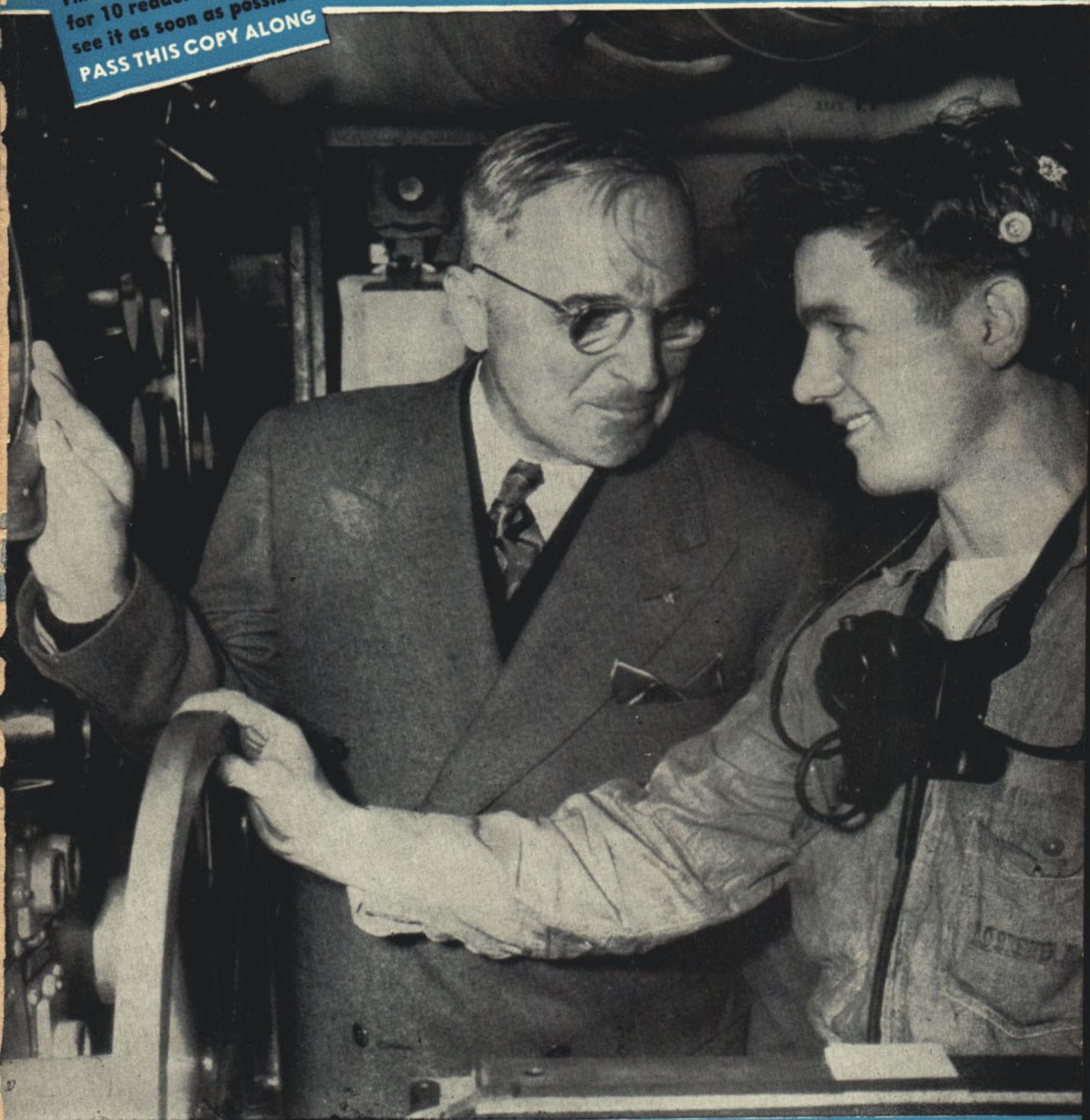
ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

NAVPERS-O

JUNE 1946

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see it as soon as possible.
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POWER POWWOW



TIGHT SQUEEZE

ALL HANDS

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JUNE 1946

NAVPERS-O

NUMBER 351

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The Chief of Naval Personnel

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The Deputy Chief of Naval Personnel

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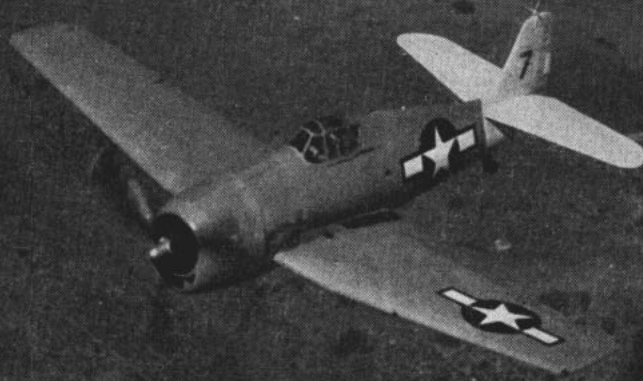
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● FRONT COVER: President Truman talks with Harry O. Brewer, MM3c, in the engine room of the USS Franklin D. Roosevelt while on an inspection of the carrier during the Eighth Fleet maneuvers. (See p. 6)

● AT LEFT: The carrier USS Philippine Sea is cautiously eased through the Fore River, Mass., drawbridge by eight escorting tugs as it heads for its South Boston Navy Yard annex berth.

CREDITS: Front cover, Press Association, Inc.; inside front cover, Acme photo; inside back cover, Official U. S. Navy photograph. On pp. 40-41: upper left, U. S. Coast Guard photograph; left center, Press Association, Inc.; lower left and upper right, Official U. S. Navy photographs; lower right, Acme photo.

PUPPET PLANES



Official U. S. Navy photographs

FLIGHT OF DRONE (lower center) is guided by one of two queen planes (upper right). Second queen is standby.

WHEN A-DAY of the long awaited atomic bomb tests at Bikini arrives about 1 July, little pilotless F6F Hellcats will streak down into gathering clouds of smoke and dust in quest of scientific data. And if they return from the inferno of the bomb detonations with data that the Navy, Army, and scientists are seeking, it will be no accident. For daily, barring adverse weather, Navy pilots have been going aloft to put the drones through their paces—all in preparation for the historic tests ahead.

Just how practical the idea of sending the drones into the mushrooming clouds of the explosions will prove is something that cannot be determined now. The bomb detonations themselves will tell the story of what heat will do to the planes.

But this is something for the future. In the meantime, the plan is to send Navy drones to the heart of the explosions, some equipped with special built-in scoops to gather particles in the air, others with velocity, gravity, time, and altitude recorders. The Army Air Forces is jointly participating in the drone phase of the tests, presently training with B-17's for a

Navy's F6F Drones Will Streak Through Center Of Bikini's Big Atomic Blast to Determine Effects Of Explosion on Planes

parallel exploration of the effects of atomic force on airborne aircraft.

All of the pilots who will guide the drones from their control planes have had previous experience in operation of pilotless aircraft. Not all, however, have worked with the F6F's, the planes chosen for the job at Bikini. The Navy figures they will be well prepared for the job ahead by the time they reach the Marshalls, as a result of extensive training.

Use of drones is no newly conceived idea with the Navy, although little information about their activities has filtered through to the public. Dating back to 1938, experimentation with radio controlled planes has been in progress. But it was not until drone groups put on an exhibition for the press at Atlantic City last December

that the public received any insight into the perfection achieved.

The little F6F's, only recently converted to remote control duty, made the most impressive showing at the Atlantic City demonstration. Previously, the work horse in pilotless aircraft experimentation was the TD2c. The F6F's, however, soon proved to be better planes for use as drones, became the object of extensive experiments, and subsequently were chosen for the Bikini assignment.

Having selected the plane, the next chore of the Navy was to choose pilots for a task unit. This could have been a difficult task, since only a small percentage of pilots have the necessary background, but it was not. At the Naval Aircraft Modification Unit in Johnsville, Pa., development of pilotless F6F's was being given plenty of attention, and Capt. John W. Davison, USN, chief engineer, was selected to head the drone unit.

It developed that an officer in BuAer kept, as a hobby, a complete file of pilots with experience in handling pilotless craft. So when a request came from the commander of Joint Army-Navy Task Force 1 for a group

of pilots to form a drone unit, it was not long before cards were pulled out of the file and a list of officers made up. Largest group of pilots came from the unit that had been conducting experiments at Atlantic City. Others were brought in from Santa Ana, Tinian, Pearl Harbor, and many other widely scattered points.

Thus Task Unit 1.6.14 was formed and given an assignment in the Bikini tests, otherwise known as "Operation Crossroads." The 38 pilots of the unit immediately went into training at the Naval Auxiliary Air Station, Brown Field, San Diego, Calif. And they will continue to train until the first bomb is released—to make sure that no failure results from lack of training or preparation.

Dress rehearsals being conducted at San Diego vary only slightly from plans for the real show at Bikini. Because the drones will be catapulted from the deck of a carrier, the *Shangri-La*, no effort now is being made to lift them from runways by remote control. A drone actually is taken up by a pilot, who relinquishes control to a control plane as soon as he is in the air. At Bikini, the drones will be operated through remote control from the time they leave the deck of the *Shangri-La* until they return.

To complete preparations for A-Day, tests have been made in lifting the drones from the deck of the *Shangri-La* completely by remote control. In these tests, successful in result, the Hellcats went up pilotless, just as they will at Bikini.

In the present training at San Diego, four control planes are assigned to each drone. The control planes work in pairs, but only one



MAINTENANCE CREW synchronizes controls from control booth to ground officer. Operators maintain contact with ground officer and planes' pilots.

actually controls the drone, with the other standing by in case of any emergency.

The first pair of control planes takes over handling of the drone as soon as it leaves the ground. They take it over a prescribed course and put it through maneuvers. Then the

drone is set on another previously arranged course, over which it flies under the guidance of an automatic pilot.

This course is followed for 13 minutes. The drone then is picked up by the second pair of control planes, which take turns putting it through maneuvers. On approaching the field, the control plane releases the drone to the guidance of a ground control officer, who handles the landing. In this practice landing routine, the pilot cuts off radio control and takes over if the plane is not coming in properly. Ordinarily, drones are brought in completely by remote control from the ground station.

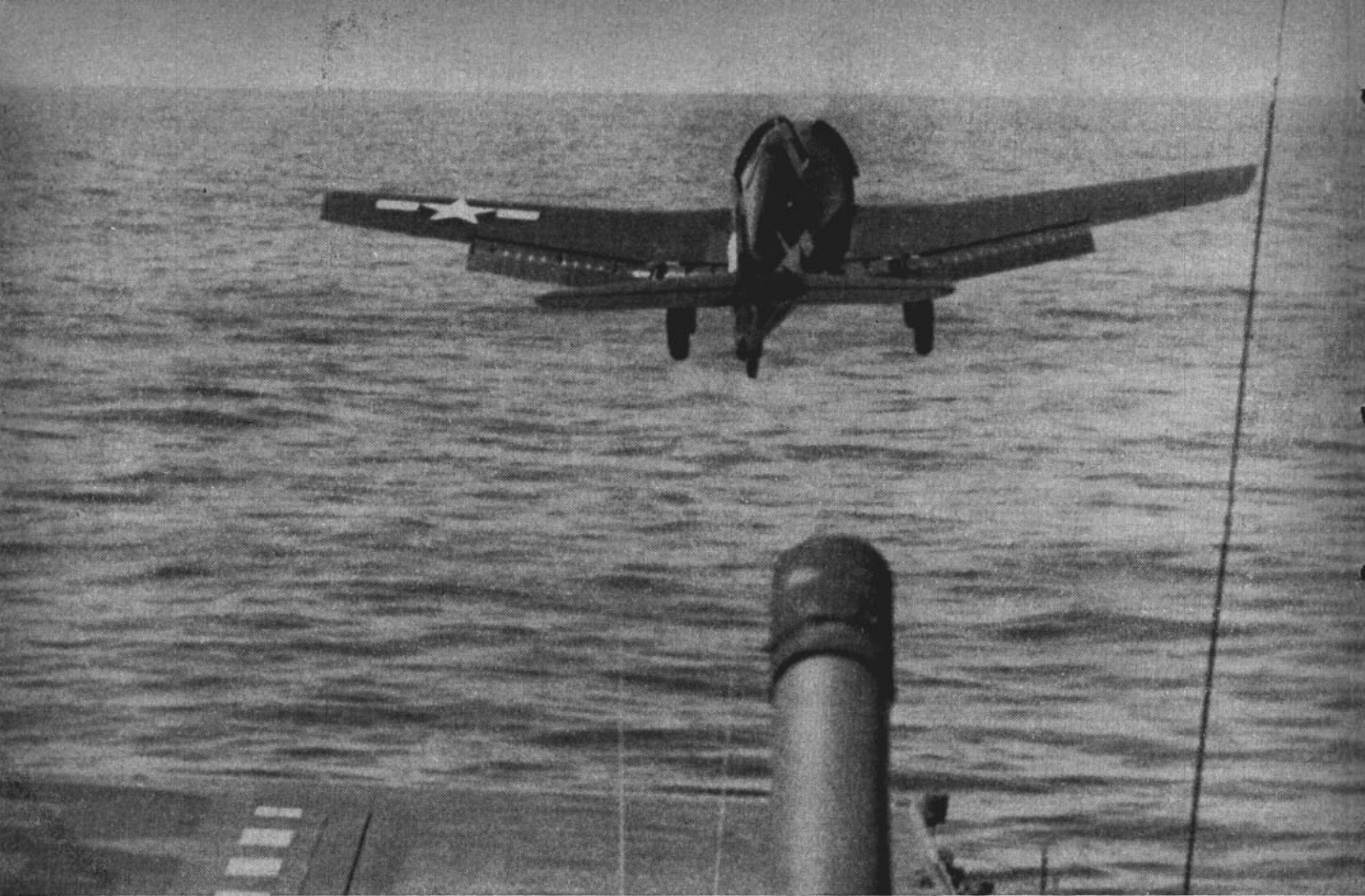
Normal speed of operation in the training work is about 150 knots true air speed, which makes it possible for the control plane to overtake the drone if necessary. At present it is sometimes difficult to control accurately the speed of the drone. Because the job at Bikini might entail flying at various altitudes, training flights are being conducted at 10,000, 15,000, 20,000, and 28,000 feet.

Handling of the drones in the air has presented little difficulty, and they have been controlled effectively from their control planes at distances of 30 miles. But the problem of speed control poses still another problem—that of landing. The latter is the most ticklish part of the business. Yet some pilots, who have been put in the drones to handle take-offs, come in with their hands over their heads in tribute to the ability of the ground control officer.

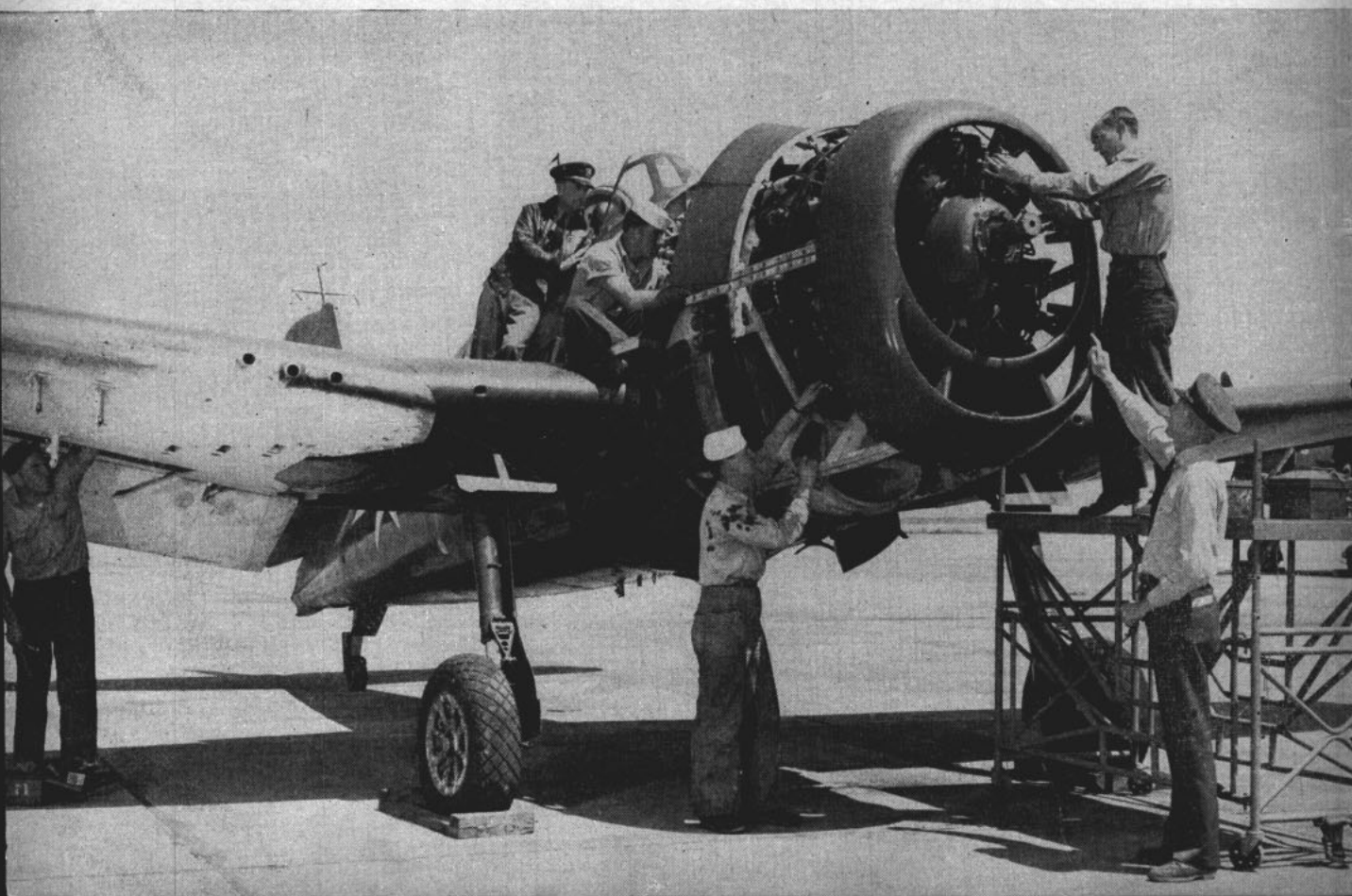
All of the drones are painted red, but tail assemblies have different colors. They may be green, blue,



AVIATION RADIOMAN, working inside control booth, throws control switch to put ground officer's controls on same frequency as incoming drone plane.



PILOTLESS HELLCAT (above), catapulted from USS Shangri-La, is clear of the carrier's bow and climbs rapidly. Drones like this one will fly through the atomic cloud. Ground crew (below) installs the engine in a drone plane.



white, or yellow. And these tail colors are significant, for they indicate the frequency on which the radio control works. Control planes are set up to work on the frequency as the drones they guide, but ground control officers can turn to any desired channel.

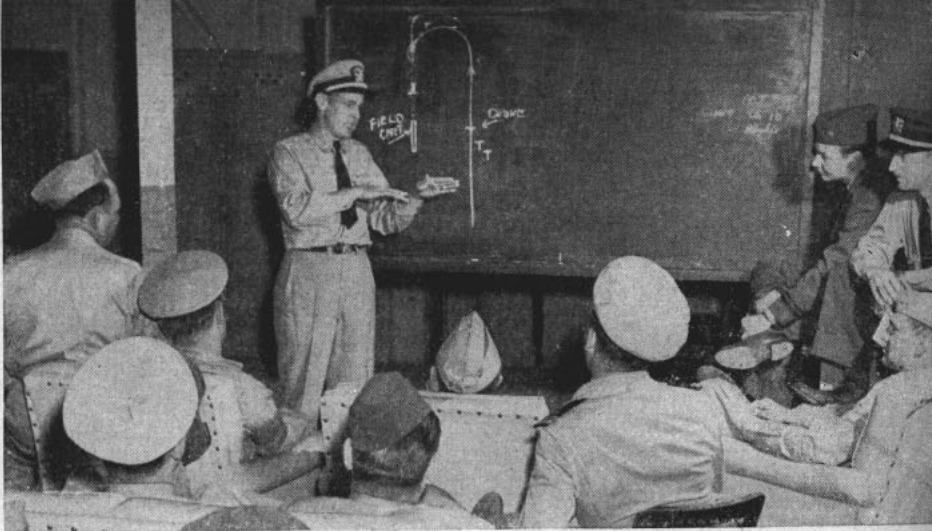
Ground control is accomplished by a control board in a booth. Operators in the booth keep in touch with control planes (in present training the drone pilot) and the ground control officer. The latter sits outside the booth with a small control box attached to the arm of his chair. This box is the same in each of the control planes.

Control boxes are about 5 by 12 inches and contain several switches, which turn the drone's engine on or off, and control its speed, brakes, and rudder. A lever, or hand grip, rises up from the box and acts as a control stick. Through use of this lever, a drone can be maneuvered into a climb, turn, or dive. At the top of the lever is a button, which is pressed when a drone comes out of a turn, and results in the automatic pilot returning it to normal flight level.

When a drone is directed into a turn, the gyro is caged electrically, and remains caged until the button at the top of the hand grip is pressed. The drone automatically lines up on its course without much manipulation from the controller, when the gyro is released.

When word is received in the control booth that a drone is coming in to land, one of the operators throws a switch on the control board. This permits the ground control officer to operate on the same frequency as the incoming plane. The control board is set up, so that it has two channels on each frequency. In event of trouble on one channel the other is used.

In the Bikini tests, in which the drones will play a part, Joint Army-Navy Task Force 1 will be concerned with evaluation and analysis of damage to ships, equipment, and material, and with every possible measurement of the phenomena incidental to the detonation of the atomic bomb.



OPERATIONS OFFICER briefs pilots on proper instant to release drone guidance to ground control officer. Board diagram shows drone and queen.



INTERCEPTION PROBLEM (above) concerns release of drone from one queen to other. Below, drone comes in for landing controlled by ground officer.





Official U. S. Navy photographs

EIGHTH FLEET ENTERS Gulf of Paria, British West Indies, during first peacetime extensive fleet maneuvers.

CARIBBEAN DRILL

UNDER SIMULATED BATTLE CONDITIONS one of the USS Macon's 40 mm

FIGHTING SHIPS of the Eighth Fleet, powerful striking force commanded by Admiral Marc A. Mitscher, USN, dropped their hooks in New York Harbor last month after six weeks of war exercises in the Caribbean.

Many of the Fleet's ships and a high percentage of their crews were new, untried by war when they set out from Norfolk late in April. Six action-packed weeks later they felt different. As a man aboard *uss Dayton* (CL 105) put it: "Does the Navy have a striking force? Call the Eighth Fleet!"

The exercises began on 22 April under the critical eyes of President Truman, Secretary of the Navy James Forrestal and Fleet Admiral Chester W. Nimitz, CNO, aboard *uss Franklin D. Roosevelt* (CVB 42). The ship had barely cleared the Virginia Capes before she was subjected to a full-scale air attack by planes from *uss Midway* (CVB 41). The visitors were aboard two days, during which a crowded schedule of air operations, gunnery and maneuvers was carried out.

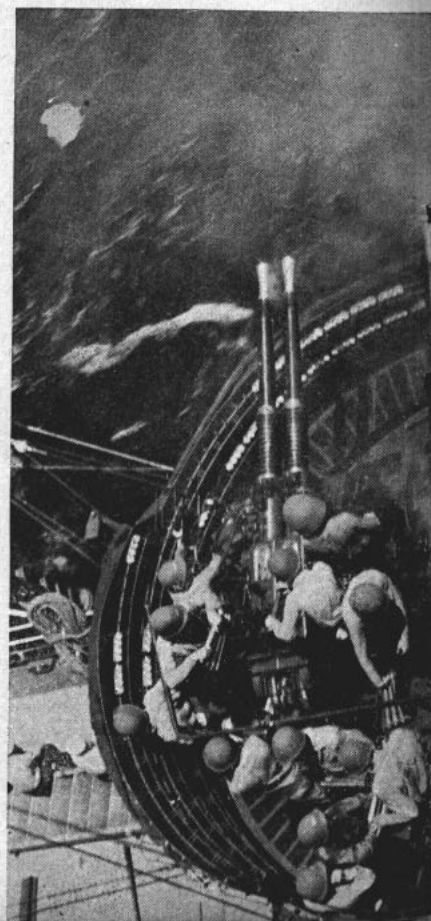
Then the ships swung southeast, headed for Trinidad. Tempo of operations, slow at first, speeded up as the force shook down. Strikes, sweeps, searches, photo missions kept the planes in the air from dawn until dusk.

Assistant Secretary of the Navy John W. Kenney and high Navy officers came aboard in Trinidad. Several good liberty days later (see illustrations) the Fleet sortied on 4 May for Guantanamo.

Third period of operations was spent in the area of Culebra just east of Puerto Rico, during which Fleet gunners and airmen got first-hand practice in supporting an amphibious operation.

The role of destroyers in modern fleet maneuvers was pointed up by *uss Bailey* (DD 713), which rescued two flyers whose plane crashed soon after takeoff from *USS Princeton* (CV 37). *Bailey* darted up from her plane guard station to pick up the two, and delivered them to the carrier within an hour. Reward: 20 gallons of ice cream for the *Bailey*.

Cruisers met a carrier and destroyers in simulated surface engagement while another part of the force was returning the Presidential party to Norfolk. The cruisers *uss Macon* (CA 132), *uss Dayton* (CL 105) and *uss Little Rock* (CL 92), attempted to sink the wounded *Midway*, which, according to the rules, was unable to launch her planes. The *Midway's* destroyers bored in under smoke screens for torpedo runs on the cruisers, while the latter simulated six and eight inch gunfire with their searchlights. The engagement was a draw.





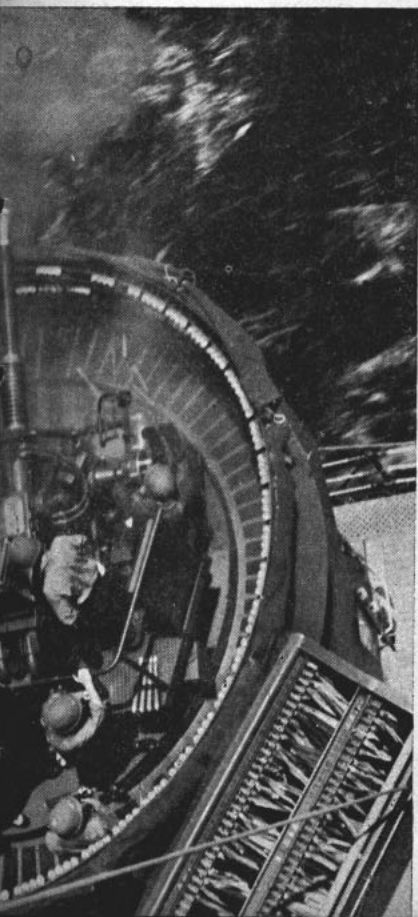
CREW MEMBERS of the USS Princeton on liberty in Port of Spain, Trinidad, barter with a street vendor for bananas.

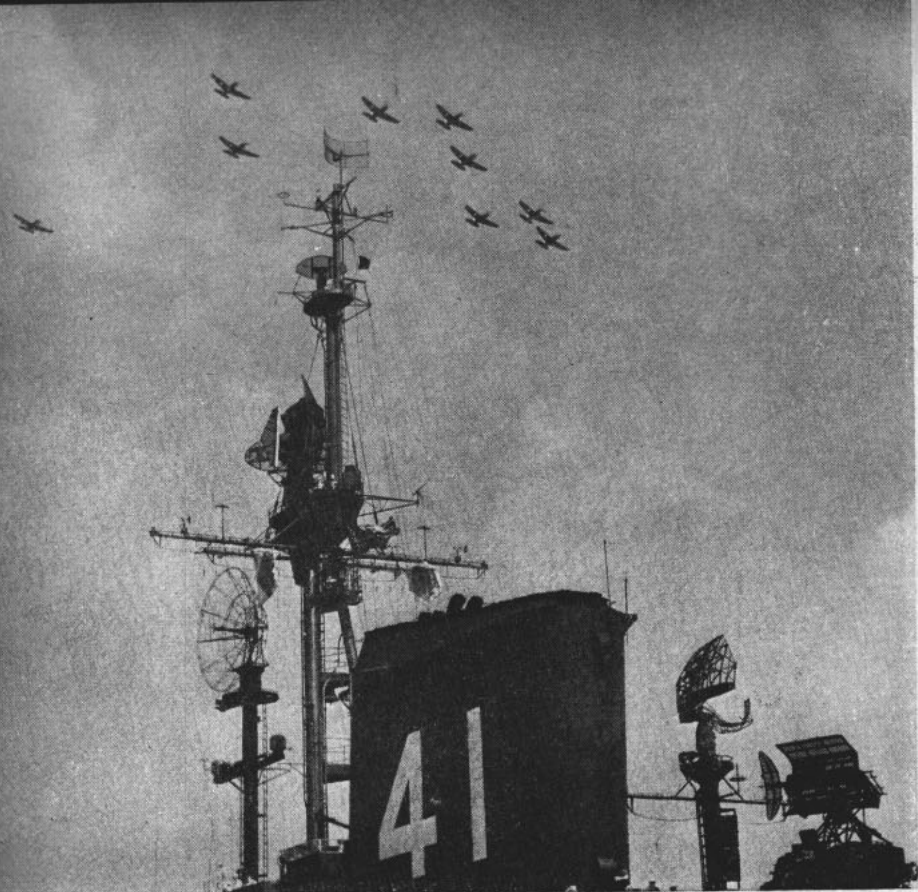


'SHOOTING THE SUN,' Lt. J. Malney, USN, stands on bridge of USS Midway during Eighth Fleet maneuvers.

quads goes into action against a drone, radio controlled by USS Little Rock.

TORPEDO-BOMBING HELLDIVERS and escorting Corsair fighters of Air Group 75 wheel over the carrier USS Franklin D. Roosevelt during a sortie.





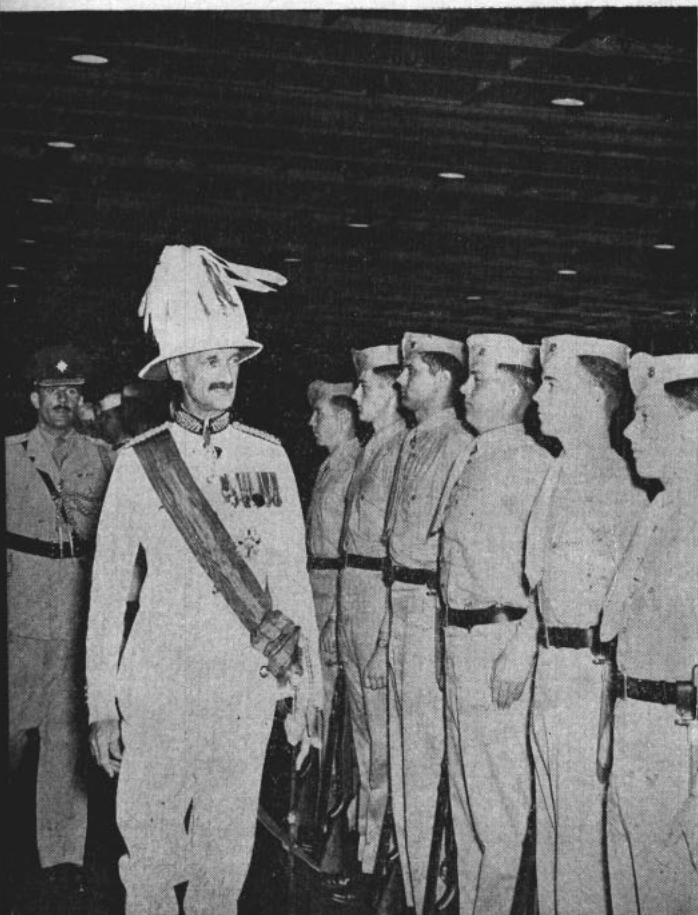
TORPEDO SQUADRON returning from a mission prepares for landing operations of USS Midway. Planes from Midway had "attacked" the Roosevelt.

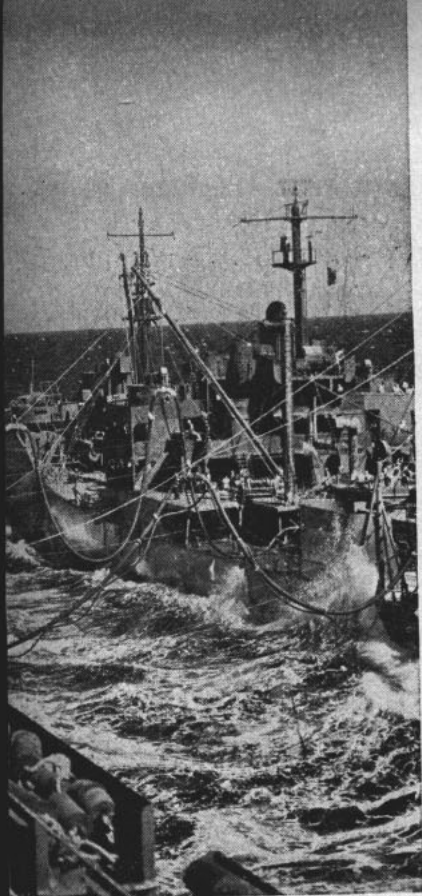
GOVERNOR OF TRINIDAD, Sir Bede Clifford, reviews shipboard marines during official visit aboard the FDR.



RENDEZVOUS IS MADE with the replenishment group for refueling all ships at

PORT OF SPAIN, Trinidad, was a good spot for liberty. Here crew members purchase souvenirs at a small shop.





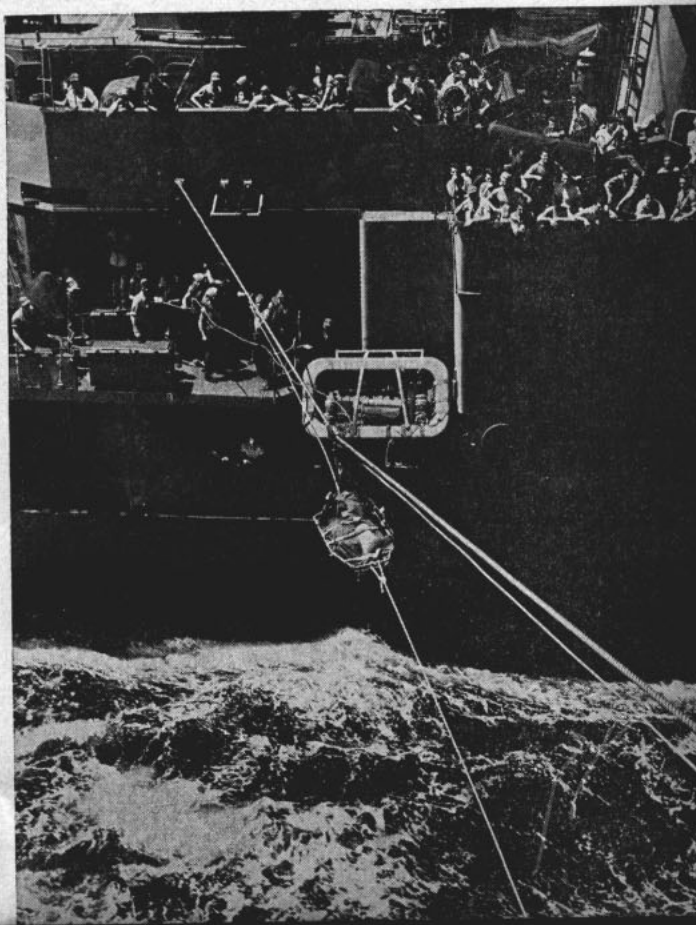
sea. The USS Princeton is shown refueling from the tanker USS Elokomin.



Official U. S. Navy photographs
 PORT OF SPAIN street vendor's parrot is given a short lesson in American Navy jargon by two members of the crew of USS Franklin D. Roosevelt.

PARTIES DURING LIBERTY were many. Rug-cutting is the style at Colored Men's USO dance in Port of Spain.

GEORGE STEEDLE, S2c, was transferred from USS Ellison to Midway for medical care when his leg was broken.





Official U. S. Navy photograph

CATAPULT IS FORWARD of conning tower and hangar on I-14 Jap submarine built to carry two bombing planes.

SUB RAIDERS OF TOMORROW

MUCH OF THE research and speculation concerning the nature of navies of the atomic age is focused today on the submarine and its chances of promotion to "capital ship" rank as the aircraft carrier was in world War II.

With some of its traditional weaknesses overcome, and bolstered by the development of revolutionary weapons and means of propulsion, the sub-surface fighting craft has a spotlighted position in new military concepts being shaped in the light of atomic energy and the magic of electronics.

In immediate prospect is emergence of the "true" submarine, a craft capable of almost continuous submerged operation at high rates of speed.

Such a submarine was blueprinted by the Germans before their surrender last year after it became apparent that the older types—essentially submersible torpedo boats which dived only in emergencies—had been stripped of their effectiveness by Allied sea-air power buttressed by improved weapons and far-ranging electronic detection devices. See ALL HANDS, May).

U. S. Navy designers, engineers and scientists are studying German developments, with an eye to strengthening the submarine's orthodox role of raider and scout.

At the same time, Navy officers are considering the possibility of radical changes in the functions of the submarine. Launchers of rockets and guided missiles or carriers of aircraft

operating with relative immunity under the surface of the sea may be the warships of the future. The use of atomic-energy propulsion for submarines is also envisioned.

Discussing the pattern of modern naval operations, Vice Admiral Arthur

W. Radford, USN, DCNO (Air), declared:

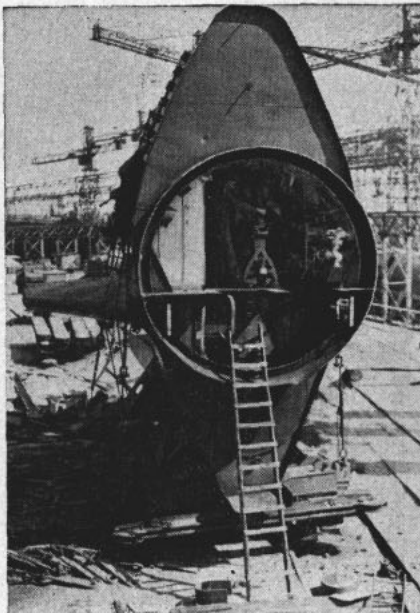
"It is true that the specific weapons utilized by a navy change from time to time. We once used armed boarding-parties . . . We no longer depend on the high-caliber guns of battleships to hit enemy vessels at close range, when we can send the mobile and far reaching ordnance of carrier airplanes against any target that threatens our control of the seas. In the future we may turn to the submarine as our primary naval weapon.

"Who knows but that the strides we have made in anti-aircraft defense—split-second fire control, proximity fuses, long-range, early-warning radar, guided missiles, and so on—may some day reach a stage of development where they render the piloted military aircraft obsolete?"

"If this day comes, our undersea experts foresee a dependence on long-range submarines, capable of submergence for months, whose ability to fire rockets and guided missiles without surfacing will allow them to stand off any coastal target in the world and destroy it."

Similar ideas were expressed by Rear Admiral Harold G. Bowen, chief of the Navy's Office of Research and Inventions, who cited "a growing school of thought which visualizes the submarine as one of our most promising naval craft, if the time comes when atomic warfare forces us beneath the surfaces of the sea."

Rear Admiral Charles W. Styer, USN, ACNO (Operations), recently asserted that "submarines are certain



Official U. S. Army photograph

GERMAN SUBMARINES were built in sections. Being built above is stern section of a Type 21 nazi-built sub.

to play an increasingly important part in our concept of national defense . . . Offensively, defensively and mechanically the submarine seems well adapted to a leading role in the navy of the future."

Two coincidental trends are influencing the future of the submarine, 322 years after its debut as an underwater rowboat in the Thames River of Great Britain: (1) recognition of the growing need of a navy capable of extensive sub-surface operation, and (2) development of a craft meeting the requirements of extensive sub-surface operation.

During the half-century of its modern development the submarine became one of the most effective instruments navies have had in utilizing the ancient military devices of stealth and deception. Submarines were the only combat craft which could hide beneath the surface of the ocean, before, after, and even during an attack.

But underwater operation entailed sacrifices. When a submarine submerged, its speed was reduced to a maximum under 10 knots, its cruising range extremely limited. For underwater propulsion it had to rely upon electricity from batteries—a low-speed method making it impossible to leave an attack area in a hurry unless it came to the surface, in which case it was subject to heavy assault from surface vessels. Its underwater vulnerability likewise resulted from sonar and sonobuoys, the underwater sound detecting devices developed to a high state of efficiency in the recent war.

It was necessary for the submarine to spend considerable time on the surface, to charge batteries or to attain the speed—available only on the surface—required to reach target sectors. Radar and aircraft made even this kind of operation extremely hazardous.

These handicaps the Germans sought to overcome in the final months of World War II by designing a submarine which seldom had to surface, and could travel submerged for long periods of time with an emergency speed of 24 knots in reserve. They claimed these qualities for their Type 26 U-boat, the first "true" submarine. When the European war ended, the Germans had designed the model and partially constructed a hull.

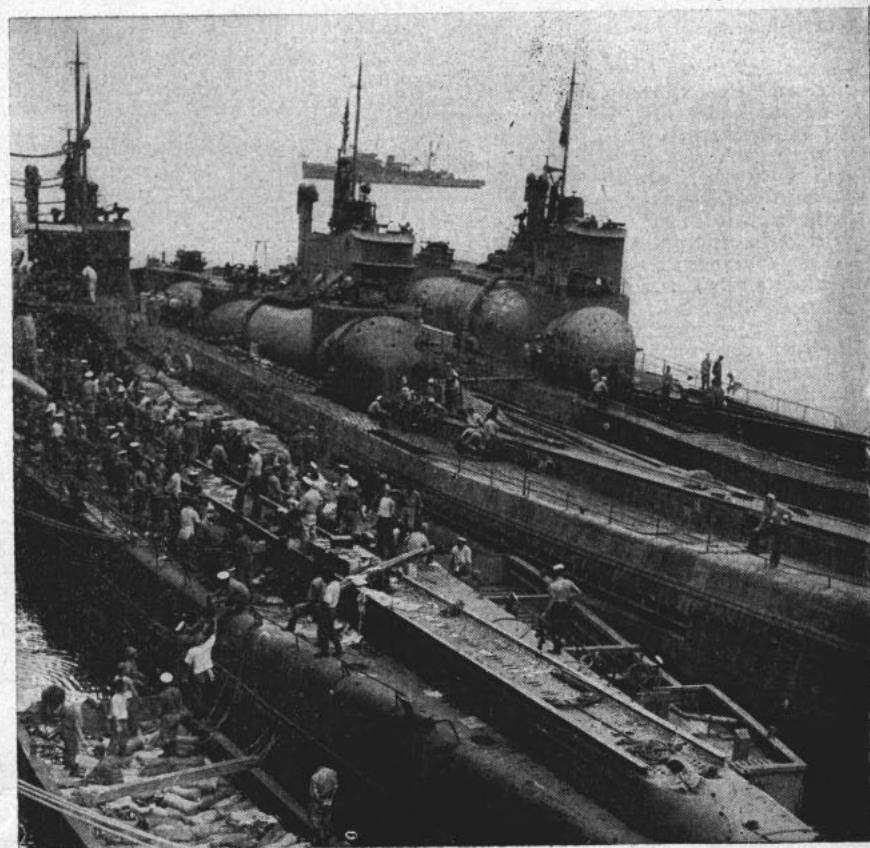
Type 26 was to have three power systems—batteries for slow underwater operation, a diesel engine for cruising at periscope depth and a revolutionary Walter hydrogen-peroxide engine for high emergency speeds. The latter type of engine and the *schnorchel*, the breathing tube which permitted operation of diesels while cruising submerged, were the Germans' answers to the need of a high-speed method of submerged propulsion which would not exhaust the precious oxygen supply of a submarine.

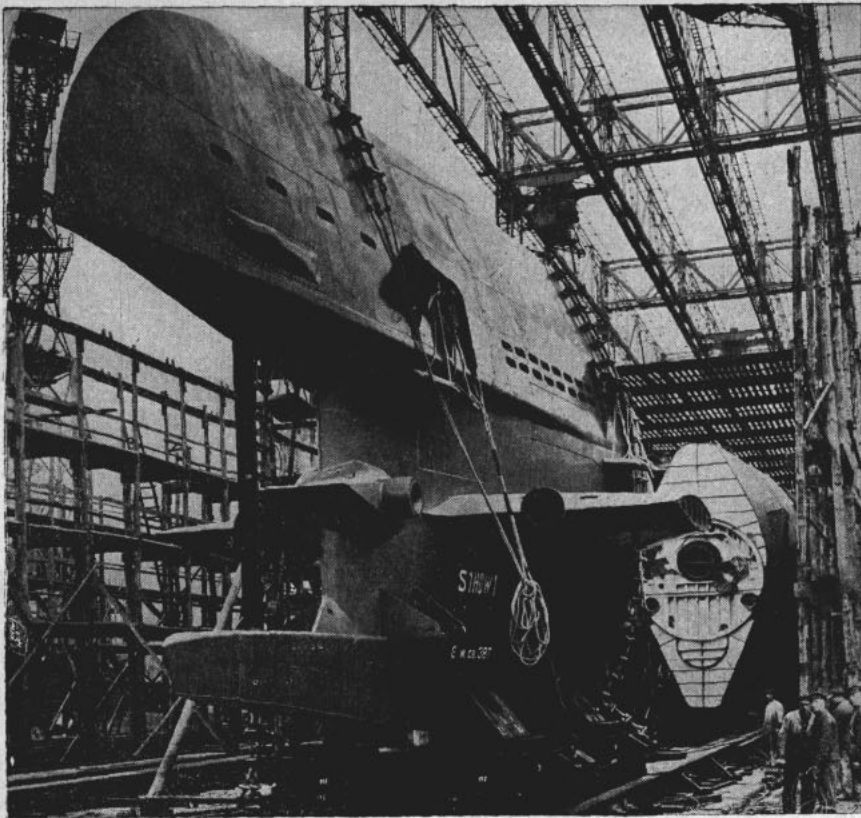
The Walter engine, developed originally in prewar years by a German engineer whose name it bears, contains its own oxygen supply. Hydrogen-peroxide is broken down in a chamber into water (in the form of steam) and oxygen, which are then fed into a combustion chamber along with fuel oil. From the combustion chamber



Official U. S. Navy photographs

JAP CREW, above, unloads gear from the inside of the hangar of an I-400, largest Jap sub ever built. The I-400s pictured below were the only three ships of their kind built by the Japs. Constructed with a hangar to carry three bombing planes each, the submarines cruise at 20 knots surfaced.





Official U. S. Navy photographs
STERN SECTION of the German Type 21 is fitted. This sub was built to have a surface displacement of 1,600 tons and can carry 20 torpedoes.

steam pressure is directed onto turbines driving the shaft.

The engine was believed powerful enough to provide speeds up to 24 knots submerged, but it had defects. It would have been possible to maintain the maximum rate for only six hours, and after that period the Walter engine could not be used again until the submarine returned to base for more fuel. The cost of operation would have been almost prohibitive. At the prevailing rate of costs in the United States, the expense of a 6-hour run at 24 knots would exceed \$100,000.

Navy engineers now are studying a Walter engine, which was removed from a German type 17 U-boat. This model, a forerunner of the Type 26, actually put to sea and reached a top submerged speed of 24 knots. But Type 17 was small, carrying only two torpedoes. The Walter engine built for the Type 26 hull is now in Britain.

More significant than the Walter engine in the future of the submarine are the possibilities of atomic energy. The prospect of this revolution in propulsion was pointed up by Admiral Styer when he said:

"The development of compact, efficient atomic energy plants in our submarines would give the underseas craft high speed while submerged and almost unlimited cruising range. With this atomic firebox, none of a vessel's oxygen supply would be used up by the propulsion machinery, and the problem of expelling exhaust gases would be eliminated. Add to this an armament of rockets or guided missiles with atomic warheads, and you

have a strong, offensive weapon that is itself relatively secure against atom bombs and detection by radar."

Admiral Radford listed atomic energy as one of the "three potentials" giving submarines "a great military future." He said:

"When submerged they cannot be detected at a distance because sea water still repels electronic waves. When submerged they are relatively immune to bombing attacks. Because of their compartmentation, and the protection against radiation afforded by surrounding water, they may well be the first craft in which atomic propulsion can be efficiently employed."

Navy submariners and anti-submarine warfare experts have been making test runs and experimenting with two Type 21 German U-boats, one being based at Key West, Fla., and the other at Portsmouth, N. H. One hundred and twenty of these were built but none was used by the Nazis in a war operation.

Although designed for installation of the hydrogen-peroxide engine, the Type 21 boats actually are powered with extra-large batteries, and diesels, and are equipped with the *schnorchel*. Their submerged speed is 15 to 16.43 knots. Here are some comparisons of the Type 26 and Type 21 U-boats:

	TYPE 26	TYPE 21
Surface Displacement	900	1600
Torpedo capacity	10	20
Crew	32	57
Designed maximum submergence depth	400 ft.	360 ft.



AMIDSHIPS SECTION of the German Type 21 is assembled. Equipped with

These types, and the *schnorchel* device which appeared in 1944 when the Nazi U-boat fleet went "underground" to dodge the Allied antisubmarine forces, are under the close scrutiny of Navy's submarine men.

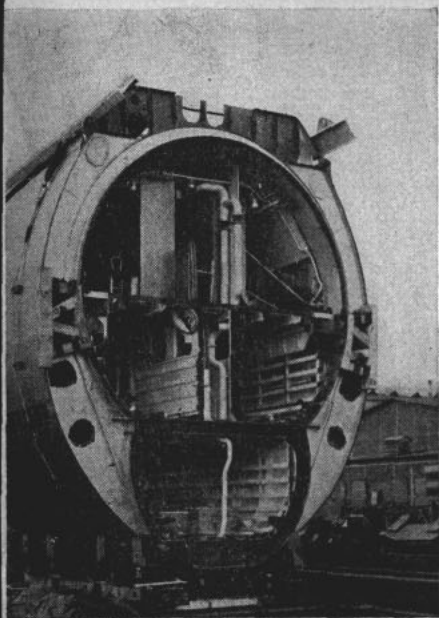
The submarine's future as an aircraft carrier is problematical. Most naval powers have experimented with such models in the past, but because of their great weight and dangerously slow diving time they were not a success. In World War II, the Free French used one which carried one plane in a hangar on deck and two 8-inch guns, but it was lost in 1942.

The Japanese, who were behind the Germans in submarine design and used the undersea craft mainly for fleet operations, built some plane-carrying submarines during the war. The I-400 class, of which three were constructed, were the largest submarines yet designed, displacing 4663 tons on the surface. They carried three bombing planes, and had speeds of about 20 knots surfaced and seven knots submerged.

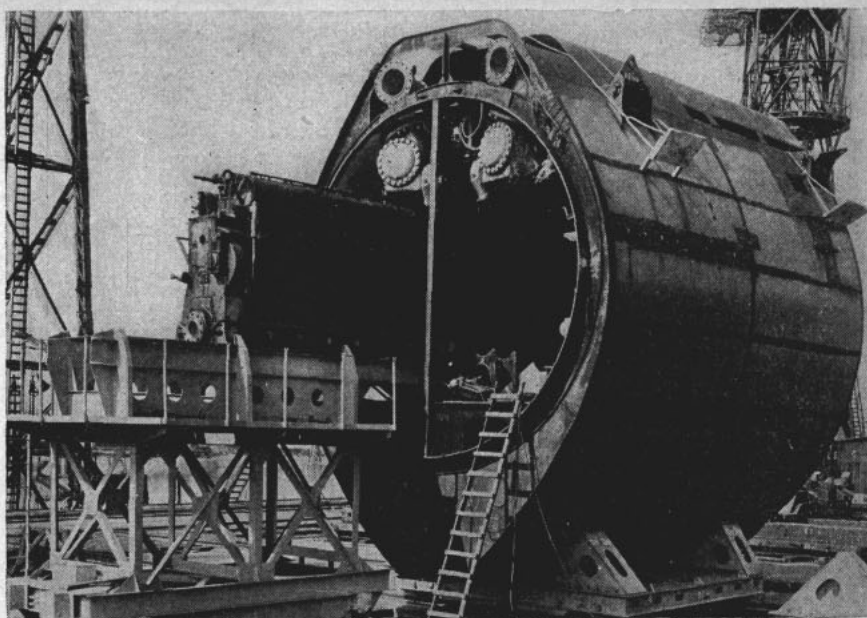
In addition to the prospect of rockets, atomic projectiles and other guided missiles as armament for submarines, the traditional undersea weapon—the torpedo—is due for further refinement. Discussing the German acoustic torpedo, which homed onto the noise of ship's propellers, Admiral Bowen declared:

"We not only have similar ones, but have gone even farther. Roughly, we can get 40 knots with a steam torpedo, and up to 60 knots with refinement of the hydrogen-peroxide drive developed by the Germans. But there is a probable limit of 75 knots on propeller-driven torpedoes."

Behind the submarine of today and its potentialities for the future lie more than 300 years of development. Before man actually attempted to sail beneath the sea, he imagined the feat.



the schnorchel, the submarine has a submerged speed of 15-16.43 knots.



THE DIESEL ENGINE protruding from the amidships section of the German Type 21 sub is one of three power systems which the submarine has.

A Greek tale of 300 B. C. detailed attempts of an imaginary enemy to equip men with diving gear enabling them to approach anchored ships and chop holes in the hulls. Leonardo da Vinci's notebooks show that he had conceived of the submarine, along with the flying machine in the 15th century. Jules Verne was fanciful about submarines, but by the time he published

"Twenty Thousand Leagues Under the Sea" in 1870, he had had some working models on which to base his fancy.

The English considered trying submarines to help stave off the Spanish Armada, but nothing came of it until numerous undersea boats were patented in the early 17th century. In 1624, Cornelius Van Drebbel, a Dutch

engineer, constructed a submarine under the aegis of the Royal Navy. With Drebbel rowing and King James I as passenger, the boat made a 2-mile trip across the Thames in two hours, at a depth of 15 feet. The early submersibles were not taken seriously as fighting ships because there was no feasible armament.

David Bushnell, a lieutenant-captain

TESTS FOR FUTURE SUB AIDED ATOM DEVELOPMENT

The Navy's long-standing interest in utilizing atomic power for propulsion of undersea craft was an important link in the chain reaction culminating in stunning blows dealt the Japanese, when atomic bombs fell on Hiroshima and Nagasaki.

Less than two months following word of the discovery of uranium fission and a preliminary understanding of its implications, announced in this country in January 1939, the Naval Research Laboratory put to Rear Admiral H. G. Bowen, then Chief of the Bureau of Engineering and now Chief of the Office of Research and Inventions, a request for an allotment to initiate study of the uranium power problem. The request was granted, and work began.

It should be understood that at this time knowledge of nuclear physics was still in the embryo stage. The Navy was well aware of the general possibilities of atomic power, and was equally aware of the advantages which would accrue from its use in submarines. But the question was not adapting newly developed power to submarine use; it was, could nuclear chain reaction itself be made to take place at all?

Thus the Naval Research Laboratory devoted its first efforts to the production of large amounts of uranium-hexafluoride, the simplest and most stable known form of uranium that occurs in the gaseous state under normal conditions. From uranium-hexafluoride might be produced, by methods still to be evolved in 1939, the active uranium 235 isotope which it was felt—correctly—would be a good bet for a source of atomic energy.

Small amounts of uranium-hexafluoride were produced from metallic uranium, and supplied to the University of Virginia and the University of Minnesota for preliminary isotope separation work. Certain unsatisfactory and dangerous features of this procedure were eliminated by the Laboratory in 1941.

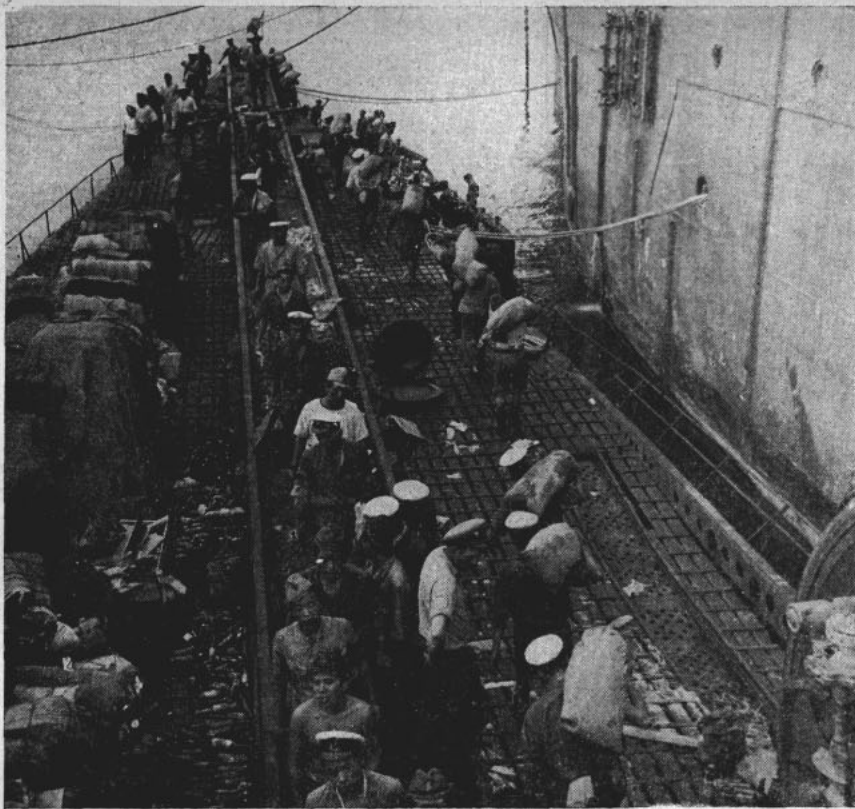
Production of uranium-hexafluoride provides only raw material for the nuclear physicist. The next step is to extract from it the active U 235, only 0.7 percent of which is contained in ordinary uranium. The Naval Research Laboratory did pioneering work in thermal diffusion—one of three methods by which production plants have carried on the extraction process, and in addition vigorously supported the project

of centrifugal diffusion, which was successfully carried to the pilot plant stage.

Work on thermal diffusion, originally carried on at the Carnegie Institute in 1940, was transferred to the Naval Research Laboratory in 1941, and a small pilot plant was built and operated there. The erection at the Philadelphia Naval Shipyard of a large pilot plant or small production plant to operate by thermal diffusion was then proposed. But upon near completion of the project in June 1944, the Navy encountered supply difficulties which nonetheless did not prevent the start of production during that month.

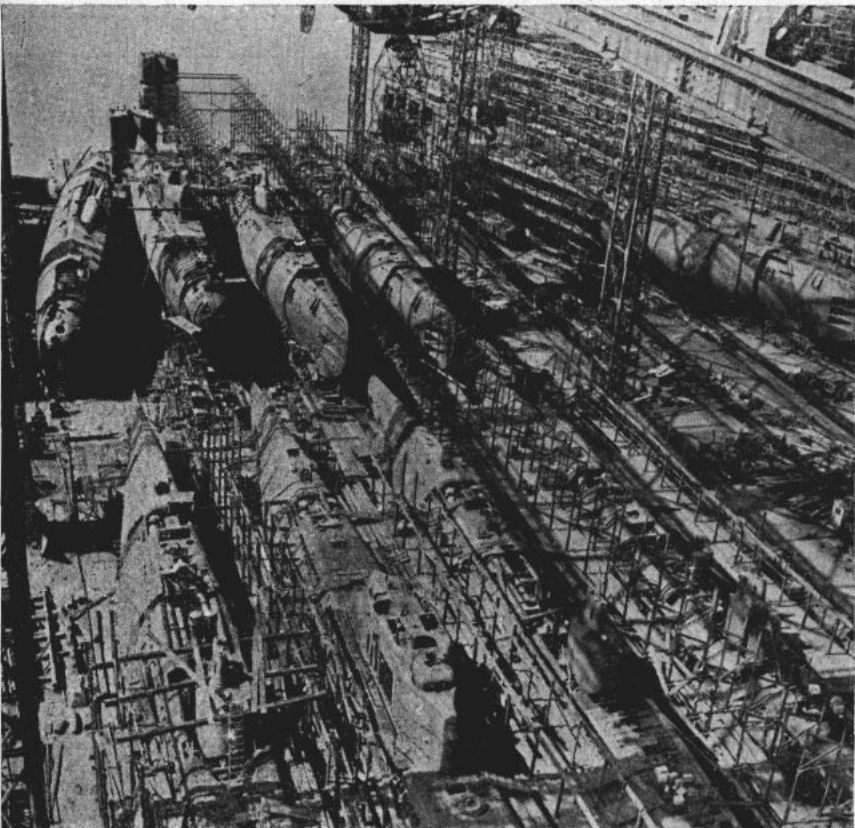
A decision of the Manhattan District Project to erect a larger thermal diffusion plant at Oak Ridge resulted in a shift of emphasis from the Navy's Philadelphia project, but training of the operators for the Oak Ridge plant, begun in December 1944, was done by personnel provided in the main by the Naval Research Laboratory.

It was finally at Oak Ridge, 59,000 acre mushroom growth in the hills of Tennessee, that equipment was operated capable of producing the actual missiles which rained down destruction on Japan.



Official U. S. Navy photograph

DECK VIEW of the Japanese submarine I-400 shows the crew members unloading gear onto barge tied to bow. Notice saki bottles along catwalk.



Official U. S. Army photograph

PREFABRICATED GERMAN TYPE 21 U-boats are assembled in a German shipyard. One hundred and twenty ships were built, but none used in combat.

of sappers and miners in the Continental army of the American Revolution, was probably the first man to use a submarine in war. With his boat he attempted to sink a British warship in New York harbor in 1775. His plan of attack: Submerge under cover of darkness (by taking on water ballast and thrusting downward with a vertical screw), approach the ship, bore a hole in its hull, attach a time bomb and retreat. There was one thing wrong—copper sheathing made it impossible to penetrate the hull.

Robert Fulton tried his hand at submarines before turning to the steamboat, but failed to interest Napoleon, the British or the United States. There was still no practical armament.

In the American Civil War, the Confederate forces sought to compensate for their lack of a surface navy by constructing submarines to break the blockade. The attack was simple, although it had earmarks of a suicide mission. A contact mine was attached to a long spar projecting from the bow of the submarine. The crew was to make a submerged approach, ram the target and blow it up by explosion of the mine.

The Federal ship *Housatonic* was sunk by this method in 1864 in Charleston harbor, but the submarine was destroyed and most of the crew perished. The attacker, the Confederate submarine *Hundley*, thus became the first vessel built as a submarine to sink an enemy ship in action, although actually it was surfaced at the time.

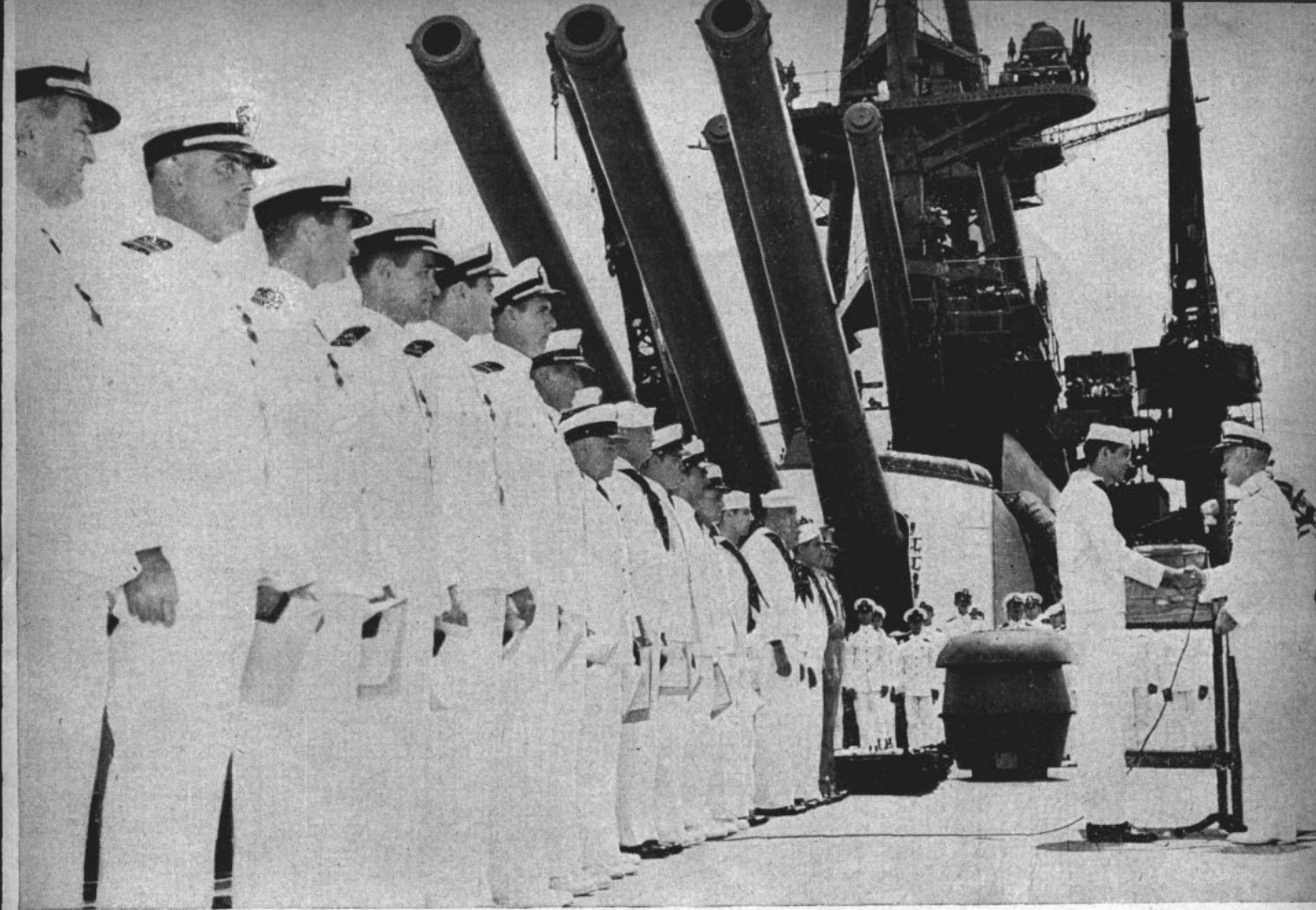
The experience of the *Hundley* emphasized the problem of suitable armament for the submarine. In the 1870s, Robert Whitehead in Austria developed a self-propelling torpedo powered by compressed air. Surface torpedo boats at first were used to carry the new weapon, but the need was soon seen for a submersible torpedo carrier.

Late in the century the leading nations began adding submersibles to their fleets. A boat designed by John P. Holland, a 100-ton, 50-foot submersible, was commissioned as the first United States Navy submarine in 1896.

The early submarines were propelled by electricity submerged, and by steam or gasoline engines on the surface. But it was not until the adaptation of diesel engines in 1900-1910, and development of the periscope and gyro compass that the submarine began to show promise of becoming a long-range, quick-diving, elusive weapon.

In the early months of World War I, the submarine was not highly regarded. It was small and frail compared with other ships, its primary function being reconnaissance and patrol.

An awakening came, however, in a chance encounter. The German boat U-9—on a scouting mission sank a British cruiser in the North Sea, and then stood by to destroy two more coming to the scene to pick up survivors. The submarine's record as a deadly weapon of war dated from that incident.



Official U. S. Navy photograph

NAVY PAYS TRIBUTE to 24 heroes for "courage, blood, sweat and tears" in ceremony aboard a battleship.

'FOR VALOR IN ACTION...'

IN THE CLOSELY-GUARDED, coin-stacked United States Mint at Philadelphia, makers of America's money are busy turning out medals and decorations for the Navy.

When Joe Smith—S1c or admiral—stands before his shipmates to be decorated, the Navy wants to know that the medal pinned on his breast will, as nearly as a bit of silk and metal may, befit the merit or valor by which he won it.

Perfection in quantity is a large order, and only the treasury artisans, who annually turn out two and a half billion coins, unmatched in etched sharpness, could meet the Navy's demands. The 332,577 medals turned out by the mint since the attack on Pearl Harbor microscopically assure that extra fineness.

The Philadelphia mint, although it delivered 119,727 medals last year to the Navy, has sought to maintain ideals of perfection. Only with such decorations may the Navy pay fitting tribute to the "courage, blood, sweat and tears" which are said to have been the price of peace.

The mint's manufacture of medals is in a tradition which goes back to George Washington, who received the nation's first military medal for driv-

Subterranean Chambers and Combination Vaults Guard the Navy Awards With Same Care Given Newly-Minted U.S. Coins

ing the British out of Boston. In September 1792 in the first public-erected building in the United States, a little brick factory in Philadelphia, the first president and his wife, Martha, watched the embryonic metal experts of the new nation's mint stamp six pounds of old copper into pennies on an old screw press. Now a century and a half of accumulated metal skill is employed turning out awards for the heroes of World War II.

Also back to Washington, the Nation traces its first military decoration for bravery given without respect for rank. In creating the Badge of Military Merit, then a figure of a heart in purple silk worn over the left breast, but now called the Purple Heart, Washington prophesied, "The Road to Glory in a patriot army and a free country is thus opened to all

... and is to be a permanent one."

The moneymakers work in an imposing three story granite building, which has, as one would imagine, subterranean chambers and immense combination vaults. Sixty armed guards and an elaborate alarm system watch over the institution which last year produced over \$66,000,000 of American coinage. Its major aim is to keep a stock of one million dollars or more of each denomination of coins in its vaults. Daily, 60 to 70 tons of metal flow into the melting room to manufacture approximately a box car and a half of coins.

The mint last year also turned out over one billion foreign coins. Many of these were invasion coins, necessitating strict secrecy lest the location of future invasions be gained from the nationality of the coin.

The Medal Department of the Mint was established by law in 1857, although individual awards had been struck before that by governmental authority.

Each medal manufactured takes careful designing and workmanship. Twenty separate operations are necessary in making the first metal naval award and the nation's highest mark of esteem, the Congressional Medal of



ELECTRIC FURNACE (left) in melting room of Philadelphia mint pours molten metal which eventually becomes Navy medals. At right, original galvano plates and plaster paris casts are shown to a Marine, injured on Okinawa.

Honor. The award, usually bestowed personally upon the recipient by the President, was authorized for the Navy in 1861 and for the Army in 1862.

The first step in the manufacture of this medal, as any other, is design.

In the earlier years of medal making, the masters had to chisel to perfection a master die from the design. Turning out an award, such as The Medal of Honor with modern methods, the mint takes a plaster paris model and by electrolysis makes a galvano cast, which is sharp featured and exact.

The galvano is mechanically re-

duced in size by an engraving machine, and thus the master die is cut. The master is carefully guarded, being the parent of the actual cutting dies, and replace them if they are broken in the manufacture of the medal itself. In the melting rooms a mixture of 90 percent copper and 10 percent zinc is heated until it is white hot.

The molten solution is poured into long molds to cool. The chilled ingots are then hoisted up and placed between a series of mammoth rollers and presses thinner and thinner until the desired thickness is achieved.

The Medal of Honor finally com-

mences to take form when the long sheets are fed through high pressure machines which blank out the five pointed star, much in the manner of a cook cutting out biscuits from a layer of rolled dough.

As soon as the stamping is completed, girls examine the emblems with magnifying lenses. If there is even a minor imperfection—the slightest flaw in the laurel wreath or the minute myriad of stars—the piece is discarded.

To any one less critical than artisans of the mint, the medal would be finished, but now comes steps toward final perfection. Sanding wheels pol-



STAMPING OUT Navy Crosses (left) by applying 100 to 600 tons of pressure. Medals are restruck until figures stand out sharply in relief. At right, medals are examined closely for sharpness of design under magnifying lens.

Official U. S. Navy photographs



PURPLE HEARTS are smoothed (left) to a satin finish on rotating sanding strips. At right, holding rings are soldered on medals to decorate the Navy's most deserved by one of the many technicians at the Philadelphia mint.

ish the edges and outlines to satin smoothness. Trained hands force sharp drills to pierce holes for suspending it; women with soldering irons attach ringlets for the same purpose. The medal is then cleansed in an acid bath, annealed under extreme heat, and placed beneath a sand blasting machine to give its surface a pebbled effect. A thorough hand brushing with pumice stone brings up the highlights, and a fine coating of transparent lacquer is placed upon it to retain that effect. A close final inspection checks the best efforts of the 134 metal workers.

The completed product is then ushered through the numerous metal barred gates and taken into a room where 41 women, gathered around in sewing bee fashion, carefully apply sewing needles, thread, and ribbon.

In this homey atmosphere, deft hands cut and fold the blue ribbon, studded with 13 stars for the original states of the Union. Because the Congressional honor is the only one hung about the neck, the ribbon is much longer than any other. The star is fastened on the ribbon by an old-fashioned stock anchor.

The finished award is placed on a velvet card, and stowed within a blue leather box, which in simple gold engraved letters states "The Medal of Honor." It is then ready to be shipped to the Bureau of Naval Personnel for presentation individually.

Although the Medal Department is working three full eight-hour shifts a day, there are 941,150 unfilled orders to go, and many more in prospect. Edwin H. Dressel, superintendent of the Philadelphia mint, stated the spirit of the mint when he said, "We won't sacrifice any quality, but day by day we are stepping up production by devising shortcuts in production. It is the wish of all us to produce the medals fast enough so that they will be on hand when the citation is given."

At present the American defense medal is passing through assembly, and the European-African and Asiatic medals are in the designing period.



HAND-RUBBING the medals with pumice stone and soft cloths, above. The final assembly line, below, folds and sews the ribbons, and packages medals. These five women shown at work are all mothers of Navy men and veterans.



SAGA of POWs

Submarine Tang's Men Survive Long Ordeal In Jap Prison Camps

FOR 10 MONTHS the submarine USS *Tang* was considered missing with all hands. But three officers and six enlisted men survivors lived through Jap prison camps since that night of 25 Oct 1944 when the *Tang* went down.

Lt. Comdr. Lawrence Savadkin, USNR, engineering officer, tells the story of how the group held together, through 10 months of interrogation, barbed wire, work details, endless boredom, and final rescue. The Japanese suppressed the fact that there were *Tang* survivors the entire time.

After a night surface engagement in the middle of a Jap convoy in the Formosa straits the *Tang's* survivors were picked up by an enemy DE.

"We were taken up on the deck, trussed up with lines binding our hands and arms across our chests," Lt. Comdr. Savadkin recalled.

"It kept getting hotter and we kept asking for water. Finally they brought us—boiling water. After we had baked a while longer survivors from Jap ships we had sunk during our attack gave us a dose of slaps and



JAVANESE GUARD slipped a popsicle to the submariners while they were in the 'cages' of a Formosa prison camp. It was a 'great day' for the Yanks.

The Terrific Tang

The USS *Tang* during her short but brilliant career identified herself as one of the Navy's fighting-ships (see p. 57).

In five war patrols in enemy-controlled waters, the *Tang* sank an aggregate total of 227,793 tons of Jap shipping and rescued 22 Navy aviators. For outstanding performance in combat and distinguished service, the sub was awarded two Presidential Unit Citations.

The *Tang* departed from Pearl Harbor on her first war patrol on 22 Jan 1944. During her last patrol she sank 107,324 tons of Jap shipping. Her commanding officer was Commander Richard H. O'Kane, USN, former executive officer of the famed USS *Wahoo*.

One of the most dramatic incidents in the sub's history was the rescue of 22 officers and men of carrier aircraft shot down at Truk during the 29-30 April raid on that big Jap base. The *Tang* scooped the men out of the sea almost under the muzzles of the Truk batteries.

Biggest take of the day was from a small float plane which had landed in the lagoon to pick up seven airmen. The plane taxied steadily for six hours waiting her turn on the *Tang's* crowded appointment list.

Overhead, search planes nosed around and pointed out rafts like hunting dogs, leading the sub to the pickup.

kicks. Hog-tied like we were, we just had to take it.

"We were landed on Formosa and sent on an eight-hour train trip up to Kirun, where we nine were tossed in the 'Kirun clink'. The cells were set up above the guards' catwalk like the cages in a zoo. Bars were of wood, but about five inches in diameter stretching from the ceiling to the floor. The head was a hole in the floor set back in a niche.

"One day a conscripted Javanese guard crept into my cell, and in broken English told me he was a Christian, and he had a present for the boys. The fellows in the cell were sleeping, so I held his gifts behind my back and said, 'Hey fellows! Guess what I've got for you—ice cream on a stick!'

"Take it easy, Mr. Savadkin', one of the boys replied sleepily. They thought I was completely off my rocker. But sure enough, that was what the guard had produced: one long, cool, drippy, and wonderfully sticky popsicle on a stick for each of us. It was a great day.

"When we moved they put a hangman's black sack over our heads—but when we got on a train they took the darn things off. So we got to see the primitive farm work, the man-powered irrigation paddles, and the water buffaloes as we thumped through the countryside.

Then came the big move to Japan proper. The enlisted men were shipped in the hold of a cruiser, where they slept on sugar sacks. The officers were split up and sent singly on DDs accompanying the cruiser.

"These DD men were combat men. They seemed to respect another combat man. They issued me complete small stores and put me up in the wardroom," Savadkin related. "The payoff was when I went ashore. I had to give the stuff back and go ashore in my old rags.

"Handcuffed and secured each to our own guard by a line, we were transferred to Ofuna." This installation turned out to be an unregistered

Naval Prisoner of War Interrogation Center, a place the International Red Cross never heard about.

"I kept telling the interrogators I was just a 'prospective' engineering officer, I really didn't know much about the submarine. It didn't seem to matter what you told the questioner, just so they could keep filling out papers to send back to Tokyo. I made the wildest statements about speed and power of our ship. My machinist made wild statements in the other direction."

When a Jap interrogator asked the mate about Savadkin's statements he just replied, "Well, you know Mr. Savadkin—just a greenhorn, doesn't know a thing."

"They asked us questions," the *Tang* engineer continued, "on every subject—communications, operational data, recreational program and facilities, as well as pertinent information about our own ship.

"During the final days before the downfall of Japan a fellow in civilian dress came into the camp and said he was a sociologist. He was trying to find out whether American opinion was in a state to accept anything less than an unconditional surrender. We gave him the works; told him the Americans would never even consider anything less than complete surrender.

"One of the questioners asked me what I did before I went into submarine service. 'Had a desk job,' I replied. 'Why did you go to sea then,' he queried. 'Well, a Wave came along and took my job,' I told him."

Asked why he went to submarine school, Savadkin blamed it on the Waves again. "I wanted to make extra dough to impress my Wave girl friend," he told the interrogator. This was swallowed without the bat of an eyelash. "I'd never even seen a Wave at that time," Savadkin chuckled.

Being interrogated had one advantage: the prisoner usually got a cup of tea, a cigarette and a chance to sit by the stove. During the cold weather any cock-and-bull story was worth spinning out for these advantages.

"The bowing and greeting of guards was one of the things we had to do all the time. In the morning we had to say 'good morning' and bow. It sounded like 'Ohio gozimus'. After 1000 the greeting changed to 'Konitsche wa'—or something like that; in the evening it was 'Kombong wa'."

All of the *Tang* gang lived together, all shared cook detail, all swabbed down and swept. But during the first week at Ofuna nobody was allowed to talk to anyone else.

"Most of the day there was nothing to do," said Savadkin, "so in our little compound we just walked back and forth, back and forth, wearing paths like a bunch of caged animals. Sometimes the Jap guards made us play games, but when they saw we were having fun out of it they made us stop at once. But anyway, walking was a good way to keep warm.

"There was one thing that we finally decided: the Japs cannot be predicted. We were trying to figure out what things we should or should not do so that life would be the least complicated. We could never tell. One bunch of guards would react one way and the next gang entirely different. It was just hopeless."

Finally a form of practical busy-work was worked out. With pieces of broken window glass the men set about making bamboo knives, forks, and spoons. Fine. But then came the next set of guards, and bingo—out went the cutlery and everyone got a beating.

"I am sure there were no microphones in our cells picking up our conversation," Savadkin continued, "because as an engineer, I was detailed to repair the electric lines in camp."

At the end of nine months, the submariners were sent to Omari, a registered POW camp, where they went on air raid shelter digging details and gardening duty. The *Tang* men were considered special prisoners and were not registered with the Red Cross. At home the Navy still considered them missing.

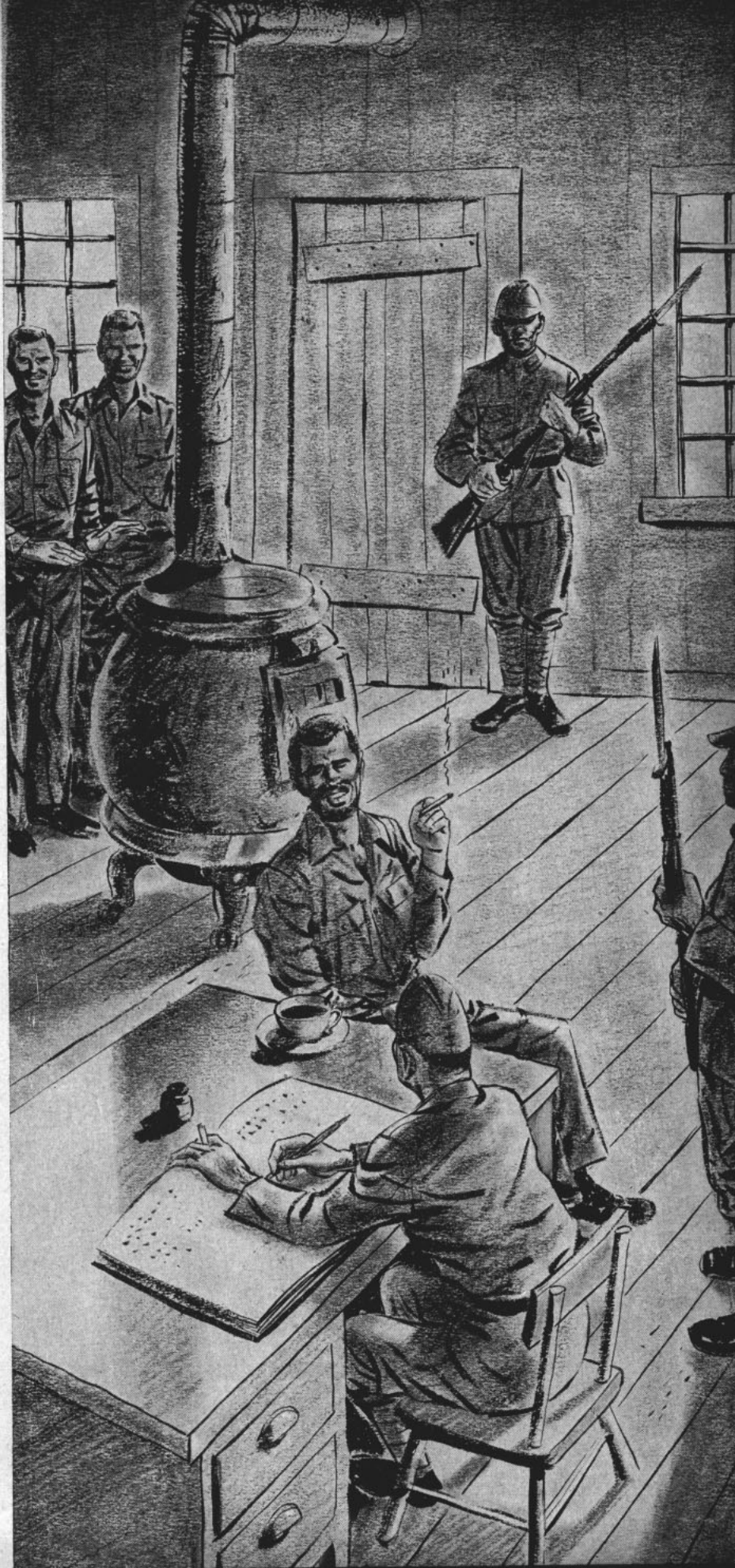
When the war finally came to a close the Jap guards immediately increased the food, brought out unused but mildewed shoes, distributed clothes, and then proceeded to get drunk. The Jap OD asked the prisoners to lock themselves in their barracks that night.

"We retreated to the air raid shelters when the carrier planes and the B-29s started bombing us with food and clothing," Savadkin recalled with a grin. "We had our own MP force since the day the war ended.

"Finally Capt. (then Comdr.) Harold E. Stassen's rescue crew arrived at the camp. After one look around the camp he said the place was so awful they'd take us away immediately.

"From then on it was C-54s for the fellows who could travel, all the way back to Oakland, with Wave hostesses on the last hop. First time I'd seen a Wave. Wonderful."

QUESTIONING by the Japs had this advantage: a cup of tea, cigarette and a chance to sit by the hot stove.



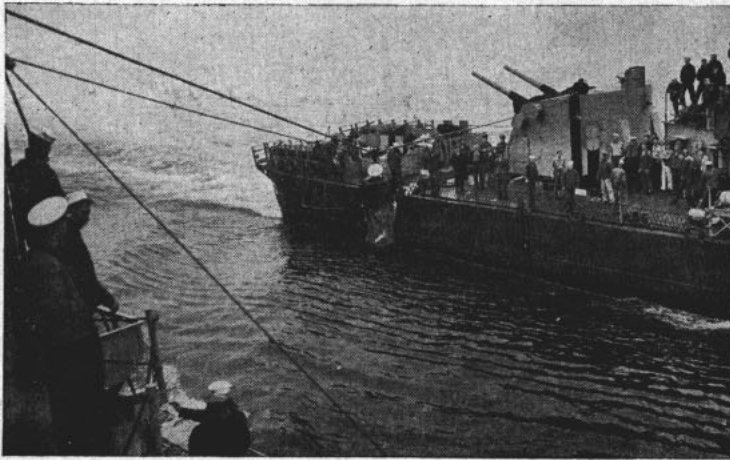
TRAINING DUTY KEEPS RESERVISTS UP TO DATE

More than 100 Naval Reservists sailed from Fort Schuyler, N. Y., last month, up through Long Island Sound, the Cape Cod Canal and around Narragansett Peninsula in the first reserve training cruise since the war.

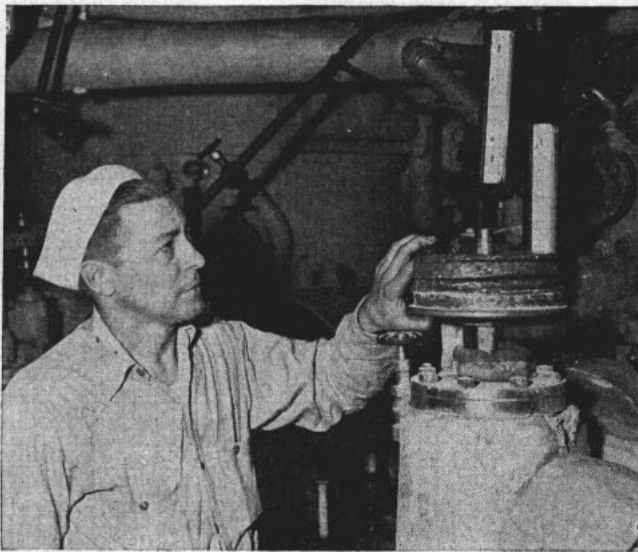
Aboard the destroyers *English* and *Haynsworth*, two of the Navy's biggest and newest "tin cans", the officers and men, now inactive members of the Navy, spent two days brushing up on much the same duties they performed when on active duty.



STEAK, THAT IS, son — and these reservists took full advantage of Navy chow, having discovered that some meats are hard to get on the outside.

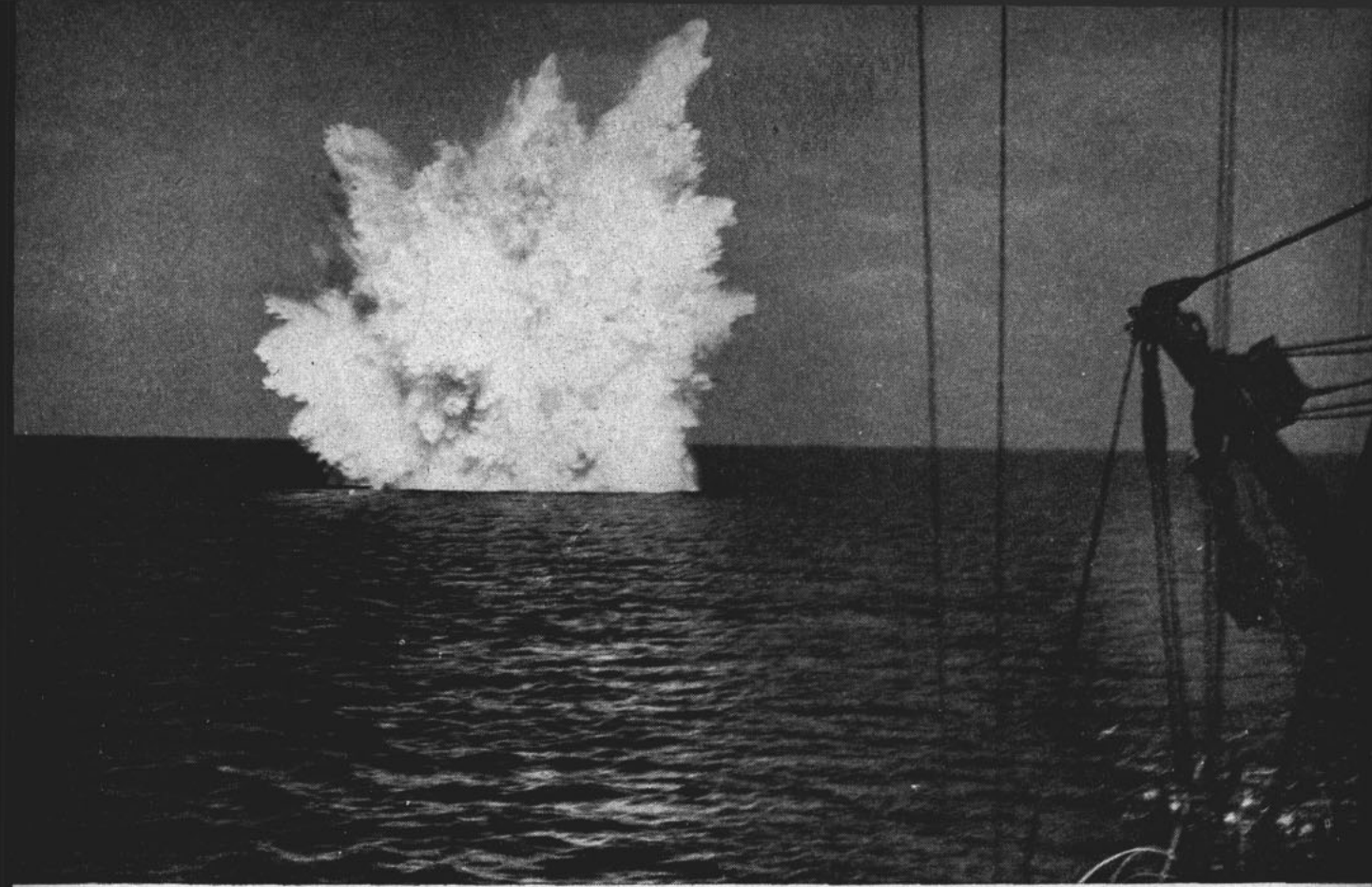


EXCHANGING CHAPLAINS (left) via breeches buoy for Sunday services brought the boatswain's mates into their own. A Protestant and Catholic chaplain each conducted services on the two ships. The latest and best destroyer equipment got a going over by reserve chief machinist's mates returning temporarily to old control stations (right).



BLACK GANG members (left) spent two days dabbling with familiar dials and gauges below decks on the USS *English*, 2200-ton Sumner class DD. Gun crewmen (right) once again tested their skill and sharpshooting on the 40 and 20 millimeters and 5-inch guns of the two destroyers by tracking an aircraft-towed sleeve during training exercises.

Official U. S. Navy photographs



Official U. S. Navy photograph

COMBINED aerial, surface and submarine minelaying sunk about 675,000 tons of Jap shipping in the Pacific.

PACIFIC CINDERELLA

THE MINE HAS EMERGED as the Cinderella of the Pacific war. Now that the full story can be told, the Navy's mine warfare experts can present a record of extraordinary accomplishment. It is a record which gives new meaning to the assertion by Fleet Admiral Chester W. Nimitz that "phenomenal results" were achieved.

The story of the offensive mining campaign in the Pacific is one of Army-Navy cooperation, and inter-allied coordination, which played a vital part in choking off the lifelines of maritime Japan right up to the Emperor's doorstep. It is a story of human ingenuity used to create deadly machines which could almost think, particularly the unsweepable pressure and subsonic mines. Above all, it is a story of results achieved with amazing economy of men and materials.

During the war, the mine became an offensive weapon of major importance. Aerial mining not only was born but came of age so quickly that the Navy's mine warfare experts have declared the airplane to be their most effective minelayer. This does not mean that submarine and surface minelayers did not play a vital role, particularly in the earlier days of the war.

For the most part, mine warfare

Mine Became Vital Weapon Of Offense During Navy's Unrelenting Campaign to Choke Off Jap Lifelines In Enemy's 'Front Yard'

against the Japanese was strategic, but it also was used tactically on occasions, and with spectacular results. The Okinawa invasion is an outstanding example of the latter use of mines.

All told, the minelaying campaign against the Japanese sank or damaged more than 1,750,000 tons of enemy shipping—nearly one-fourth the pre-war strength of the Japanese merchant marine. This figure may go as high as 2,000,000 tons when all the returns are in. Enemy casualties caused by mines included 2 battleships, 2 escort carriers, 8 cruisers, 46 destroyers and destroyer escorts, 7 submarines and 81 other naval vessels.

Preliminary reports credit mines with the sinking of more than 675,000 tons of enemy shipping and the final total may go to 750,000 tons. Of more than 1,000,000 tons damaged by mines, an estimated 25 percent might as well have been sunk as far as the

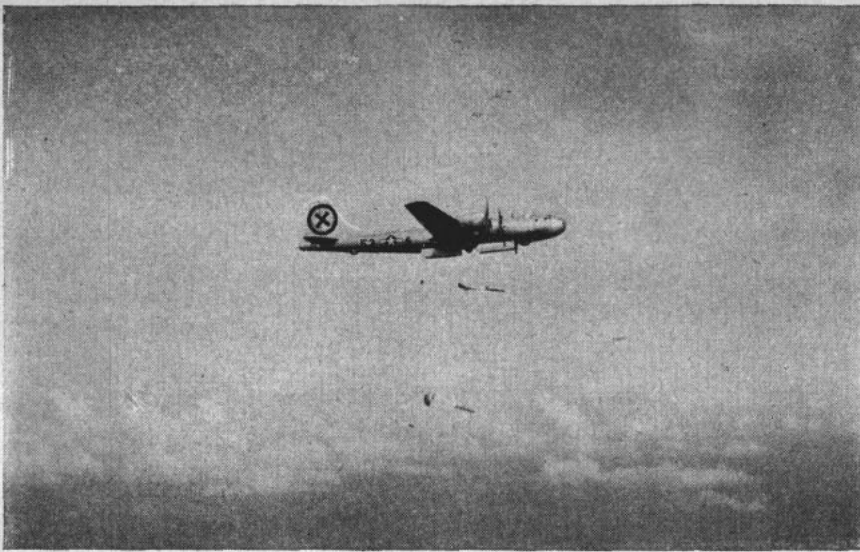
Japanese were concerned because their ship repair yards were so crowded that damaged vessels couldn't go to sea again for a long time. In fact, many of them were still out of service at the end of the war. The Japanese themselves have declared that a large ship damaged by mines required an average of 95 days for repairs and a small ship 70 days.

All this was accomplished with a total loss of 55 airplanes, 15 of them B-29s, in 4,760 sorties. No submarines or surface vessels were lost, while minelaying. Nearly 25,000 mines were laid, 21,389 of them mines of aircraft types.

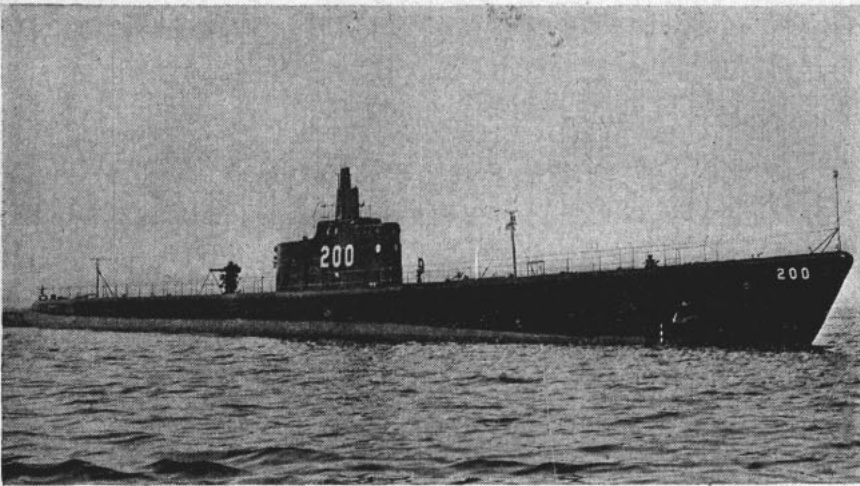
The mining offensive was divided into two principal phases:

- The "outer zone" campaign, which began early in the war and lasted to the end, choked 150 enemy harbors and shipping channels with nearly 13,000 mines, more than 9,000 of them aircraft types. This campaign hampered the flow of enemy troop supplies, and of raw material shipments to the Japanese homeland. It helped to foul up the enemy's offensives, and frustrate his efforts at defense. And it sank 245,000 tons and damaged 460,000 tons of enemy shipping while causing many sailing delays of a day to a month.

- The "inner zone" campaign, a

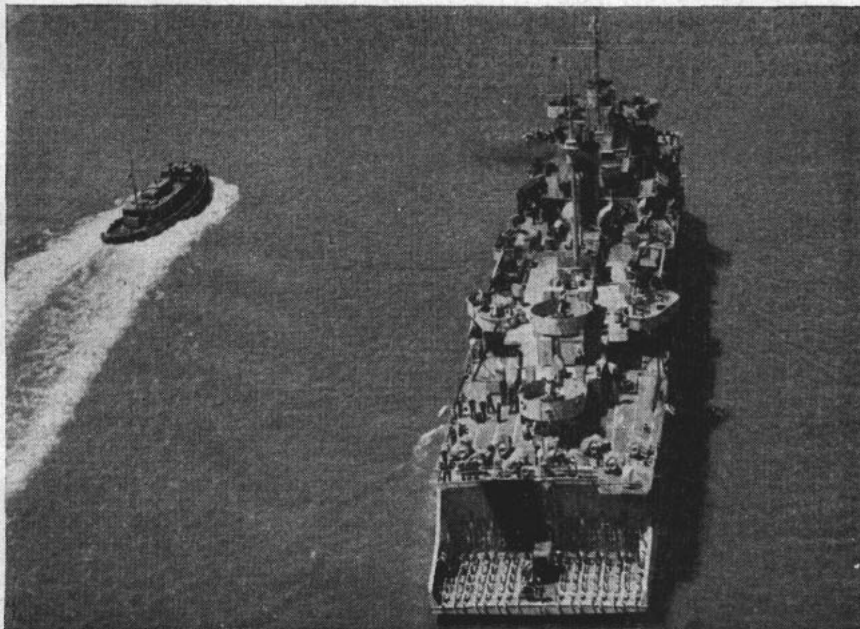


ARMY B-29's laid Navy mines which sank or damaged more enemy shipping during last months of war than any other Army or Navy offensive measure.



Official U. S. Navy photographs

USS THRESHER, above, was one of submarines active in minelaying campaign. Surface vessels started minelaying in 1942. Below the USS Salem.



spectacular aerial mine warfare blitz, during the last five months of the war built a virtually impenetrable wall of 12,000 mines around the Japanese homeland, sinking or damaging more than 1,000,000 tons of enemy shipping. This drive, in which Army B-29s laid Navy mines, sank or damaged more shipping than the combined efforts of submarine and direct air attack by both the Army and Navy in the war's final months. The Japs even moved anti-aircraft guns from industrial centers to mining targets in an effort to stop the Superforts. Although the 21st Bomber Command devoted only 5.7 percent of its efforts to mining, Prince Konoye, a former Japanese premier, subsequently declared that the mines were as devastating in their effect as all the bombing and incendiary raids in the last few months of the war.

In the outer zone campaign, mines were laid by the Australians, the British and the U. S. Army and Navy. In the inner zone, the U. S. Army carried the brunt of the minelaying effort because it had the long-range better suited aircraft (B-29s).

The British supplied some mines for the outer zone campaign, but most of the mines were U. S. types supplied by the Navy, which was responsible for their design, development, production and servicing. The Navy also played a major part in planning the joint Army-Navy efforts.

Submarines, surface vessels and aircraft participated in the outer zone campaign. Operations were carried out from China, India, Australia, Ceylon and island bases in the south and central Pacific. Rangoon and Haiphong were rarely used by large ships after mining began. The presence of mines frequently closed Shanghai, Hong Kong, Takao in Formosa, Bangkok, Singapore, Balikpapan and Surabaya to enemy ships. Palau, Penang, and Kavieng were abandoned as key bases shortly after and largely because of mining.

Major General Claire L. Chennault has credited mining of the Yangtze River and ports of the China Coast with being one of the major factors responsible for failure of the Japanese offensive in South China in 1944.

"Aerial mining was primarily responsible for the long delay which amounted to a tactical defeat for the Japanese," he said.

Much of the failure of the Japanese to supply and reinforce their troops in Burma can be attributed to the persistent mining of ports in Burma, Siam, Malaya and Indo-China. In the Southwest Pacific, 49 areas were mined by air, greatly hamstringing Jap efforts to exploit the Netherlands East Indies and supply troops in that area. Rear Admiral Matsuzaki, chief of staff in the NEI area, estimates that 90 percent of the ships over 500 tons were lost to allied attack and 40 percent of these were due to mines.

The 33 submarine mine-laying missions in the Pacific laid 658 mines, sinking at least 24 enemy ships and damaging 20. The mines also forced enemy ships into deep water where they were better torpedo targets.

Fourteen surface-laid minefields in the vicinity of the Solomon Islands

sank four destroyers and interfered significantly with the support of Japanese troops in the closing months of the Solomons campaign. The aerial phase of the outer zone campaign required 3,231 sorties from which 40 aircraft failed to return.

The mining offensive began in October 1942. Seventh Fleet submarines, based in Australia, started it by taking extremely long cruises to the dangerously shallow waters of the Gulf of Thailand and the Gulf of Tonkin in the South China Sea and laying mines in enemy shipping channels.

Submarines from Pearl Harbor conducted similar operations off the coasts of Japan and China.

Surface vessels started minelaying early in 1943 and by the end of January, as the Guadalcanal campaign was drawing to a close, mined the channels around that island. On one night, the "Tokyo Express" made its usual effort to run supplies to the beleaguered Jap troops and an enemy destroyer was sunk by a mine. Three more destroyers were sunk in a similar field in Blakett Strait. Surface minelaying continued as U. S. forces penetrated deeper and deeper into the Solomons, doing such a thorough job that the Navy later had to sweep some of its own fields because the Japanese did not have enough gear to sweep the fields themselves.

Vigorous Campaign

The first aerial minelaying in the Pacific occurred on the night of 22-23 Feb 1943 when the Tenth USAAF, India-based, sent ten B-24s loaded with British mines against Rangoon. Shipping there fell off immediately and from that time on few large ships ever attempted to use that port. This started a vigorous minelaying campaign from India and from then on neither Rangoon nor any other port within aircraft range was long free from mines.

The first dropping of U. S. mines from U. S. aircraft occurred on the nights of 20 and 21 Mar 1943 when 40 Navy and Marine Corps TBFs made two aerial mining strikes at Bougainville, then the center of enemy resistance to the Solomons campaign. This opened a campaign to close down enemy supply lines to Jap outposts in the Solomons in which aircraft and surface layers collaborated.

Ground mines, which sank to the bottom and laid there until a pre-selected size of ship came along to set them off, were laid by aircraft in the shallow waters, while the surface layers established fields of moored mines across the deep approach channels. As a result, at least six enemy warships were hit. Of these, two destroyers were sunk, two were so badly damaged that they became "sitting ducks" and were subsequently sunk by air attack and one light cruiser and one destroyer, as well as one or more cargo vessels, were damaged.

In late April 1943, Royal Australian Air Force Catalinas (PB5s) opened a campaign continuing into early June, during which they laid 60 mines in

the proposed Japanese fleet anchorage at the north end of New Ireland near Kavieng. The one entrance remaining, too deep for ground mines, was closed by a field of moored mines laid by a U. S. submarine. Late in June and July, the field was reinforced. Results: One survey ship and five cargo vessels sunk, several vessels—including two light cruisers and a destroyer—damaged and, finally and most important, the Japs abandoned the anchorage completely.

The RAAF carried out virtually all subsequent aircraft mining in SoWes-Pac. It was a strategic campaign against the principal harbors and shipping routes of the NEI.

By the end of 1943, U. S. offensive mining had taken its first steps in each of the major combat areas of the Pacific war.

In the next 12 months, about 400 U. S. and British mines were planted by the RAAF, operating from Australia, in 21 harbors of the NEI and Bismarck Archipelago, with a loss of only one plane in 200 sorties.

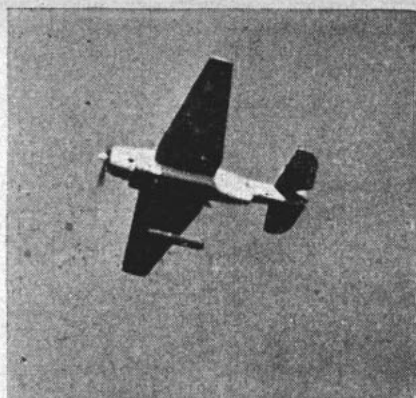
The first U. S. mines arrived in India in July 1943. They were later used in extending the mining attack from Rangoon to Bangkok and the railway ferry crossings between those places. After the early mining of Rangoon, the Japs attempted to bring their ships into Bangkok and transport supplies the rest of the way to Burma by rail. Minelaying combined with direct air attack on the rail lines made this route an unreliable one for the enemy and his supplies suffered.

The 14th USAAF, based in China, joined the minelaying offensive in October 1944. Two B-24 sorties against Haiphong sank a ship in the main channel, blocking a 10-ship convoy outside the harbor. After milling around several hours, the convoy headed for northern Hainan where the 14th's bombers caught it and sank six of the ten ships. The Japanese also suffered another ship casualty in the minefield and abandoned Haiphong as a port for anything larger than junks. The 14th subsequently mined from Tonkin Gulf on the south to the Yangtze on the north. Hong Kong and Takao became favorite targets. Both of them, especially Takao, were staging points for convoys between the Empire and the southern Japanese holdings.

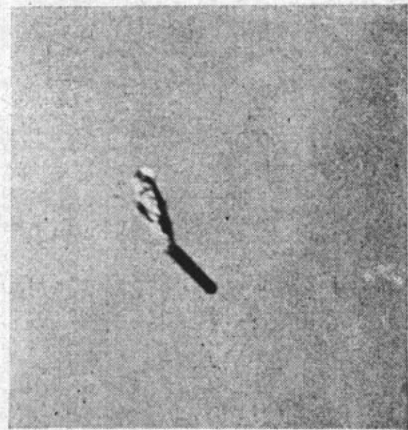
Mines began to be used more extensively as tactical weapons early in 1944. The first mining done specifically in preparation for an amphibious attack was directed against the Marshall Islands late in December 1943 and early in January 1944.

Heavy bombers from Tarawa and Apamana placed mines in the entrances of four of those islands which were by-passed during the invasion of the Marshalls.

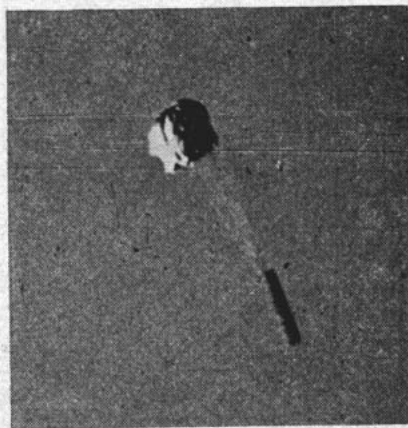
The first and only minelaying mission by U. S. carrier-based aircraft was directed against Palau on 30 and 31 Mar 1944. Task Force 58 was spotted by a Nip search plane at Woleai so the Japs had sufficient warning to get their warships out of danger before the task force was in striking position. Thirty-two enemy merchantmen and tankers, however,



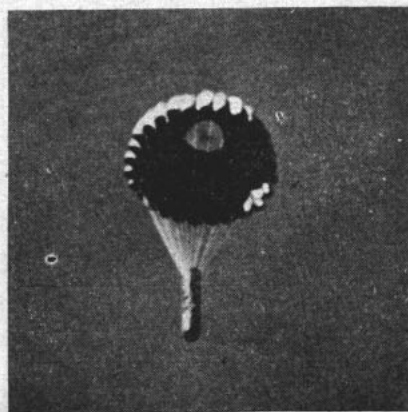
AERIAL MINE is dropped by a TBF.



PARACHUTE then begins to open.



AND MINE floats gently to water.



were bottled up in the harbor by mines which planes from the *Hornet*, *Lexington* and *Bunker Hill* laid in the long, tortuous passages leading into it. Bombers and torpedo planes of the task force then came along and wiped out all 32 ships.

This strike denied use of Palau to the enemy for at least 20 days and was one of the factors which led to its abandonment as a forward operating base for enemy naval ships and aircraft.

Truk and Woleai were mined in April 1944 to prevent temporarily their use by enemy fleet units which might endanger the Hollandia invasion and other movements then being carried on. Palau was mined again in June and July to insure its neutralization during the capture of the Marianas and the westward sweep toward the Philippines.

Attrition (strategic) mining also expanded rapidly. The Royal Air Force, based in India and Ceylon, and the 10th USAAF flew more than 200 sorties and laid almost 1,000 mines in 11 regions along the coasts of Burma, Thailand and the Malay peninsula.

The 14th USAAF's mining was done under more difficult conditions. All its planes and mines had to be flown over the Hump from India and Jap advances greatly curtailed air operations in late 1944. Nevertheless, several hundred mines were laid along the coast and in the rivers of China and around Formosa. In the first three months of 1945, the 14th laid over 300 mines in the upper Yangtze, including more than 100 floating mines dropped upstream from such places as Hangkow to float down on ship and barge traffic. Then India-based B-29s carried out two heavy mining attacks

in the mouth of the river near Shanghai in March.

In the SoWesPac area, meanwhile, the RAF, RAAF, 10th USAAF, 14th USAAF, 20th Bomber Command and the Fifth Fleet all contributed to mining 40 localities, hampering enemy development of important sources of raw materials.

Balikpapan, Borneo, site of the only high octane gasoline refinery nearer to Pacific bases than Palembang, Sumatra and principal storage place for bunker fuels in that area, became an important new target. RAAF Catalinas first mined it on 22 Feb 1944, and port closures and ship sinkings followed regularly thereafter. The first U. S. acoustic mine—a mine fired by the noise of a passing ship—was used there on 20 Apr 1944.

B-29s entered the minelaying picture for the first time at Palembang



on 10 Aug 1944. It was also the first time the B-29 had been used for anything but high altitude bombing. While some Superforts bombed the target, eight B-29s flew low and dropped mines into the long river channels leading to the refinery—so low that one plane strafed an enemy tanker. The mining resulted in seven ship casualties and the river was closed to important enemy tanker traffic for nearly a month. It was the longest bombing and mining mission of the war.

In November and December 1944, B-24s of the 7th USAAF heavily mined the Bonins, which were being used as forwarding points for enemy supplies to the Volcanoes and other advance bases. This operation, which caused a marked decrease in enemy shipping in the mined areas, was in support of the invasion of Iwo Jima.



Official U. S. Navy photograph

NAVY MINING EXPERTS plot a raid in the blockade mining of Japan. During the last months of the war, almost 12,000 mines blockaded Jap homeland.

By early 1945, the Japanese were making desperate efforts to transport the most vital materials from their outer zone to the homeland for a last stand. It was at this point, on the night of 25-26 Jan 1945, that India-based B-29s engaged in their first large-scale mining effort, planting several hundred magnetic mines in the approaches to Singapore, Saigon and Camranh Bay, a serious blow to the major port and repair facilities left to the Japanese in southeast Asia and the southwest Pacific. In view of the operations already in progress in China, southeast Asia and the central and southwest Pacific, this operation served notice on the Japanese that no mineable waters short of those in North China, Korea and the Empire proper could be considered safe to shipping.

At the same time, during one week the RAF mined nearly every usable port along the Malay peninsula. The RAF kept up a continuous campaign against all targets within range of India and Ceylon, using all types of U. S. and British magnetic mines, as well as acoustic mines, for the first time in that theater.

While the Japanese offensive in South China forced the 14th Air Force to move so far west into China that it could no longer mine the China Coast, RAAF Catalinas, operating under Com7thFlt, took over the job as soon as Philippines bases were available.

By the end of March 1945, the Japanese were forced to withdraw most of the 2,000,000 tons of shipping they had left to the inner zone. There, in the comparatively shallow and well-protected East China Sea, Yellow Sea and Sea of Japan, the Nipponese vessels shuttled back and forth between the homeland and the Asiatic continent in comparative safety. Most of this shipping—and it was then adequate to Japan's needs in the inner zone—passed through Shimonoseki Straits to industrial ports on the Inland Sea of Japan.

Just before the invasion of Okinawa

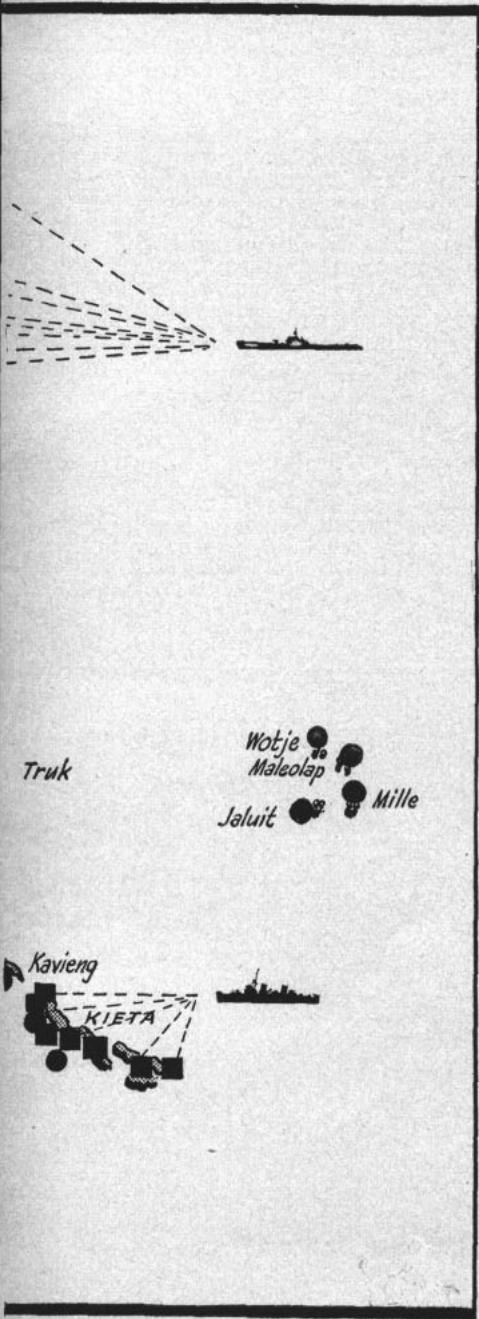
began, Superforts of the 21st Bomber Command (313th Very Heavy Bombardment Wing) carried nearly 1,000 magnetic and acoustic mines from Tinian to Shimonoseki Straits and the Inland Sea. This attack opened the inner zone campaign by denying the enemy the use of sea lanes on which they depended heavily to rush reinforcements to the Ryukyus and to bolster their homeland for the threatened invasion.

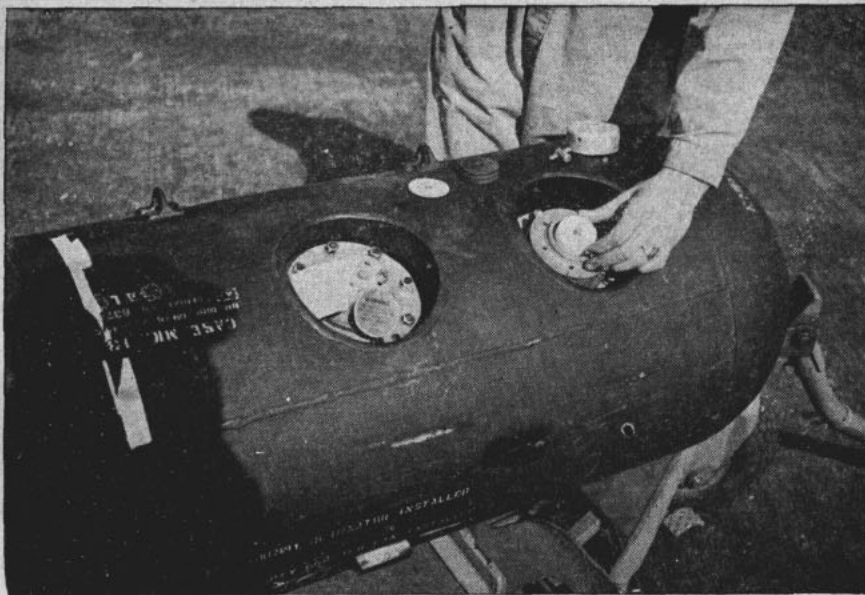
The inner zone campaign was divided into five phases:

- First phase, 27 Mar-2 May, Okinawa support: Shimonoseki Straits, the naval bases of Kure and Sasebo and the military port of embarkation at Hiroshima were mined to endanger Japanese naval movements, particularly by a sortie of the fleet through Shimonoseki to Okinawa under cover of western Kyushu. As a result, the only task force which did sortie attempted to slip out of the Inland Sea via Bungo Suida, east of Kyushu, where U. S. units lay in wait and sank the BB *Yamato*, pride of what was left of the Japanese fleet.

- Second phase, 3-12 May, industrial center blockade: Purpose of this attack was to destroy seaborne communications between industrial zones of Japan by maintaining the blockade of Shimonoseki and mining the ports of Tokyo, Nagoya, Kobe, Osaga, and the main shipping lanes of the Inland Sea. It was here that the unsweepable pressure mine was introduced, after being made available by the Navy. This attack used 1,422 mines of all types, and shipping at all ports began to fall rapidly while ship sinkings rose. Much shipping from Korea and Manchuria, which formerly passed through the Straits to industrial ports on the Inland Sea, was diverted to northwest Honshu ports and Kyushu.

- Third phase, 13 May to 6 June, Northwest Honshu-Kyushu blockade: The purpose here was to blockade the bulk of enemy shipping from the Asiatic mainland to Japan by continuing to block Shimonoseki Straits and by mining all the major harbors





SOLUBLE WASHER is adjusted in a mine case. When water pressure reaches a predetermined density, the washer dissolves, thereby arming the mine.

of northwest Honshu and Kyushu. The Superforts laid pressure, magnetic and acoustic mines in this phase and the low-frequency or subsonic acoustic mine also was introduced. As shipping fell off in Shimonoseki Straits and the industrial ports, there was a slight increase in shipping in the northwest Honshu and Kyushu ports, but the newly laid mines resulted in many ship casualties.

• Fourth phase, 7 June to 8 July, intensified northwest Honshu-Kyushu blockade: Secondary and tertiary harbors were added to the list of targets and saturation of Shimonoseki and the primary ports of northwest Honshu and Kyushu continued. The important port system of Kobe-Osaka was mined repeatedly. Ship losses accumulated rapidly, shipping began to drop off in the northwest ports and

Shimonoseki and the industrial ports were almost completely blockaded.

In conjunction with the fourth phase, Navy PB4Y-2 (Privateer) aircraft based on Okinawa conducted an attrition mining attack against shipping from the Yellow Sea skirting the southern coast of Korea.

• Fifth phase, 9 July to 15 August, total blockade: The purpose of this phase was to mine all the ports of Korea while maintaining the blockade of Shimonoseki and all of northwest Honshu-Kyushu. This attack resulted in continued shipping losses and falling off of traffic in all ports. In the closing days of the war, Japan was ringed with ports polluted by aerial mines. None of the shipping lanes was being cleared efficiently, but the Japs preferred to take abnormally high losses rather than stop shipping

completely. Ships were using the diversionary ports on northwest Honshu and Kyushu only as a desperate measure to get supplies to the mainland, but limited inland transportation prevented final delivery of the necessary food and materials to the industrial sections on the Inland Sea.

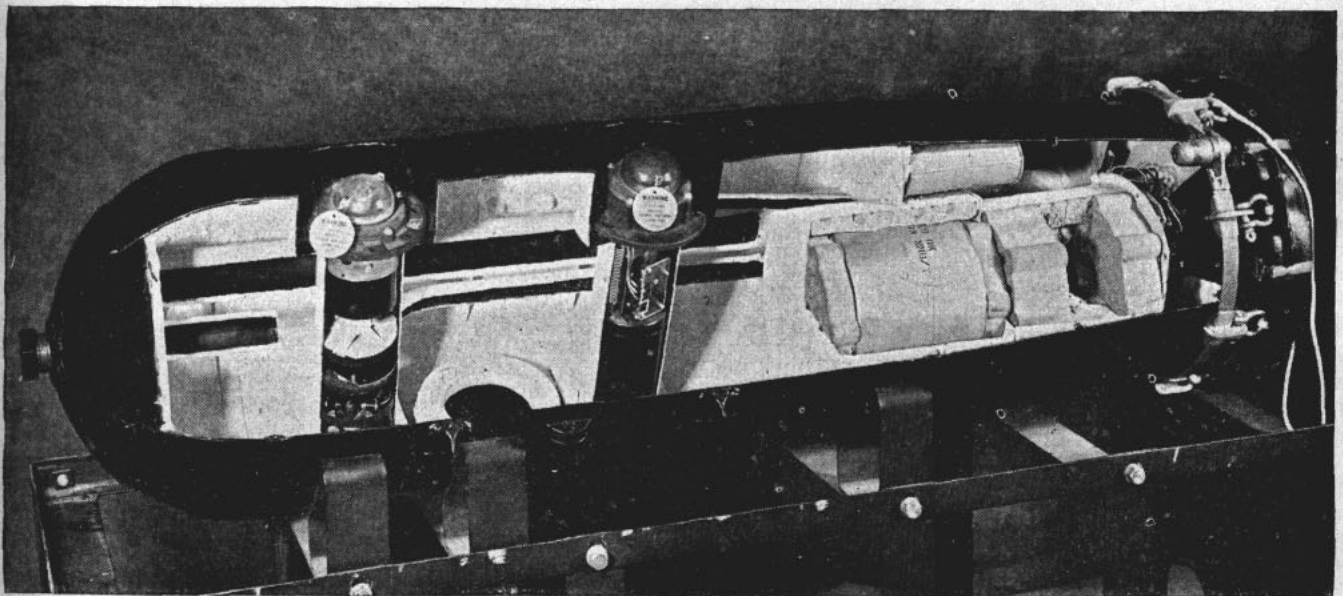
Accumulated results of the mining offensive were shortages of coal, oil, salt and food which contributed to such a complete paralyzation of industry that shortly before the surrender leading industrialists indirectly informed the militarists that industry could not continue. Seven million Japanese would have starved to death if the war had continued another year, they estimated. Appropriately enough, this mining attack on the inner zone was called "Operation Starvation."

Such is the outline of the war's mining operations. But it is more than a story of operations. It is also a story of machines—of the mines themselves—and of the race between allied and enemy scientists to bring them to a new and even more baffling perfection of intricacy.

The nazis started the race early in the war, while the U. S. was still at peace, by dropping new magnetic mines from airplanes into British shipping lanes. These mines lay on the bottom and were set off by the magnetic fields of passing ships. It was the "secret weapon" of which Hitler had been boasting in those days and the British were justifiably alarmed. Their alarm spread to the U. S. Navy.

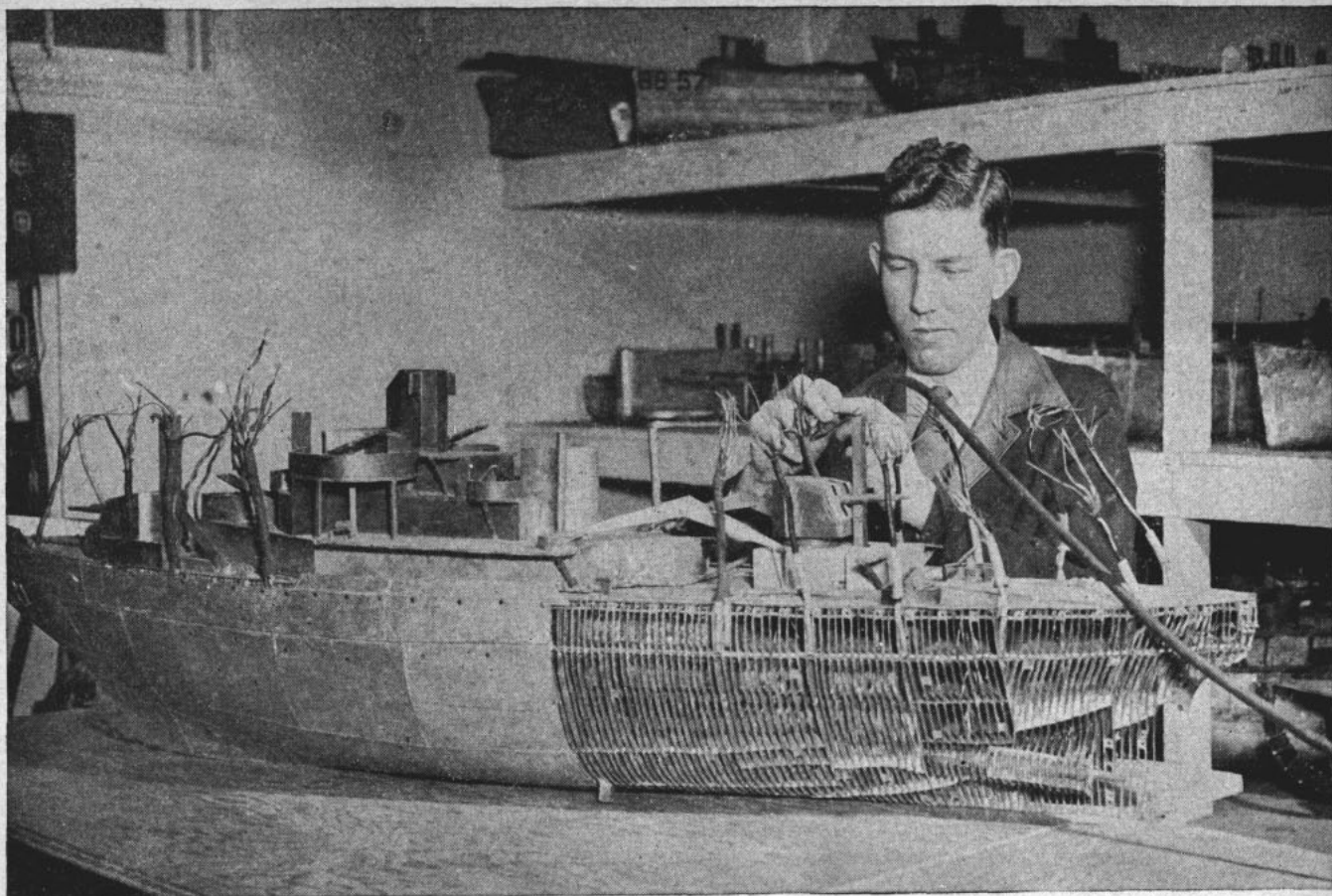
British and American scientists joined in developing degaussing methods for neutralizing the magnetic fields of ships and in 1940 the Naval Ordnance Laboratory in Washington, D. C. began building magnetic scale model ships in an effort to predict degaussing systems for ships still under construction. This method worked and by war's end degaussing had protected 12,500 ships and millions of American lives from magnetic mines.

The German mining activities not



CUT AWAY VIEW of the Mark 26 shows delayed arming device, ship counter and sterilizer in first vertical incision.

Official U. S. Navy photographs



Official U. S. Navy photograph

DEGAUSSING COILS are experimented with on scale models to determine formulas to be built into actual ships.

only forced the Allies to take defensive measures, but spurred them to take offensive steps in mine warfare. As a result, the U. S. Navy developed magnetic mines of its own, and went on to produce other types as well.

After the Pearl Harbor attack plunged us into war, mines designed and produced by BuOrd during 1941 and 1942 were sent to mine depots throughout the Pacific, Australia, India and China, staffed largely by personnel trained at the Mine Warfare School, Yorktown, Va., and at NOL, Washington, D. C. Several Navy officers stationed at the Admiralty in London also accumulated experience from the war on shipping between Great Britain and Germany.

As the race of the scientists developed, the Navy produced an audio-frequency acoustic mine which, lying on the bottom, would be fired by the audible sounds of a ship passing overhead. By sheer luck, the Japanese discovered they could sweep this mine with underwater noisemakers which they had been using for training of their sonar operators. The enemy also developed magnetic sweeps for the magnetic mines.

It was then that the Navy came up with its two "unsweepables"—the subsonic acoustic mine, and the pressure mine. The subsonic mine was fired by ship sounds so low in frequency that they could not be heard by the human ear. The pressure mine was fired by the changes in water pressure caused by a passing ship.

But the various types were only part of the story. The mines could be equipped with counters which would literally count the number of ships passing overhead and then go off when a pre-selected number had passed to hit an important target in mid-convoy.

Lacked Equipment

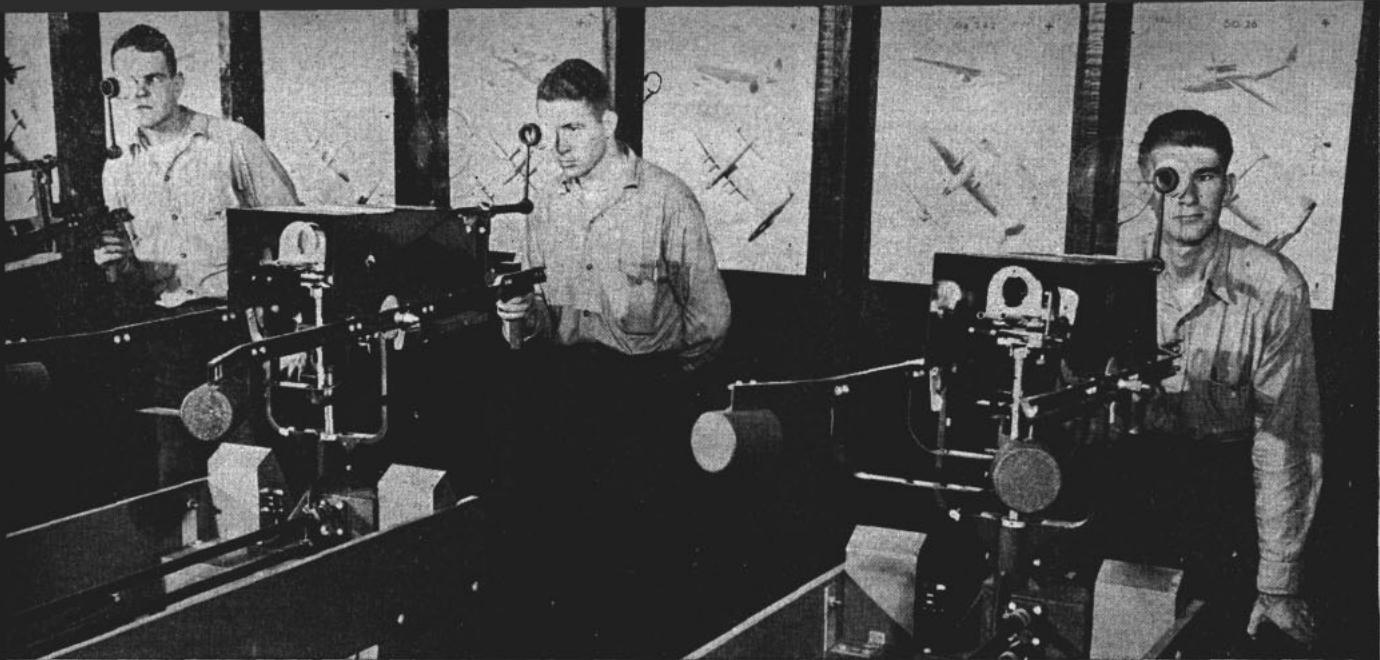
Actually, the Navy's experts report, the Japanese never were able to cope adequately with the Allied mining offensive, for lack of sufficient equipment and for lack of sufficient ingenuity to keep pace with our scientists. For that matter, the Navy itself never discovered a sure method of sweeping the pressure mine, other than that of simply running ships over the areas in which they were planted. Although these mines were equipped with sterilizers to render them harmless after a given period of time, "guinea pig" ships—three ancient, battered merchantmen with specially protected volunteer crews and no one below decks—cruised up and down Japanese home waters after the war in a deliberate effort to blow up any mines which might still be alive. Fortunately, all the sterilizers had worked.

Aerial mine warfare required an entirely new type of mine. In general appearance they resembled heavy bombs, but were equipped with small parachutes to slow their descent. Most air mining was carried out at night, particularly when the sky was heavily overcast, and drops were made by

radar or visually from very low altitudes.

Problems of training ground and air crews in an entirely new type of warfare, problems of logistic support, problems of production were met and conquered. Mine details, consisting of specialized personnel and equipment for servicing intricate mine mechanisms under all sorts of advanced base conditions, were formed and sent to all areas in the Pacific theater. The speed and efficiency with which these details worked are illustrated by the fact that B-29's often took off from Tinian with fully-serviced mines, the components for which had been unloaded on the beach the day before. On the production front, freight cars were on occasion hooked to fast passenger trains to speed needed materials to the many manufacturers of mines.

Yet offensive mining had a slow start. Comparatively little had been done about developing mines between World Wars I and II, so far as the U. S. was concerned. Mines suffer from the handicap that their results cannot be seen immediately and often never are definitely known. Minelaying is not a competitor of more direct forms of attack on enemy shipping, but it is a valuable supplement. The record of the Pacific war has shown that it was the most economical, in terms of results achieved measured against effort and men and equipment expended, of all the forms of attacks on shipping. That record will not soon be forgotten.



Official U. S. Navy photographs

GUNNERY STUDENTS learn to estimate the lead of a plane in flight using this equipment designed by Special Devices. Five hundred training devices were developed and distributed throughout the Navy during the past war.

MOCK-UP FOR BATTLE

Training Tricks from Special Devices Unit Simulate Combat and Speed Class Studies For Navy's Students

THERE WILL BE no pitch or roll and no spray over the bow, but simulation of the bridge of a vessel under way will otherwise be nearly complete in the shiphandling trainer under development by the Navy's Special Devices division.

An old and sure hand at the art of projecting the pattern of operations into the class room, with a war record of more than 500 training devices designed and distributed, the division is completing plans for the new equipment in its headquarters at Sands Point, Long Island, N. Y.

The shiphandling trainer, a device containing two complete replicas of ships' bridges, pilot houses and CIC compartments, is high on the list of the division's 190 peace-time projects. The current program, under supervision of division director Capt. D. L. Hibbard, USNR, calls for an extension of techniques utilized during the war in founding a new instructional system credited with saving many men from death in training accidents. And as in the past the development of training devices and operational equipment will run concurrently.

Three hundred military and civilian personnel are carrying on this work for the division, which is a part of the Office of Research and Inventions, headed by Rear Admiral H. G. Bowen, USN.

The shiphandling trainer is one of

Special Devices' newest examples of applied illusion. Here again the sounds and shapes of actual operation are being "prefabricated" to lend an air of reality to instruction—a method devised and developed in the war years by Rear Admiral Luis de Florez, USNR, now assistant director of Admiral Bowen's office and in civilian life an inventor and engineer.

Other Special Devices projects under way concern anti-aircraft armament, super-sonic air speed research, mathematical computers, simplified cockpits for helicopters and new developments on camera guns.

Also taking shape is the "Fly Bar"—a piece of aircraft equipment which would enable pilots to "read" their flight instruments with their ears, so to speak. Auditory signals would give the instrument readings, allowing pilots to use their eyes for observation or to rest them from strain.

A new contribution to the problems of flight training and learning how to control pilot-less aircraft is on the ways. This device consists of a cockpit, a panel like those used in flying "drones," and a miniature plane suspended from a movable arm. Electric motors power the propeller, and synchronize the plane with the control stick in the cockpit, where the student pilot sits. The craft and the "drone" panel are likewise coordinated. Landing and take-off speed is simulated by an endless moving strip, operating in the manner of a treadmill, on which the plane rests at the beginning and end of each "flight."

So sensitive are the controls of this miniature aircraft that experienced fliers find difficulty in handling it at the first attempt, according to division officers.

The war record of Special Devices and its rise from desk to divisional status is one of accomplishment. Many of the 500-odd types of training paraphernalia logged out by the division from 1941 to 1945 were used throughout the world, at continental training centers, on ships and in rear areas of combat zones.

They were distributed to all United States armed services and 10 allied nations. One mission of Special Devices was to set up training equipment in Brazil for the instruction of Brazilian pilots on the South Atlantic anti-submarine patrol. Some of the equipment went to Naval hospitals for rehabilitation work. Special Devices developed equipment for training in gunnery, recognition, radio, radar, bombing, flight, navigation, air crew cooperation, maintenance and anti-submarine warfare.

The division was the creative force behind the designing of numerous operational devices whose details are still classified confidential. To help meet the submarine menace in the Atlantic, new methods were blueprinted for use in rocket firing, combating sonic torpedoes and conducting searches at night. The radar section trained officers participating in every major invasion.

850 New Projects

In all, the division initiated 850 projects during the war. Most of these were in the field of aeronautics, the unit having been part of BuAer until last year.

The story behind the designing of a new type of diagram was typical of project development in the division. In August 1944, Special Devices re-

ceived a request from Rear Admiral John Gingrich, USN, (then a captain) for aid in installing simplified operational damage control diagrams on his ship, the USS *Pittsburgh* (CA-72).

Three-dimensional charts were Special Devices' answer. By January 1945, the new-type diagrams, easily read and depicting vividly the location of valves and compartments, had been installed on the *Pittsburgh*. And the pay-off came on 8 June 1945 when the *Pittsburgh* lost her bow in a typhoon between Guam and the Philippines. The whole forward part of the ship, 104 feet back from the stem, was torn off in the storm which caused extensive damage among a task force.

Admiral Gingrich believes that Special Devices' idea aided materially in saving the ship and allowing her to limp back to Guam, without a loss of life.

The diagram system, together with an improved cabinet installation for display of the charts, has been adopted by BuShips for use in all new combat ships.

Special Devices had its inception in the ideas and inventive genius of two officers, Admiral de Florez and Captain Hibbard, who entered the Navy in 1940 to speed up BuAer's training program. For the work of Special Devices, Admiral de Florez in 1944 was awarded the Collier Trophy for "the greatest achievement in aviation in America, the value of which has been demonstrated by actual use during the preceding year."

At first, his task in BuAer was to seek means of improving existing systems of training pilots and air crewmen, but later his attention was directed toward synthetic devices.

As this program grew, more and more men got their first feel of combat conditions in Special Devices' "Rube Goldberg" creations. Gunners who had fired beams of light at an ersatz enemy on a screen knew instinctively what to do when the real thing came up. Air crews taking off for the first time had already "flown" hundreds of miles sitting in the simulated nose of a big plane, meeting "emergencies" which in an actual training flight could have meant death to all hands.

The results of the new method were cited in a book, "Carrier War, Task Force 58 and the Pacific Sea Battles," by Lt. Oliver Jensen, USNR: "Synthetic training with Navy mechanical special devices produced fighters who knew automatically what to do. In their very first action they were actually more than a match for veteran enemy fliers."

"Only short of miraculous" was the description applied to the program by a House investigating committee in 1943. A Pacific Fleet notice of 24 May 1944 concerning the experimental installation of gunnery trainers declared: "The percentage of hits has increased, in many cases to a marked extent."

Men with scientific training and skills ranging from ballistics to psychology were recruited during the war years. Captain Hibbard, who was



MECHANICAL COUNTER keeps score while fighter pilot practices a "dog fight" with plane silhouettes which are projected onto a screen.



LINK TRAINERS are devices used to teach Navy cadets the art of blind flying. Sp(T)(LT) Florice Burke, above, demonstrates how it's done.



LIGHT-BEAM "BOMBS" are dropped by trainee in horizontal bomber trainer chamber which simulates actual conditions during flight.

awarded a Legion of Merit medal in March for his Special Devices work, first as assistant director and later as director, is a college president and mathematician. The division's roster also included educators, engineers, lawyers, architects and businessmen.

Special Devices became a separate division in BuAer in August 1943, when headquarters were established in a converted Washington, D. C. garage. It was transferred to the Office of Research and Inventions on 19 May 1945.

The machines and methods Special Devices devised during the war became familiar to thousands of Navy men. A list of the division's most widely-used war developments would include:

- The "Gunairstructor," for training fighter pilots in the art of dog-fighting. This consisted of a cockpit with its fixed guns firing at plane silhouettes projected on a screen, with the illusion complete as to sky, maneuvering tricks and the cacophony of plane engines and gunfire.

- The free gunnery trainer, a device also containing a light-beam gun and two motion picture projectors for training in estimation in range and lead amid a confusion of sound and excitement.

- Bombing Trainer. In this unit photographs of terrain were projected underneath a bombardier chamber, with height and movement simulated with startling reality. Light-beam "bombs" were dropped and hits scored.

- Planetarium rooms for instruction in aerial navigation and star identification.

- The safety cockpit program. On the theory that many air accidents are caused as much by pilot confusion as by pilot error, the division promoted with BuAer a scheme for simplifying and standardizing arrangement of flight instruments. This program is still progressing.

- Landfall techniques. The division developed skills and techniques for constructing models used in combat planning and briefing. Kits were devised with which officers could make relief maps and terrain models with three dimensional perspectives.

- Operational flight trainers. The noses of large Navy planes were exactly reproduced, down to the sound effects. Pilots, flight engineers, navigators and radiomen went through all flight operations without leaving the ground.

- Maintenance trainers. These facilitated the transition from school to line work by machinist's mates, electrician's mates, ordnancemen, radio technicians and other specialists.

- Flight engineers' panels. The controls and instruments on these devices were synchronized so that the instruments would react to the student's operation. The instructor could introduce engine trouble from a duplicate set of controls.

- Refrigerated low-pressure chambers to indoctrinate pilots and air crewmen to conditions of flight at high altitudes.

BATTIN' THE BREEZE ON THE 7 SEAS

Toss Him a Smoke Bomb

While waiting for the exec's green flag from the signal bridge, the bomb-laden OS2U pilot on the cruiser's catapult tested his radio gear with a talker deep in the darkened depths of CIC.

Pilot: "Ace One to Bulldog . . . Over."

Talker: "Bulldog to Ace One . . . What is your position?"

Pilot: "To Bulldog . . . I am directly over you."

Talker: "To Ace One . . . What is your air speed and altitude?"

Pilot: "Air speed . . . zero-zero; altitude . . . 20 feet above the deck."

(At this point there was a brief pause while the talker dived for the quick-action door to the captain's cabin.)

It didn't help the talker's nerves when, just at that moment, he heard an explosion on deck—the catapult charge.

Ship's Service Afoot

Peacetime reconversion of Japs, famed for going loin-cloth clad into battle fortified only by a handful of rice, seems to be in full swing despite reports of hardship and famine in Nippon. At least Shoji Nishimoto has found a way to beat the food and haberdashery shortages.

When arrested in Sendai for illegal possession of U. S. goods, Nishimoto was concealing on his person without

benefit of sacks, bags, or any other carryall:

One can salmon, one can mixed nuts and candy, one pack candy, 12 packs cigarettes, one bath towel, one Navy flashlight, one pair trousers, two shirts, one sweater, one mackinaw, one box lifesavers, one can chopped ham and eggs, one pair shoes, four packs gum, one pack cocoa, one pack cereal, one can candy, 12 candy bars, four packs sugar, one mirror, one tube shaving cream, three packs razor blades, one can anchovies, one shaving brush and kit, four bars soap and one soap case.

Stars Are Pretty, Too

Even the angels probably heard about the young—painfully young—officer who apparently missed attending one of the Navy's schools designed to teach you what-to-do-when-and-why.

Freshly commissioned and in a snappy new officer's raincoat, he strode into one of the Navy's offices, stood at attention, and with the prescribed flourish of his right arm removed a cap resplendent with the sort of gold filigree customarily adorning senior officers' headgear.

Strictly conforming to regulations, he snapped out briskly: "Ensign Johnson reporting for duty, sir."

He momentarily unbent to the extent of doffing his raincoat to display, sure enough, one lonesome stripe on

each sleeve. This proved almost too much for the composure of the office. Awed, the duty officer was barely able to ask who he was, what he was, and how he'd come by either the scrambled eggs or the single stripe.

"Ensign Johnson, I said, sir," the newcomer replied. "As for the cap, I bought it. I'm glad you like it. It only cost a few dollars more and it's so much prettier than the plain ones."

Gyrene Boot Lure

Army Day in Washington and thousands of neatly turned-out GIs tramped or rode down Constitution Avenue in their olive drab uniform. But, on the day set aside to glorify soldiers, Marines couldn't stay out of the act any more than they'd have thought of sitting home during the war.

Sharing the cheers of crowds watching the two-hour parade were four Marine sergeants—making a sharp contrast in their snappy dress blues—who rode close behind the last brown-clad rank in a jeep prominently displaying "U. S. Marine Corps Recruiting Service."

Explaining the expedition as an intentional added attraction, the head of the local recruiting office grinned that officially the boys were just out riding and got caught between the guide ropes. After that they had to go through with it.

Such quibbling doesn't hide the fact, however, that a flock of dog-weary doughfoots have turned up recently at the recruiting station with discharge buttons asking to trade in their OD's for blues.



Recipe: One Mailing List

Homesick for stateside beer parlors? Bored with overseas life? Feel let down when you miss out on the packages at mail call?

Well, you might try out the scheme a couple of crew members of the *LCT 596* evolved in England when they figured the folks back home weren't making with the parcels often enough. Not being ones to offend the proprieties by coming out with blunt requests, they put their heads together and came up with a plan of great finesse to start the flow of morale builders rolling in.

Soon afterwards two girls in the states—at least that's as many as the fellows admitted they wrote—received letters that read in part something like this: “. . . Boy, did I appreciate that big box of home-made fudge and candy you sent! It sure went fast. All the guys on the ship were jealous of me because I've got a girl who's thoughtful enough to mail stuff and such a good cook, too. But that didn't seem to stop them from gobbing it up. Sending that package certainly shows how much you think of me . . .”

The letters were identical except for the addresses on the envelopes and the names inside. The one addressed to Mary Jones “accidentally” contained a letter that started out “Dearest Helen,” and Helen Smith's letter commenced “My darling Mary,” by the same strange chance.

And almost as soon as the fudge cooled, it was on its way across the Atlantic.

Mail Cull

When the chaplain throws in the towel over your problem, it's still not time to jump overboard. Maybe the Navy Department or Veterans Administration can give you the word. Anyway, a lot of people—and their wives—have tried it. Such as these excerpts from letters:

“I have been married to a naval enlisted man for three months on the 17th of June. Should I report this to the Red Cross or where?”

“I know this question is a long one. I could use bigger words, and make the letter shorter, but then I wouldn't understand it. I would like very much to buy a farm. I have the necessary money to start farming on. But I haven't enough money to buy a farm and start farming. My question is, can you get money under the GI Bill even though you didn't get called into service?”

“I am an honorable discharged veteran of this war and would like to have some advice about the Waves, mainly where do I go to join up?”

“I have two small children and expecting a baby in September due to an infection in my left side. I would like to know if it would be all right if my husband went AWOL to see me at the hospital?”

“I am a member of the Marine Corps and am going to get a medical discharge for disability. I am married to a Wave and I would like to get her out of the Navy because I will have use for her in my home. How can I do it?”

“I have a son in the Marines, he

write me often but seem as though he doesn't know where he is, as I am furnishing you his address will you inform me as best you can where he is located, I would like so very much to know and if I do find out can I tell him?”

“Just before my fiancé was shipped overseas he wrote and told me he was married. Who do I see about an allotment?”

“I want to know about vocational training. Can I collect the \$75 monthly subsistence allowance while I learn a trade? Can I work and collect if I work for my wife? I can learn more from her than anyone else.”

“At one time I heard the statement made on the radio: ‘It costs \$10,000 to have a man discharged from the United States Navy.’ Is this true? If not, how much does it cost? In any case, what is the course taken by the money? Where does it go?”

This is the Cats

The cruiser got under way from Ominato, Japan, with a six-by-six cage lashed to the port side of the well deck. In the cage was a 100-pound wildcat, mascot of an Army unit billeted on northern Honshu; the cat was the Navy's “guest” en route to the States via the “Magic Carpet”.

Weather: calm. Temperament of the cat: calm. Appetite of the cat: negative.

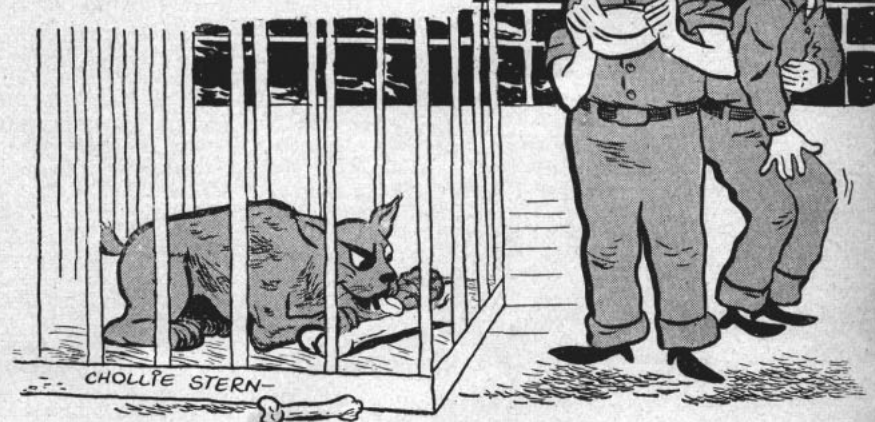
Worried, the wildcat's chaperone tried soft-voiced coaxing, choice tidbits from the galley. Result: negative. The cat wouldn't eat.

“They'll skin me alive when we reach Frisco if this baby's lost a single pound,” lamented the GI, while his Navy buddies chewed their fingernails trying to find an aperitif for the sad-eyed tabby.

Then—the change. The weather: very stormy. Spray showered the well deck and doused the cage at every roll. All hands (with few exceptions) temporarily missed meals. The wildcat's appetiteless plight was forgotten.

Result: The Army short-tail—neglected—bristled and yowled for chow. Generosity of the crew knew no limits and the cat grew plump and sleek while the ship pitched and rolled her way to the Gate.

Now, we're told, green-eyes insists on a salt shower before chow and her waistline is a furry 24.



Swimming Call

Somebody “shoved” the Eniwetok dock and the jaygee missed the whale-boat, plummeting into the brine.

Spouting, he surfaced—clutching an old soggy life belt, which he handed to his ship's exec. Then he gurgled: “Abandon ship drill completed, sir.”

THE WORD

Frank, Authentic Advance Information
On Policy—Straight From Headquarters

● **ETM and AETM shortages** are continuing as most critical in all Navy ratings, and every inducement is being offered to attract personnel to this field. Electronic technician's mate and AETM are the only ratings now open in which a S2c can rise to PO1c in 13 months. Moreover, good conduct excepted, just about every other requirement is being waived for advancement—sea duty and service in pay grade, for instance.

In addition to the usual ratings accepted for this training—RM, ARM, EM, AEM, Rdm and SoM—all other ratings or nonrated personnel who passed the Eddy test previously but were not selected for radio materiel training are eligible for enrollment. Men with the Fleet may apply via their Fleet commands, applications being screened by either ComServPac or ComServLantSubordComd, as applicable, for inclusion within quotas assigned their commands. Personnel attached to shore establishments apply directly to BuPers via unit commanders. Two years of obligated service at time of school entry are required for all personnel interested in the program.

Upon completion of 20 weeks basic training at one of the Naval Training Schools (EE or RM), graduates may be advanced to the next higher pay grade up to and including pay grade two ratings. Advancements in cases of men in ratings other than ETM and AETM will be effected in the ratings held.

A special program of advancement for non-rated men will be followed in advanced radio materiel schools. Upon completion of the first four weeks, the top 25 percent of the total number of non-rated men will be advanced to ETM3c or AETM3c, as appropriate.

After completing the first 16 weeks, up to one-third of those non-rated men not previously advanced in rating may be promoted to ETM3c or AETM3c. Upon completion of the entire 28 weeks course, remaining men not promoted may be advanced to ETM3c or AETM3c.

Those men in either the top one-fourth or one-third mentioned above may be promoted to second class ratings upon completion of the course if their work is considered to have been outstanding. In addition, they can be recommended to BuPers for advancement to first class if their showing has been exceptional.

Completing the advanced training satisfactorily will mean, too, that third class petty officers of other ratings will be advanced to second class of their rating, and that second class men will be promoted to first class. First class POs become either ETM1c or AETM1c, and CPOs of other ratings, in turn, become CETMs or CAETMs.

Recommendations for advancement

to CETM(AA) and ACETM(AA), in the cases of all men who held a petty officer, first class, rating upon entry in the NavTraScol (EE or RM) and who successfully complete the advanced radio materiel course, may be submitted to BuPers for consideration. Sea duty requirements and service in pay grade requirements may be waived in these cases.

● **Many scarce items** of ship's store and ship's service stock are expected to be back on the shelves within the next three to five months.

According to present contracts, radios will be arriving in lots of 2,500 per month for the next four months. There is already a considerable number of various types of radios in ship's services and ship's store distributing points.

Cameras, another rare article, are expected to be in fairly general supply during the summer months. Thus far, five different types of cameras have been procured for distribution to the fleet and overseas bases through ship's stores. Leading brands of fountain pens should be appearing in ship's stores and ship's service stores during the next few months.

Noticeable change in ship's service store policy from prewar days will be seen with regard to items such as automobiles, jewelry and costly household appliances which formerly were obtainable through Navy ship's service channels. Purchase of such items no longer will be possible through

these channels, the reason being that the Navy does not desire to enter into competition with private retailers.

● **USNR and USN-I** men now on shore stations will, in general, remain land-locked until their final demobilization. Excepted are those who have volunteered or volunteer to remain on active duty until 1 Mar 1947.

While not a hard and fast rule for remaining landlubbers, the fact is that with final demobilization at hand, the short time remaining before 1 September doesn't warrant general reshuffling of reserve personnel.

In some cases, reserve officers are being ordered to sea for one cruise of short duration, but in these instances consideration is being given to their remaining time on active duty before becoming eligible for discharge in order that they may be returned to the continental limits in time for processing.

Some enlisted reservists have complained about studying seamanship and related salty subjects while still ashore with no prospect of going to sea before discharge. The answer is that the Navy is a seagoing outfit, and that it looks to the future in training its men.

● **Family allowance benefits** may be extended until 1 July 1952 under a Navy plan sponsored by BuPers and prepared by the Judge Advocate General's office. Before going to Congress for legislative action, however, the proposal must be approved by the Federal Bureau of the Budget. The question most likely to concern budget men and Congress is, "What will it cost?" If it becomes law, the plan may end much uncertainty over eligibility for such benefits under the present law. Moreover, it will keep many USN men happy who were concerned about reenlistments after 1 July 1946, and loss of such allowances.

created. Among reserves, a majority of the 17 to 18-year-old group liked the present uniform, while greatest opposition to the uniform as is came from reserves over 25. Here are the answers:



QUESTION:

★ What do you think of the present enlisted man's uniform?

Most regulars like it; most reserves don't. In brief, that's what a tally of answers to this question showed, after the question had been put to a scientifically selected cross-section of Navy personnel. Considerable leeway was allowed in answers to the question, which brought out the point that large percentages of both regulars and reserves think the present uniform could be improved. Among regulars, greatest satisfaction with the present uniform was voiced by CPOs, but in all pay grades among regulars approval of the uniform increased as the length of service in-

OPINION	REGULARS	RESERVES
The enlisted man's uniform is completely satisfactory as is	33%	21%
It is fairly satisfactory, but there are a few changes that should be made to improve it	27%	20%
TOTAL	60%	41%
A lot of changes should be made to improve it but it has some satisfactory features	15%	16%
The uniform is completely unsatisfactory and it should be entirely changed	25%	43%
TOTAL	40%	59%

● **Warrant ranks** in the postwar Navy are in for a good deal of consideration and possible revision. Realizing that many of its most experienced personnel are either warrant officers or aspiring to rise to such rank, BuPers is looking forward to the time when there will be a warrant rank for every enlisted rating.

At present several enlisted ratings must be reclassified when warrant rank is attained. For instance, a chief quartermaster or chief signalman becomes a boatswain when he becomes a warrant officer. The Navy's plan is to provide suitable rank classifications for all enlisted ratings so that they will retain their proper identity upon promotion.

For the present, however, it appears that BuPers will resort to the use of designators in classifying warrants. In this case, a quartermaster who becomes a warrant boatswain might have a parenthetical designator (such as D2) attached to his rank to distinguish him from a boatswain with straight deck duties, who might be designated as (D1).

When all this will come to pass is another consideration. Navy plans, already drafted, will probably be in final form for announcement to the Fleet by 1 September, but in view of necessary legislation which will have to come from Congress, it is unlikely that actual enactment of the plan—granting Congressional approval—will be an actuality before a year from that date.

● **National Service Life Insurance** may be due for some changes if present legislation now awaiting action on Congressional bill becomes law. Still in the hands of the Committee on World War Veterans' Legislation, and not yet reported out of committee to the floor of the House of Representatives, are several bills providing for increased benefits to servicemen holding NSLI.

Several of the bills are "omnibus" in form, and include provisions for altering more than one feature of service insurance. Almost all of them provide for:

- Optional lump sum settlement in case of death;
- Elimination of present beneficiary restrictions;
- Endowment policies;
- Income to the insured in the event of total disability.

Army and Navy are favoring enactment of these proposals, and the main factor to consider at present is when the bills will be put on the House calendar for action.

● **A journalist's mate rating** leading to a corresponding warrant grade is being considered by BuPers in the postwar rating structure. Journalist's mates would gather news throughout the Navy, perform editorial duties for various agencies including ALL HANDS and ship and station newspapers, and carry out special assignments in radio interviewing.

THE WORD ON— ATOM BOMB TEST, NUCLEAR PHYSICS

A special ALL HANDS "extra" has been published this month on Operation Crossroads and on the science of nuclear physics that developed the atomic bomb.

The 52-page magazine tells the story of preparations being made for the tests scheduled to be held at Bikini 1 July and includes an elementary but detailed explanation of nuclear physics. Among the features of the edition is a color cover of the USS Nevada (the target ship), a list of leading scientists who developed nuclear science, and complete information to date on details of the test.

Distribution of the "extra" will be on the same basis as regular issues of ALL HANDS.

● **Permanent Waves?**

*With jargon most nautical,
In get-up quite tautical,
These lovelies have earned our loud
raves.*

*Sea-labors they lighten,
The landscapes much brighten:
All hail, then, the Permanent
Waves!*

—The St. Louis Post-Dispatch

Waves and woman Marines may become a permanent part of the Naval and Marine Corps Reserve under legislation coming before Congress.

Secretary of the Navy James Forrestal, in a letter to the Speaker of the House requesting enactment of H.R. 5915, pointed out that members of the Women's Reserve had exceeded

the performance of men in certain types of work, and that "the Navy Department considers it to be very desirable that these important services rendered by women during the war should likewise be available in postwar years ahead."

H.R. 5915 would repeal the present provision for the termination of the Women's Reserve by Presidential proclamation, concurrent Congressional resolution, or the expiration of the present war period plus six months.

Other amendments being considered would eliminate the restriction on the number of Wave line officer captains, and limitations on the assignment of women reservists overseas.

Actual enlisted strength of the peacetime Women's Reserve would be limited to one percent of the current authorized enlisted strength of the Navy. With that figure now set at 500,000, a total of 5,000 women would be permitted on active duty if appropriations were made available. Officer strength would be held to 15 percent of the enlisted women, or 750 under present allowances. If the Navy's authorized enlisted strength were increased, however, the Women's Reserve would be permitted to enlarge its complement on active duty according to these percentage allowances.

● **Bugler ratings** are destined to be abandoned eventually, according to the latest word from BuPers. It is not intended to scuttle the functions of ship's bugler. The present plan is to designate seamen striking for the quartermaster rating to perform bugler duties in addition to their primary quartermaster chores.

LEGISLATIVE ROUNDUP

Shotguns—(S. 1551)—Makes available for public purchase surplus Government-owned shotguns through War Assets Administration. Passed by Senate 20 Dec 1945. Awaiting action in House Military Affairs Committee since 21 Dec 1945. (This corrects a notice in ALL HANDS, March 1946, p. 42).

Terminal Leave Pay—(H.R. 4051)—Provides for terminal leave payments to enlisted personnel. Opposed by Bureau of the Budget but reported favorably by House Committee on Military Affairs, the bill was expected to be brought onto the House floor by its sponsor, Rep. Dwight L. Rogers of Florida, for action on 23 May. The House committee has amended the bill so that in any future emergency, payments of this character will not be made either to officers or enlisted personnel.

Retirement—(S. 2201)—Extends time for filing valid application for disabled emergency officers' retirement benefits, and grants retirement pay to World War I emergency officers who now have or may later establish a 30 percent or more service-connected permanent disability for this and/or other purpose. Introduced by Sen. Claude Pepper of Florida and referred

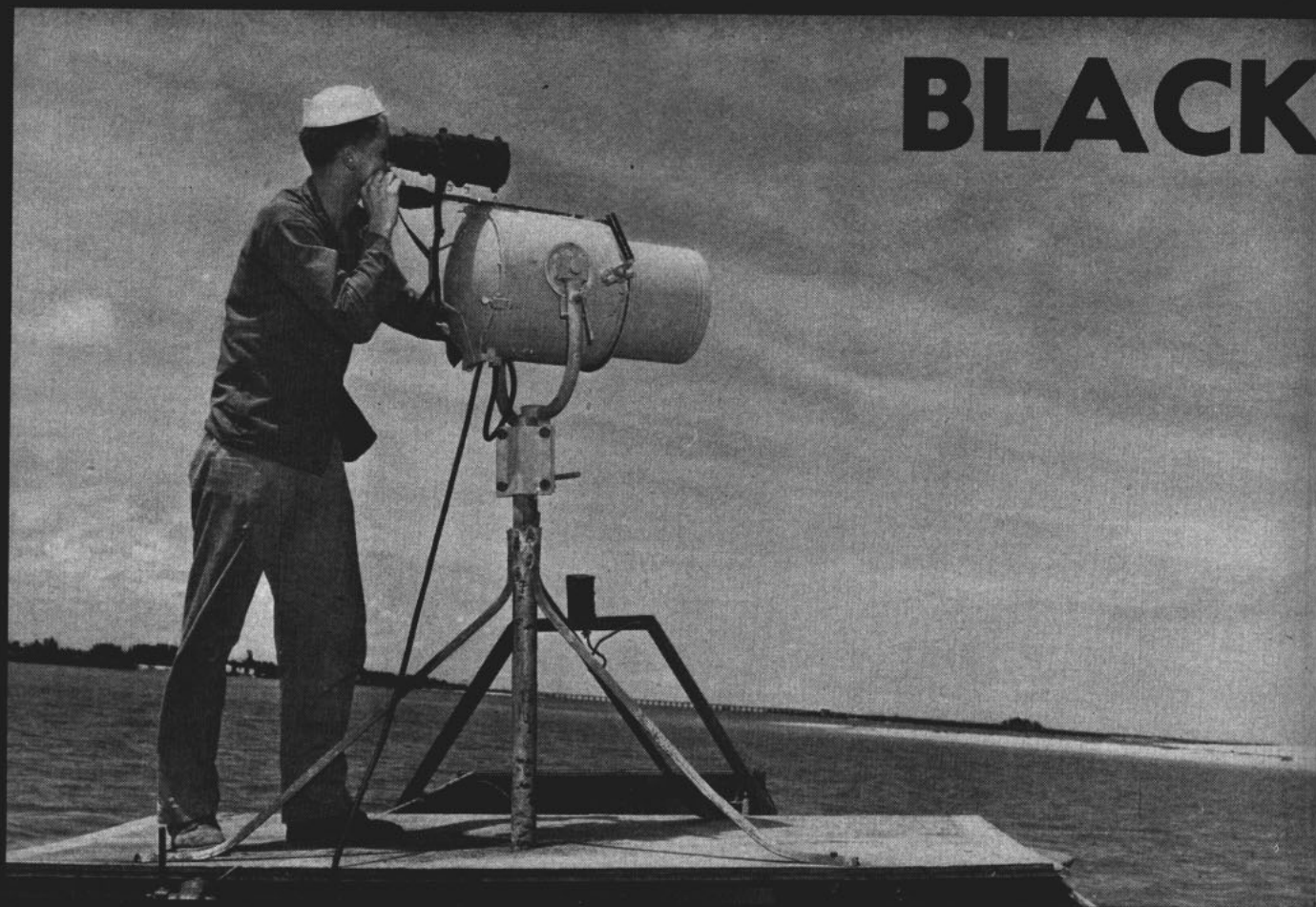
to Senate Committee on Military Affairs.

Electronic Devices—(S. 1953)—Forbids the sale, loan, lease, exchange, transfer or presentation as a gift of U. S. electronic equipment to foreign governments. At present in subcommittee of the Senate Committee on the Judiciary, the bill is being discussed in executive sessions. Date has not been set for Navy testimony on the measure.

Veterans' Subsistence—(H.R. 6430)—Introduced by Rep. Helen Douglas Mankin of Georgia, this bill would amend the veterans' regulations promulgated pursuant to chapter 12 of the Servicemen's Readjustment Act of 1944 so as to provide additional subsistence for all veterans enrolled in and pursuing educational courses. Referred to the Committee on World War Veterans' Legislation, the bill has not yet been reported on by the Veterans Administration.

Legal Advice—(H.R. 6435)—A bill conferring upon the Attorney General authority to advise veterans on their rights and privileges as veterans under existing laws, without cost or fee. Introduced by Rep. Cecil R. King of California, the bill was referred on 14 May to the House Committee on the Judiciary.

BLACK



Official U. S. Navy photograph

INFRA-RED SIGNAL LIGHT sends out rays which are not visible to the naked eye, but can be seen with a receiver.

IN ADDITION to its myriad other virtues, endowed and acquired, the Navy can see in the dark. This useful gift, enjoyed hitherto only, as far as anybody knows for sure, by cats and owls, was bestowed on the Navy by infra-red.

During the war, infra-red was provided as a means of night signaling, reconnaissance, recognition, navigation, station keeping and beachmarking. Some of these, however, for sufficient reasons, were never employed. The principle was useful to Marine Corps snipers, who, carrying rifles equipped with lights and special filters, simply illuminated the Jap at night, scrutinized him through a receiver attached to the gun, and picked him off. This item, called the Sniper-scope, was developed by the Engineer Board at Ft. Belvoir, Va.

Infra-red visual signaling, however, was the most important use to which the principle was put. The system supplements standard blinker and flashing light equipment with special devices which make the signal invisible to the naked eye. This is accomplished by placing a filter over any signal light and then viewing the rays that filter through with a special receiver. Only the observer equipped

Navy Can See In Dark Using Infra-Red Ray Equipment Which Sends And Receives Signals Invisible To Naked Eye

with this receiver can see and read the signals.

Back in 1918, during the other war, the Navy found itself face to face with the problem of enemy interception of radio and visual signals. Forthwith, the USS *Pennsylvania* was equipped with a mechanically modulated acetylene searchlight with infra-red filter and selenium type photocell receiver. Messages could be sent with this in Morse, but the beam was too narrow for use except in a flat calm. The equipment was bulky and unreliable besides, so they finally let the whole thing go.

Then in 1930 a man at the Naval Research Laboratory developed an ultra-violet signaling system, involving the use of special telescope in which the ultra-violet radiation was transformed into visible light. Un-

fortunately, some people can see the longer ultra-violet waves, and it was not possible to screen the source adequately without absorbing most of the useful energy. The project was terminated.

In 1941, with war imminent, the Navy renewed its interest in invisible signaling. Some men in the Bureau of Ships, with a group at the Naval Research Laboratory and in the National Defense Research Committee, laid out plans for expediting a practical solution to the old problem.

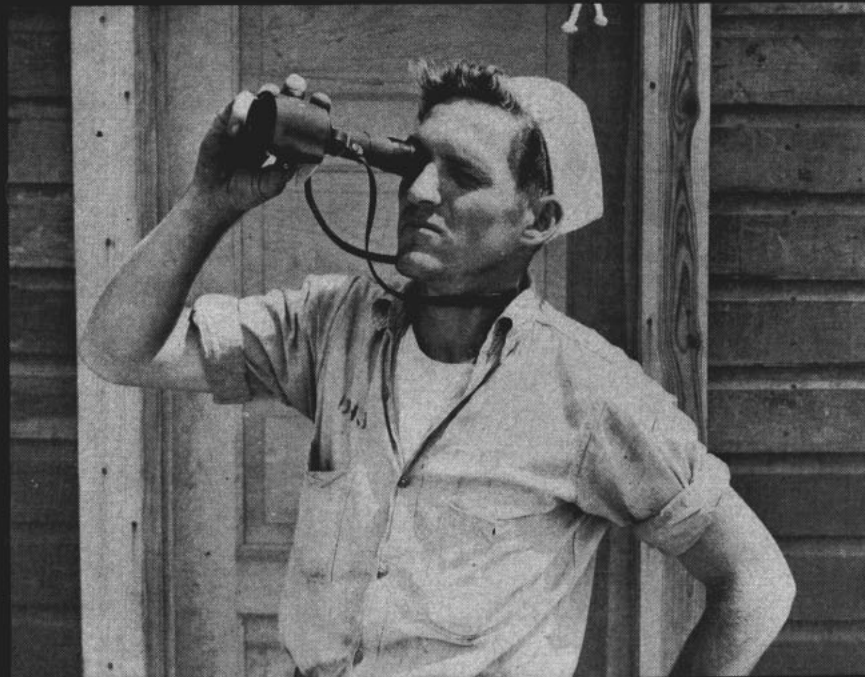
Before the invasion of Sicily several ships were outfitted with pre-production models of infra-red gear. Reports of their performance varied, but few were good. However, by the summer of 1944 infra-red had made some friends. Admiral Halsey's Third Fleet flagship reported that in one operation the receivers had given "excellent performance" and that "traffic was exchanged with good readability" up to a good range. Other reports gave the gear a good word from Saipan to Okinawa, where the Marines unlimbered Sniperscope.

The way this equipment transmits and receives rays that you can't see may be compared to the way a radio transmits sounds you can't hear until

LIGHT

they are reproduced by a receiver. The radio transmitter sends out a radio frequency wave to a receiver which converts it into a sound wave at a frequency within your hearing range. In a similar manner, some types of infra-red gear send out waves that are beyond the visible light range; a receiver catches these and converts them into light waves *within* the visible range. This enables one equipped with a suitable receiver to see light rays emanating from otherwise invisible sources. These light rays are of the type beyond the visible light range, the receiver transforms them to visible light rays.

Infra-red sources emit invisible rays which fall above the wave length range of light which the human eye is capable of seeing, and just below the wave length range of heat waves. At wave lengths of about 4,000 to 8,000 Angstroms (an Angstrom is one ten-thousandth of a micron, which is one-thousandth of a millimeter or about .00004 of an inch) light waves are visible to the human eye as colors, or as white light, which is a combination of waves of all wave lengths. Infra-red waves, however, are waves whose wave lengths are *longer* than 8,000 Angstroms, and just beyond the range of visibility. All this is supposed to demonstrate why, when you get within 400 yards of an infra-red source, you may see a faint red glow with the



Official U. S. Navy photograph

THE INFRA-RED image-forming phosphor receiver shown here is one of a number of receivers which convert infra-red signals to visible light.

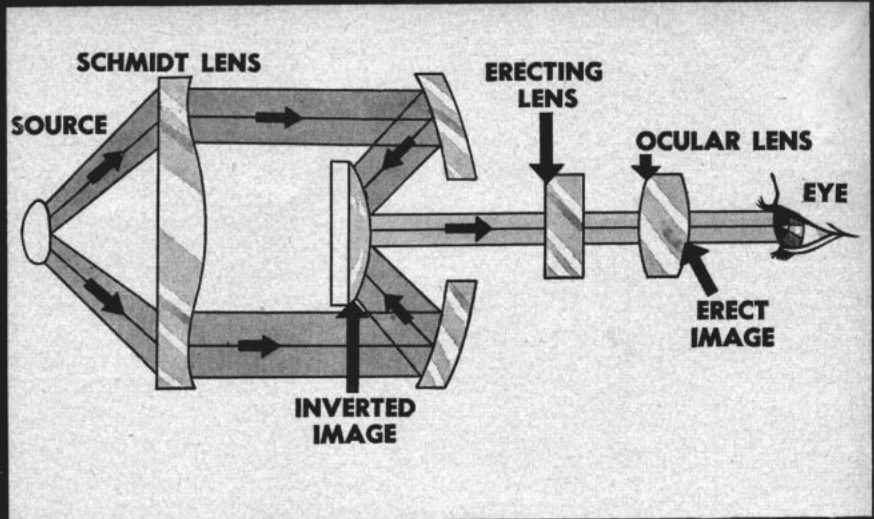


DIAGRAM SHOWS HOW images appear in their proper upright positions through the use of both the ocular and the erecting lenses in the receiver.

naked eye; and why, when you get up close, you feel heat on your cheek where you would expect to see light.

An ordinary electric light may be used to produce infra-red rays, and *only* these, if a filter is employed to completely remove all the visible light rays that are produced. This is exactly what is done in infra-red sources. It is accomplished by covering any standard or specially constructed searchlight or beacon with a specially designed, visually opaque, glass or plastic filter, through which *only* infra-red rays can pass.

Infra-red equipment is divided into sources and receivers. All sources consist of some type of electric light, a filter and a power supply. Natu-

rally, there are many supplementary components and refinements in some of the more highly developed models. But, fundamentally, all you need to produce infra-red radiation is light, power and a filter, and these are the only components common to all sources.

Sources Grouped

Sources may be grouped according to their function or use about as follows:

- Signal searchlight, including the standard searchlight equipment with infra-red filter-lens and hood added.
- Beacons, to serve purposes similar to those of shipboard broadcast lights.
- Beacons, provided chiefly in portable models with portable power supplies.

Infra-red experts are at some pains to point out that the equipment is adversely affected by fog, haze and rain in much the same manner as regular, visual daytime signaling equipment is affected. The range of an infra-red source is reduced by adverse weather conditions to approximately the same degree as the range of a white light of comparable intensity. In conditions of very bad visibility, the equipment may be rendered virtually inoperative.

The standard searchlight is the most powerful unit used for visual infra-red signaling. However, the beam of the standard light has very little spread. On a rolling ship it might be difficult to keep a narrow invisible beam trained on the signalman receiving. The control lens-filter, fitted inside the special hood, spreads the infra-red beam and permits un-



Official U. S. Navy photographs
THE SNOOPERSCOPE has a dual mechanism: a light source which sends out infra-red rays to illuminate the target and a receiver to spot the target.

interrupted signaling despite the rolling of the ship.

On the standard searchlight a curved mirror concentrates most of the light into a single beam. However, a small percentage of the light spills directly from the lamp to form a dim, side-angle beam around the main beam. If haze is present in the atmosphere, the spilled light is reflected from the tiny moisture particles and produces a secondary illumination which clouds the view of the receiver and greatly reduces its range. The purpose of the hood is to reduce the spilled light to a minimum.

The standard light and hood also have been used successfully to flood-light objects close aboard. One time, for example, it was necessary to transfer personnel from one ship to another in complete darkness. By means of infra-red illumination the task was greatly facilitated.

Infra-red beacons were used during the war principally for broadcast purposes; that is, for sending simultaneous messages to ships in formation. One type of equipment included two beacons, each utilizing six infra-red units arranged to cover 180 degrees of azimuth. Obviously these, when



INFRA-RED UNIT is installed in a beacon, used during the war to send simultaneous messages to ships in formation.

properly mounted, will give a coverage of 360 degrees; they also can sweep a 15-degree vertical span.

In addition to signaling devices, the Navy developed some portable beacons and beach markers intended for use with invasion units. These were never actually put into combat operation, probably for the very good reason that most of our landings were made in broad daylight. If night landings had been undertaken on a large scale, however, the infra-red beacons were to have been employed in guiding landing craft waves into beachheads and in marking the assault area after the landing was made.

The Navy originally designed two types of receivers. Both were called in and replaced by other types. All receivers perform the same basic task: They gather up invisible infra-red rays and convert them into light you can see or sounds you can hear. This objective, however, is accomplished in different ways and in different types of receivers. Image-forming receivers are small, portable units, looking vaguely like telescopes.

Other types are larger, more powerful, permanent installations not suited for ready handling as is the case with the smaller, portable units.

Image-forming types are phosphor receivers and electronic receivers. Briefly, the phosphor receiver contains a phosphor disc or "button" which, when properly charged, transforms infra-red waves into visible light. Charging is accomplished, in one unit, by a tiny green light powered by two dry cells. Charging of the phosphor disc in another type is done by a small quantity of radium, no less. This costs the Bureau of Ships \$30,000 per gram, but it gives the receiver a power source guaranteed for at least 1700 years. By that time, who knows,



THIS SIMULATED town street scene appears clearly visible in the daylight.



NIGHTTIME VIEW of same street as it would appear with the unaided eye.



Official U. S. Army Signal Corps photographs

IN THE CIRCLE: Otherwise invisible figures as seen through snooperscope.



Official U. S. Navy photograph

VIEWED THROUGH AN EYE PIECE, the image of the infra-red source usually appears as an orange spot.

somebody may have figured out something less expensive.

Electronic receivers, the type used with the Sniperscope, are of four types ranging from a handy unit less than 12 inches long and weighing under seven pounds to a permanently-mounted piece a foot in diameter, 20 inches long and weighing about 20 pounds. This receiver is equipped with a glass optical system common to ordinary telescopes or field glasses and employs a special type of phototube (image-forming tube) which converts infra-red radiation to visible light. Incidentally, the Army, which also used the Sniperscope and a similar gadget called the Snooperscope, says the two devices "are credited with 30 percent of the enemy killed on Okinawa."

The enemy also had a finger in infra-red. The Germans appear to

have made widespread use of devices for signaling, reconnaissance and detection. German infantrymen carried infra-red devices, probably similar to the Sniperscope, which enabled them to see and fire on enemies in complete darkness at about 100 yards. Another German development was a long focal-length camera using infra-red sensitive film which enabled the enemy to photograph Allied defenses and communications installations across the English Channel. Other devices, used with infra-red searchlights and headlights, made it possible for tanks and other vehicles to be driven in complete darkness.

The Japanese are known also to have used infra-red devices. Information on such employment has not been fully analyzed, but the developments are believed to be distinctly inferior to those of the U. S. Navy.

LETTERS TO THE EDITOR

This column is open to unofficial communications from within the Naval Service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes; no private reply will be made.

Mustering Out Pay

SIR: When, if ever, will a USN who shipped over in 1944 for four years be eligible for mustering out pay?—J.E.D., CFC, USN.

• At the termination of his present enlistment, USN men who reenlisted prior to 1 Feb 1945 will receive mustering out pay at the end of present enlistments. Those who reenlisted on or after 1 Feb 1945, and who have not received mustering out pay, can apply for it now. The application should be sent to the Field Branch, BuSandA, (Mustering Out Payment Division) Cleveland, Ohio.—ED.

SIR: I hold a permanent rate of CPO. As the result of successive promotions I now hold a temporary commission as lieutenant and have more than 17 years of service. I desire, when required by law, to revert to CPO and to continue active service. If I am discharged as an enlisted man for purposes of reenlisting, will my discharge entitle me to mustering out pay?—M.E.W., Lt, USN (T).

• Yes.—ED.

'Mary Maru' Was at Pearl

SIR: In your article, "SRU: Fix-It-Quick Men" (ALL HANDS, January, 1946) you stated that a task force which included the battleships, "Pennsy," "Weevee," California and "Big T," practically annihilated a Jap task force in Surigao Strait. Your article pointed out that each of these ships was hit in the attack at Pearl Harbor. What I wish to bring to your attention is that you forgot the "Mary Maru" (uss Maryland). She also was hit at Pearl and also participated in that particular sea battle. I was aboard her at the time and remember it very clearly. F.A.S., SC2c, USN.

• No slight of the Maryland was intended—she was indeed hit at Pearl Harbor and lived to fight gloriously at Surigao. But the article in question was about the SRU men, not about ships or battle actions. To use a striking example of the contribution of SRU, we listed the Surigao battleships which had been SUNK at Pearl. The Maryland, of course, was afloat at all times.—ED.



USS MARYLAND—no slight intended.

Rehabilitation Leave

SIR: (1) Under what conditions is a man entitled to rehabilitation leave? (2) What is the present policy of BuPers with regard to annual leave for USN personnel?—A.W.C., Y3c, USN.

• (1) Men are entitled to rehabilitation leave when they return from overseas duty for reassignment by Fleet commanders. They rate two and one-half days for each month of overseas duty, not to exceed 30 days. (2) Fifteen days a year for duty within the continental limits of the U. S. has been prescribed as the maximum during war time.—ED.

Stewart Rates Philippine Ribbon

SIR: Are the personnel who served aboard the USS Stewart (DD224) from 8 Dec 1941 to 22 Feb 1942 entitled to the Philippine Defense ribbon?—R.M.B., Y3c, USNR.

• Yes, they earned the ribbon with one star. The Stewart served under both the U. S. and Japanese flags in World War II. Scuttled at Surabaya, Java, she was reclaimed by the Japs. We recovered her at Kure Naval Base, Japan (see ALL HANDS, April, p. 49).—ED.

Award for Good Conduct

SIR: Are officers who started their careers as enlisted men eligible for the Good Conduct Medal after completing three years of service?—H.M.B., Ens., USN.

• No. Good Conduct Medals are awarded to enlisted men only. If a man completed three years of active service in the enlisted ranks prior to commissioning he would be eligible. Temporary USN officers would receive credit for service in commissioned status toward meeting eligibility requirements for the medal after reverting to an enlisted status. Requirements for the medal are three years of continuous service for periods terminating on and after 15 Aug 1945, no mark of less than 3.0 in conduct and an average for the three years of at least 3.8, and an average of 3.5 or higher in proficiency in rating.—ED.

Identified

SIR: In your February issue there is a picture on page three of men in a hospital being addressed by an officer. The fellow in pajamas sitting on the bed looks very much like my brother, a marine who was reported killed. Is there any way I can find out this man's name?—M.H.DYCHE, BM2c, USCG.

• The man you refer to has been identified as Myrl Eugene Lieding, S2c, 555-73-01, of 935 Richy St., Tucson, Ariz. The Marine Corps casualty lists show that Lawrence Wilburn Dyche, 322-579, PFC, of El Reno, Okla., died of wounds aboard an LST on 16 June 1944. He is the only man by the name of "Dyche" reported as a fatality on Marine Corps casualty lists.—ED.

Payment for Mattresses

SIR: I am wondering what happened to the \$10 enlisted men were supposed to have received for mattresses turned in last October. An Alnav came out last October stating that all mattresses were to be turned in. We paid for them out of our clothing allowance and did not receive any reimbursement.—M.W., S1c.

• No provision ever was made for reimbursing men for turning in mattresses. Under Alnav 278-45 (NDB, 30 September) all individually owned mattresses became government property, and ships and stations assumed responsibility for providing personnel with this gear. Mattresses in question were government issue originally, and enlisted men never actually paid for them. In cases where original issues were lost and men paid for replacements out of their own funds, the men were permitted to retain the latter upon entry of a statement to that effect in their service records.—ED.

Billetts for Air Ordnancemen

SIR: (1) How many ACOM and ACOM (AA) billetts are contemplated for the postwar Navy? (2) How many ACOMs are now serving in the regular Navy? (3) How long will it take, based on latest information, before the number of men serving in the rate and the number of billetts are brought to a balance?—P.F.H., AOM1c, USN.

• (1) Present plans provide for a total of 731 ACOM and ACOM (AA) billetts as of 1 September. (2) As of 24 February there were 1,609 ACOMs in the regular Navy. It is expected that about 1,560 will be on duty 1 September. (3) It is difficult to say. Every effort is being made to bring about a balance, especially through legislation which would permit transfer to the Fleet Reserve after 16 years of service.—ED.

'Lady' is No Single Carrier

SIR: Which carrier is known officially by the Navy Department as the "Fighting Lady?" Some say it was the Enterprise. I contend it was the Yorktown. I was aboard her and saw several shots of the motion picture made.—A.G.P., SK1c, USN.

• No carrier has been designated the "Fighting Lady" by the Navy Department. The motion picture, "Fighting Lady," contains a composite of scenes shot aboard several different carriers.—ED.

Boatswain's Mate is Number 1

SIR: What rate has the highest seniority in the Navy, a quartermaster or a boatswain's mate.—W.F.S., QM3c, USN.

• The boatswain's mate rate has the highest precedence in the Navy rate structure, followed in order by turret captain, gunner's mate, mineman, torpedoman's mate and quartermaster. Navy rates are listed by precedence in Article D-5102, BuPers Manual.—ED.

18-Foot Mistake

SIR: On page 65 of the March issue of ALL HANDS you printed a photograph of a ship captioned as "a 45-foot picket boat." As skipper of a 63-foot Navy ARB or (AVR) for 11 months, I feel qualified to say that the boat illustrated is a 63-foot crash boat.—R.S.L., Lt. (jg), USNR.

• You are correct. The ship in question was a 63-foot aviation rescue boat (ARB). About two dozen eagle-eyed ALL HANDS readers correctly identified the boat. Below are pictures of a 63-foot ARB and a 45-foot picket boat.—ED.



A 45-foot picket boat.



A 63-foot ARB (or AVR).

Souvenir Books

In this section ALL HANDS each month will print notices from ships and stations which are publishing souvenir books or "war records" and wish to advise personnel formerly attached. Notices should be directed through channels to the Chief of Naval Personnel (Attn: Editor, ALL HANDS), and should include approximate publication date, address of ship or station, price per copy and whether money is required with order. Men who see these notices are asked to pass the word to former shipmates who will be interested.

• Block Island (CVEs 21 and 106). Prior 15 June address requests for copies to Editor, Ship's Book, USS Block Island (CVE 106), Norfolk Group 16th Fleet, Norfolk, Va. After 15 June address Editor, Ship's Book, USS Block Island (CVE 106), U. S. Naval Academy, Annapolis, Md. The book covers activities of both the old and the new Block Islands (CVEs 21 and 106). Distribution is free to naval and marine personnel who served aboard either ship. This book was to be ready about 1 June.

• USS Lake Champlain (CV 39), Address, Commanding Officer, USS Lake Champlain, (CV 39), Norfolk Group, 16th Fleet, Newport News, Va. Will be distributed upon request to former crew members free of charge.

• USS Miami (CL 89). Address, The Editor, USS Miami (CL 89), Fleet Post Office, San Francisco, Calif. Date of publication: 15 July. Requests must be in prior to 15 June. \$4.50 per copy, prepaid.

• USS Pondera (APA 191). Address Chaplain J. J. Tubbs, 209 Fitzwater St., Salisbury, Md. One copy has been mailed free to the best known address of each man who served aboard. Additional copies \$2 each.

• U. S. Naval Training and Distribution Center, Treasure Island. Address (and make checks and money orders payable to) Welfare Officer, U. S. Naval Training and Distribution Center, Treasure Island, Calif. Book was to be published 1 June. One copy will be distributed free upon request, to persons who served as members of ship's company more than two years prior to 1 Sept 1945; information on division and command where applicant served must be included. Additional copies \$2.50.

The New Uniform

SIR: The only thing we can see that's right about the new uniform is the hat, shoes and belt. The rest of it looks like the Bell Boys' Union. One question: When do we get the pajamas?—H.C., S1c, USN.

SIR: We all have the same idea about the uniform. We want to wear the so-called "tailor mades" with hip pocket and 30-inch bottoms. We recommend replacing the present white hat with a visor cap. We think the neckerchief should be worn 1½ inches above the "V" in the jumper, because we think it's neater.—G.C.B., Cox, and 20 other USNS.

SIR: I'm in favor of the new uniform if it can be stored conveniently and still retain its crease like our present uniform. I don't care for the new overseas hats, however. Why not change the hats to something resembling those of chiefs?—J.F., S1c, USN.

SIR: Most of us regulars joined the Navy because of the uniform, and if it is changed I think many will be glad to get out. The present blues are perfect, so far as we are concerned. Sure we would like to get rid of the whites, but not the design. Why not change the color to gray?—A.J.L., S1c, USN, and four buddies.

'Fini la Guerre'

SIR: Reference the letters on page 38 in the February, 1946, issue concerning the *Concord*, *Hughes* and *Tigrone* and their firing the "last shot." Well, ours was no such thing as a hangfire with the gun pointing in the direction of the Empire, but a good old-fashioned torpedoing of the Jap sub I-382 by USS *Spikefish* (SS 404) at 0425 King, 14 Aug 1945, in the East China Sea.—R.L.H., Lt., USNR.

SIR: Maybe I shouldn't write to your magazine since I'm a woman and not serving in the Navy, but my husband served a couple of years on the *Concord* and still is aboard USS *Heermann* (DD 532). Now I understand the *Heermann* fired the last shots in the Pacific on 15 August. She shot down a Jap Judy which was making a suicide attack. Why not give them a little credit.—Mrs. J.F.F.

• A check of war records confirmed reports on the *Hughes*, *Concord*, *Tigrone*, *Spikefish* and *Heermann*, and turned up a surprise candidate for last-shot honors, USS *Torsk* (SS 423). The last-shot schedule, all times Greenwich:

USS <i>Hughes</i> (DD 410)	0958 12 August
USS <i>Concord</i> (CL 10)	1106 12 August
USS <i>Tigrone</i> (SS 419)	0700 13 August
USS <i>Spikefish</i> (SS 404)	1924 13 August
USS <i>Torsk</i> (SS 423)	2117 14 August
WAR'S END	2300 14 August
USS <i>Heermann</i> (DD 532)	0418 15 August

From the above it seems the submarines won all the prizes, not counting *Heermann's* exploit which occurred after hostilities had ceased (officially, that is). *Spikefish's* kill later was identified as the Japanese submarine I-373. An extract from the War Diary of *Heermann*, which shot down a Jap Judy in a friendly manner the day after the war ended, recounts how the ship received news of the surrender the morning of 15 August, local (Japanese) time. That afternoon, suspicious of an approaching aircraft, she went to general quarters. When the Judy closed in for what appeared to be a suicide dive the *Heermann* opened fire and splashed the plane.

Last-shot honors now appear to be:

GUNFIRE—*Tigrone*: Used her deck gun to bombard a radio station and other buildings on Mikomoto Shima in the western entrance to Sagami Wan, Honshu, Japan, 0700 13 Aug 1945.

TORPEDOES—*Torsk*: Sank two Japanese coast defense vessels (frigates) with torpedoes, one at 1935, the other at 2117, 14 Aug 1945. The latter was sunk just 1 hour, 43 minutes before the official end of hostilities in the Pacific.

ALL HANDS invites further claims for the last-shot-of-the-war department, if substantiated by action reports.—ED.

Rating Badge Not Changed

SIR: (1) Has BuPers changed the ship's cook rating badge from the crescent moon to two keys and a feather? (2) Many ship's cooks wear the latter rating badge. Is it authorized? (3) Am I right in my assumption that officers' cooks and stewards use the crescent moon rating badge?—J. J. S., USN.

• (1) No. (2) Ship's cooks are not authorized to wear the two keys and feather badge. This is worn only by chief commissary stewards. (3) Yes.—ED.

CCA for Wave Chiefs

SIR: Do Wave CPOs receive a higher CCA than an enlisted chief?—M.S., SKD-1c, USNR.

• No. All enlisted Waves, including chiefs, receive a credit of clothing allowance of \$12.50 a quarter. Enlisted male chiefs receive a quarterly allowance of \$20, and other enlisted men receive \$12.—ED.



USS TORSK takes winner's honors.



USS SPIKEFISH was a runner-up.



USS HEERMAN overshot the deadline.

Irate Women

SIR: Let us address this letter to Seaman Adden (ALL HANDS, Fanta Forum, April 1946).

No, we are not thinking of the Navy as a life work, but we certainly do not pass judgment on those who do. It has been said that when one thinks that other folks have rocks in their heads it is high time to see a psychiatrist. Yet, you are entitled to your opinion. But do you think you are an authority on naval administration? How many weeks have you served toward a hash mark?

You say, "Waves had nothing whatsoever to do with winning the war . . ." If the attitude of all service women matched your own we would probably be hoing rice! There were plenty of jobs during the war which had to be done. If you feel you did nothing, please don't brag about it.—97 Irate Waves in Pearl Harbor.

SIR: I would like to reply to the remarks of Margaret M. Adden, S1c, in your April issue. During the war we needed every man we could send to man our ships. That shore work had to be done by someone; therefore, the Waves. None of the work was glamorous, and that is where she made her mistake. I wonder if she'll be able to adjust herself to civilian life better than her Navy life.—J.W., Sp(X)3c.

SIR: It is quite apparent that Margaret Adden had few of the qualities so necessary in the adjustment from civilian to military life. A little initiative and enthusiasm would sooner or later have warranted that coveted eagle, but Seaman Adden, no doubt, lacked both. I had fully intended to enroll in college this fall, but when the opportunity presented itself the advantages outweighed the disadvantages, and I did not hesitate to sign over until 1947. Yes, Seaman Adden, I am quite proud and consider it a privilege to be a part of the U. S. Navy.—A.S., Y1c.

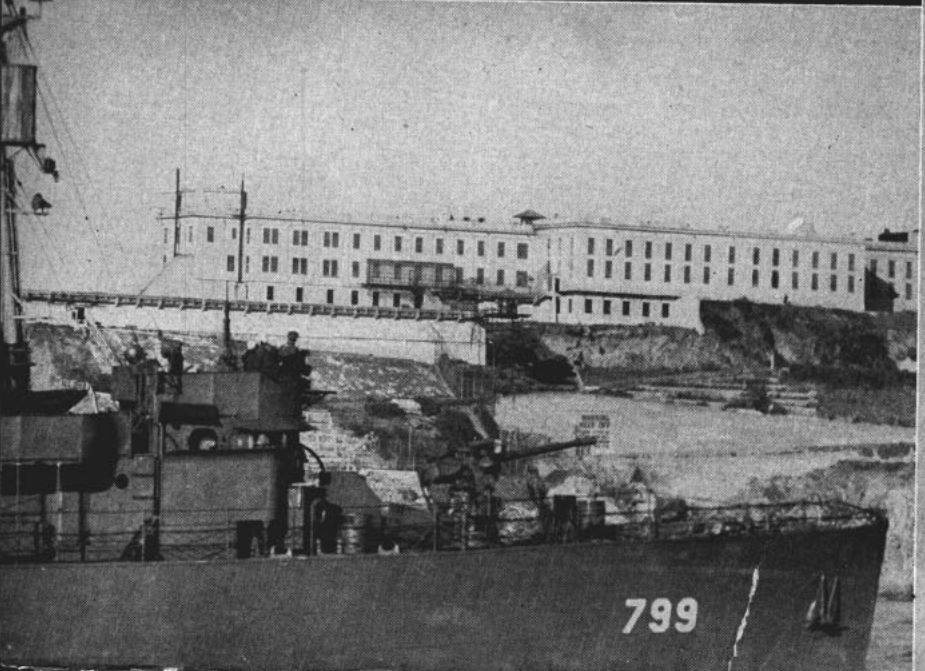
Loose Application

SIR: In ALL HANDS, April 1946, p. 6, you mention USS *Spica* (AK 16) as a "merchantman!" Those of us who served on her, as I did for 16 months, do not like to see her misrepresented.—C.E.F., Lt., USNR (inactive).

• Sorry, ALL HANDS loosely classified *Spica* and SS *Harrington* together as "merchantmen." Both are cargo carriers. But USS *Spica* (AK 16) has flown the commission pennant since 1 Mar 1940. The *Ex-ss* *Shannock*, she was acquired by the Navy 16 Nov 1921. *ss* *Harrington* is, in fact, a merchant ship.—ED.



THE USS SOLAR, upper left, wrecked by a Coast Guard fireboat. Salvage crew, left center, which Japs dumped in Alcatraz'. Navy's USS PC 799, lower left, Alcatraz'. Visitor aboard the USS Midway, right, is shown the mechanisms of a flight deck, USN. Chosen official pin-up girl Vaniver, below, is to be a guest of honor.



THE MONTH'S NEWS

WORLD AWAITS ATOMIC BOMB TEST AS NAVY SHIPS STEAM TO BIKINI

PERIOD 21 APRIL THROUGH 20 MAY

Before the Blast

The world waited last month for the CROSSROADS test explosion of the atomic bomb, scheduled for 1 July at Bikini. It was to be a gigantic experiment, and would possibly determine naval and military tactics and strategy for years to come. Because of the importance of the test, to give naval personnel a better insight into nuclear physics and things to come, ALL HANDS Magazine prepared an atomic energy extra issue, now being distributed.

Meantime, these were the worldwide developments:

- Joint Task Force 1 personnel left Washington, D. C., on a special train for San Francisco on the first leg of their trip to Bikini, and Navy ships bound for the experiment plowed broad wakes across the Pacific converging on Pearl Harbor and fanning out to the Marshall Islands.

- President Truman issued invitations to 11 nations, members of the U. N. Atomic Energy Commission, to attend the test, including Australia, Brazil, Canada, China, Egypt, France, Mexico, Netherlands, Poland, Soviet Union and the United Kingdom.

- The Senate Special Atomic Energy Committee was drafting a bill to control atomic power.

- The Army-Navy Munitions Board directed a survey of the nation's caves for underground military and industrial use in event of another war.

- Use of atomic energy in medicine was outlined at a meeting in New York, including treatment of thyroid cancer with radioactive iodine and use of radioactive "tracers" to study body processes; and the University of Chicago announced it would soon have a model turbine spinning on power supplied by a small pile of uranium.

- German atomic research was

banned by the occupying Allies; General of the Army Dwight D. Eisenhower said in Honolulu that disclosure of U. S. atom bomb secrets "must await the time when the United Nations can demonstrate its efficiency and permanency"; a British scientist drew 10 years in the penitentiary for disclosing atomic secrets to the Russians; and Marine guards with "shoot to kill" orders were placed over test preparations at Bikini.

- Former inhabitants of Bikini, moved once to Rongerik Atoll 109 miles to the east, might have to move again as a safety precaution if it is determined that currents of wind or water might carry injurious matter from Bikini to Rongerik.

For more on the A-bomb test, see p. 2.

Solar Explosion

A destroyer escort unloading at the Naval Ammunition Depot, Earle, N. J., was wrecked by explosions on 30 April. A Navy Court of Inquiry and other Navy officials have completed investigations but no findings were made public.

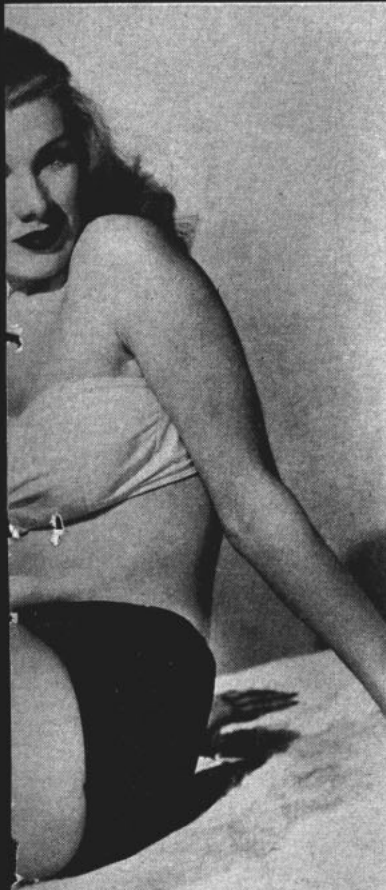
USS *Solar* (DE 221), a veteran of World War II which saw action in the ETO and the Pacific, was towed to the U. S. New York Naval Shipyard for dry-docking and salvage.

Of the ship's 13 officers and 143 men reported to be aboard, one officer and six enlisted men have now been declared dead as a result of the explosions. Thirty-six required hospitalization. Others were treated at the scene.

The explosion occurred as the crew was unloading ammunition in preparation for an overhaul. Only about one-third of the regular load of 15 tons of ammunition remained on board at the time of the first explosion which reportedly was a "hedghog,"



y explosion and fire, is watered
w stands beside recovered silver
nto Tokyo Bay before city's cap-
stands guard in the "Battle of
ay, Mrs. Arthur Reading, upper
ght deck tractor by Lt. V. Pra-
of the USS Midway, Patricia
r at a party aboard the carrier.



LAST JULY

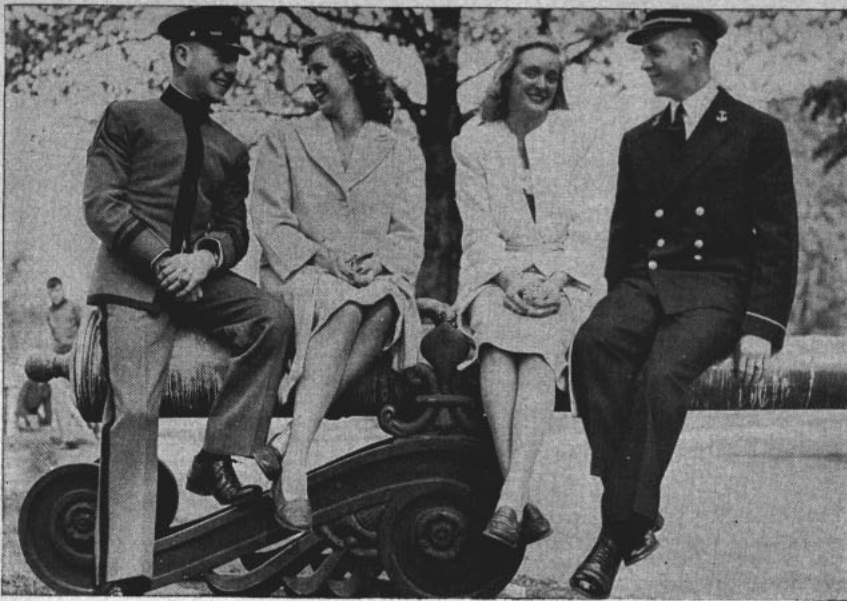


U. S. Fleet fired upon the Jap homeland at point blank range as record number of carrier planes hammered at remnants of land-locked Nip warships

during raids on Tokyo and Honshu coastline. The Army mopped up in the Philippines and Australians landed on Balikpapan.

JULY 1946

SUN	MOR	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			



Photograph from Press Association, Inc.

VISITING WEST POINT CADET is made welcome in style at the Naval Academy during an exchange of students between the two service schools.

an antisubmarine charge about 30 inches long and 7 inches in diameter, weighing about 65 pounds. The first explosion was followed one minute later by a blast heard two miles away. After the first explosion, fire stations were manned and attempts were made to extinguish the blaze, but after the second explosion the word to abandon ship was passed. Nearly all of the crew was able to get off the ship before a third and final explosion followed about two minutes after the second.

A 10-ton section of the bridge was blown about 150 feet into the air and landed on the pier. The forward section of the ship was battered and mangled beyond recognition and curled back over what remained of the bridge with the underside of the deck exposed. The third blast was felt for a radius of about 30 miles, shattering windows and causing ground tremors.

Tugs towed nearby craft loaded with ammunition away from the pier. A destroyer and an ammunition ship tied up at the same pier some distance away were undamaged. The pier is 2.7 miles long. Flying fragments caused a railroad boxcar into which ammunition taken from the *Solar* was loaded to explode on the pier, leaving nothing but a hole in the concrete.

The *USS Solar*, after a long career of escorting convoys in the Atlantic was assigned to testing new equipment and had just returned from the Pacific.

Midway on View

The Navy's newest type carrier, *USS Midway*, played host in April at New York City to approximately 1,000 naval reservists, their families and friends. A special day was set aside and the ship was opened exclusively to reservists and their guests. Presentation of Naval Reserve

identification cards was necessary to board the ship.

Success of the visitors' day prompted Com3 to recommend in a letter to the Chief of Naval Personnel that similar visits be planned when other ships of the Fleet enter New York.

The visit aboard the carrier was planned by the district director of Naval Reserve, and invitations to board the ship were sent to approximately 5,000 reservists in the area.

The reservists and their guests were taken to the carrier, which was moored in the North River, by small craft provided for the occasion. They were received aboard ship by officers and crew, who conducted a three-hour tour. Much of the ship's intricate equipment was open for inspection.

The Merger Bill

S. 2044, the Thomas-Hill-Austin bill for unification of the armed forces, was reported out last month by the Senate Military Affairs Committee and placed on the Senate calendar. This means the bill is available to be taken up by the Senate at any time.

The Senate Naval Affairs Committee also has held hearings on the merger question and received statements from several witnesses, including Secretary of the Navy James Forrestal, Fleet Admiral Chester W. Nimitz, USN, CNO; Fleet Admiral Ernest J. King, USN, former CNO; and Gen. A. A. Vandegrift, Commandant of the Marine Corps.

Army, Navy and Air Forces leaders conferred one day last month with President Truman at the White House. Secretary of War Robert P. Patterson and Mr. Forrestal said after a conference that a "general discussion on military reorganization" had been held. Later, the President asked War and Navy heads to strive to have differences on unification ironed out by the end of May.

Senators Styles Bridges (R., N. H.) and Thomas C. Hart (R., Conn.), the latter a former commander of the Asiatic Fleet, submitted a minority report on S. 2044 last month as members of the Senate Military Affairs Committee. The report said that in the conduct of hearings on the bill the nation's "great reservoir of impartial wisdom and experience . . . has not been tapped." It continued, "In addition to many who have been leaders in war mobilization, we should hear from our industrialists, from our scientists, and from our citizens generally."

The Thomas-Hill-Austin bill provides a Department of Defense to be headed by a secretary of Cabinet rank, with the secretaries of the Air Forces, Army and Navy subordinate to him.



Photograph from Press Association, Inc.

FLYING WING, experimental Army bomber, has a wing span of 172 feet. The plane, called the XB-35, is powered by four 3,000 horsepower engines.

Navy Holds Class in China

At Tsingtao, U. S. Navy men are running basic and operational training schools for Chinese sailors.

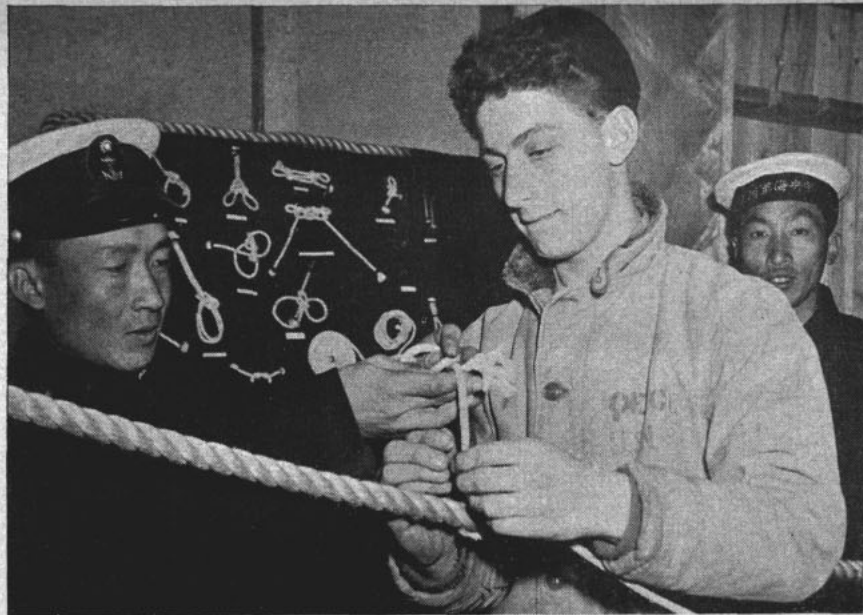
At that North China port, the American Amphibious Training Group under Capt. John S. Keating, USN, is training 800 enlisted men and 100 officers attached to the Chinese Naval Training Center. School is held aboard U. S. amphibious craft—four LSTs, two LCIs and one LSM—which once underwent enemy attacks in Pacific and Atlantic waters.

Goal of American instructors is to teach Chinese personnel to man U. S. amphibious ships so they can take over one of the jobs that has been keeping American Navy men busy in China—moving Nationalist armies to the North.

Assisting Capt. Keating are Capt. Clarence E. Coffin, USN, Comdr. James W. McBrier, ComLstGrp 100 and two Chinese naval officers, Comdr. Charles Chow and Lt. L. F. Lin who act as Capt. Keating's aides and liaison officers. Capt. Lin Sian Kwan commands the Chinese Naval Training Center at Tsingtao, and is a graduate of the Chinese Naval Academy at Chefoo.

About 400 U. S. Navy men are assigned to the seven amphibious craft. Five officers and nine men assist with training at the shore school. Should the bill authorizing transfer of American ships to the Chinese government become law, both ship and shore facilities will be augmented.

The language problem, while eased by interpreters, is presenting interesting personal chores for Americans responsible for teaching the Chinese. Many of them are studying Chinese, and some have undertaken to teach



Official U. S. Navy photograph

CHINESE SEAMAN, students at the U. S. Naval Training Station, Tsingtao, China, are being instructed by Coxswain Peter Cerce in tying sailors' knots.

their pupils their versions of the American language.

Down at Guantanamo, Cuba, Chinese naval personnel were trained in eight small naval vessels—patrol and mine craft—and left for China about 1 April via the Panama Canal. In the interest of safety and to provide possible assistance, these craft are proceeding with USS *Mawnee*, an ex-tanker now a repair ship and tender.

Turned over to the Chinese navy under lend-lease before the Japanese surrender, these vessels will be supported under lend-lease until 30 June 1946 by Presidential authorization. Upon arrival at their destination, these ships probably will be used for shipping protection in China waters.

Surplus Food Transfer

Coffee, tea, spinach, dried fruit, canned roast beef and marmalade were a few of the items in the 156 million pounds of food declared surplus by the Navy in a five month period ending 1 Apr 1946.

To the Department of Agriculture went 44 million pounds of food for U. S. civilians and 74 million for sale to foreign governments. In addition, 38 million pounds of food was transferred to the Army for civilian relief programs in Germany and Japan.

BuSandA, which handled the food transfers, said the surpluses resulted from dry stores unloaded from ships returning from the Pacific and from the rapid demobilization of personnel since VJ Day.

Maritime March

A march honoring officers and men of the U. S. Maritime Service, "The Merchant Marine," was first performed publicly last month and offered for adoption as the official march of the Merchant Marine by its composer, Kenneth Douse, principal musician, USMC.

End of the Search

All searches for missing persons in the Pacific Ocean Areas under the jurisdiction of CinCPOA have been completed by the Navy. The searches, which began coincidentally with the Allied offensive in the Pacific, covered every land mass, island, and atoll in the area. Naval casualty records show no instance of any person's being found alive in these searches, although graves of American fliers were discovered on a few islands.

Covering searches first were made by airplane, then followed up where it was considered necessary, by shore parties landed from ships. In some places very small dots of land, entire areas which could be sighted from a ship's deck were circled and interrogated by loud speaker. On all islands of any size, however, parties went ashore and queried natives and missionaries concerning the existence of any white persons in the area.

Searches have been completed in the Philippines and the Japanese empire under the Army.

'Mac' Cuts Jap Navy

The Japanese government was ordered by General of the Army Douglas MacArthur to destroy all Japanese naval vessels larger than destroyers, if they can not be used in the repatriation fleet, by 30 Apr 1947. When repatriation of Japanese from China and other countries is completed, the fleet used for this purpose also will be scrapped.

A list of Japanese combatant vessels larger than destroyers which were not sunk in the war includes: BB—*Nagato*, heavily damaged; CVs—*Amagi*, *Katsuragi*, *Ryūho* and *Hayata* (*Junyo*), heavily damaged; *Hosho*, lightly damaged; *Kasagi*, never fitted out; CAs—*Myōko* and *Takao*, heavily damaged; CL—*Kitagami*, heavily damaged.



Photograph from Press Association, Inc.

SPOTTED BY TALENT SCOUT while modeling for fun, Linda Christian was signed soon after for movie contract.



Photograph from Press Association, Inc.

COEDUCATION IS INTRODUCED to Vassar with the enrollment of 36 men students. They'll transfer to other schools as soon as places are available.

Veterans' Education

Best chance for Navy men to return to school when they go back to civilian life is to try a small college. A veterans Administrator survey found 162,485 known vacancies for the fall term in 1,029 schools throughout the nation, and the probability was that vacancies would be more than 250,000 when the remainder of the 1,686 schools queried had reported.

The schools included universities, professional schools, teachers' colleges and junior colleges in 47 states and the District of Columbia. Complete facilities for education in every academic field exist in the small schools, many of which have academic ratings considerably higher than the "name" universities. Most of the big "football colleges," VA pointed out, have few or no vacancies for veterans.

VA has published an aid to the veteran who is shopping around for a school with an opening in the academic field he wants. The pamphlet, "Educational Opportunities for Veterans," lists the schools by location and states their fields of study. The pamphlet has been distributed by VA to its field workers at separation centers and VA regional offices, where it is available to former servicemen looking for a school.

VA has concluded that the "educational shortage" is not as serious as was once believed. Nevertheless, Gen. Omar N. Bradley, veterans administrator, foresees a still substantial lack of educational opportunity. Speaking before 500 educators in Chicago he declared total enrollment of full-time student-veterans may run as high as 750,000 this fall (present enrollment: 394,551), and that demand for additional enrollment might equal the total of those enrolled.

Applications for training under the GI Bill of Rights number nearly 1,750,000 (including those already in school), but VA pointed out that not

all applicants are potential college- or college-level students, nor do all applicants qualify for GI education rights or accept them when qualified.

ND Headquarters to Move

Approval of plans to move headquarters of the Seventh Naval District from Miami to Jacksonville was announced recently by the Navy Department.

Rear Admiral John F. Shafroth, USN, commandant of the district, is effecting cancellation of leases on property now being occupied by the headquarters in anticipation of the move.



Acme Photo

MUTUAL INTEREST is shown in spring finery as Navy men wearing new uniforms talk with Mary Alice Ward.

Alcatraz Prison Break

The Navy, with the Marines, Coast Guard and Army, helped federal officials quell last month's attempted prison break at the federal prison on Alcatraz Island in San Francisco Bay. Navy and Coast Guard craft patrolled waters around the island, a Coast Guard PBV flew an observation patrol overhead, and 100 Marines landed on "the Rock" to guard prisoners who did not take part in the riot.

The two-day uprising broke out in the afternoon of 2 May when a small group of convicts holed up in a cell block after one of them had overpowered a guard and taken his weapons, a rifle and a pistol. The riot cost the lives of two guards and the wounding of 14 others, and the lives of the three ringleaders of the escape plot.

Warden James A. Johnston sent out a call for help soon after the riot began. Several of the prison guards were held as hostages by the convicts.

The warden's call was answered quickly. As he put it, "The Marines came over like it was Iwo Jima."

Two Navy ships, *PCs 788 and 799*, and five Coast Guard craft were soon patrolling the waters around the island to prevent escape by swimming. The 799 transported the Marines in four groups from Treasure Island.

The riot ended with the death of the ringleaders.

Later, a small crew of Navy bomb disposal men went over Alcatraz carefully, at the request of federal officials. They removed 11 unexploded hand grenades.

Merchant Marine Reserve

Contrary to reports previously published, the Merchant Marine Reserve is not set up under the Organized or Volunteer Naval Reserve, but is a separate component of the Naval Reserve.

Purpose of the Reserve is to provide a trained force of experienced seagoing personnel adequately indoctrinated in naval administration and organization available for mobilization in the event of a national emergency. These men serve aboard naval vessels and merchant vessels requisitioned by the Navy, and provide a backlog of qualified specialists for mobilization billets in the naval establishment connected with the administration and operation of vessels. During World War II, approximately 5,000 were on active duty in the Navy.

A training program is in effect at the present time which places on active duty for one year those junior officers of the merchant marine who previously have not had active duty with the Navy. In addition, a total of 56 days of active duty within four years is allotted for other merchant marine reserve officers. Correspondence and other courses are also made available to these reservists.

About 12,000 copies of a new publication, the *Merchant Marine Naval Reserve Bulletin*, have been distributed for the information of inactive officers of the Reserve.

Return of War Dead

President Truman has signed legislation permitting the return of America's 328,000 war dead from overseas. In addition to service personnel the program will include the return and reburial of American Red Cross workers; war correspondents; Merchant Marine personnel and government employees who were buried subsequent to 3 Sept 1939 and who were engaged in war work or whose death was a result of the war.

The repatriation program which should be completed in less than five years will cost from 195 to 215 million dollars. Anticipated cost of returning the bodies is approximately \$700 each.

The Bureau of Medicine and Surgery will take the initiative and contact families to determine the desired disposition of the remains of naval personnel. Next of kin need not originate any correspondence in this regard to the Navy or War Departments. This process will be lengthy, therefore families of deceased personnel living in the same neighborhood may receive such queries at widely separated times.

Next of kin will have the option of:

- Having the remains returned to U. S. and interred in a National Cemetery, all costs to be paid by the Government.

- Having the remains returned to U. S. for burial by next of kin in a private cemetery. Government will pay \$50 of local interment expense and all expenses of shipping the body home.

- Burying the deceased in a permanent American military cemetery overseas.

The bodies will probably begin to arrive in the States at the beginning of 1947 at the rate of 1200 per month increasing to 18,900 per month by the end of the year. Liberty ships, aircraft carriers and LSTs will be converted for the job and will be painted white with a purple band circling the ship.

Veteran Job Training

Veterans receiving on-the-job training under the GI Bill of Rights are eligible for the same cash subsistence benefits as are veterans attending school, the Veterans Administration announced. Veterans in school receive \$65 a month if they have no dependents, \$90 a month if they have one or more dependents.

These payments are made also to veterans in on-the-job training, provided the combined total of the payments plus wages received from the employer does not exceed the minimum wage prescribed by labor unions for journeyman in that trade (not, as was reported in error in ALL HANDS, April 1946, p. 50, the maximum wage prescribed for an apprentice in the trade). If the total exceeds this minimum, VA scales down its payments. For instance, if the minimum wage prescribed by the union were \$150 a month, and the veteran were receiving \$100 from his employer, VA would scale down his \$65 or \$90 dollar benefits to \$50, to bring the combined total to \$150.



Official U. S. Navy photograph

NAVY NURSES, as members of air evacuation service teams, were responsible for the care of all patients aboard their evacuation planes.

NAVY NURSE CORPS 38 YEARS OLD

Back in October, 1908, 20 women at the Washington, D. C. Navy Hospital constituted the Navy Nurse Corps. The act of 13 May 1908 had established the Corps, and its first superintendent was appointed in August; but the Navy was unable to provide quarters for them, so they rented a house and operated their own mess. While a Congressional order designated the group as neither officer nor enlisted personnel, members were officially recognized as members of the naval service and were subject to naval discipline.

That was the beginning of the Nurse Corps. Now 38 years old, and a seasoned veteran of two world wars, the Corps observed its anniversary with a membership of 7,500 women. Its strength sharply reduced since VJ Day (when it reached a peak of 11,000), its future complement will depend on the size of the postwar Navy.

Secretary of the Navy James Forrestal, in recognition of the Corps' 38th birthday, sent the following message to Vice Admiral Ross T. McIntire (MC) USN, Surgeon General of the Navy:

"On the thirty-eighth anniversary of the Nurse Corps, I want to express, on behalf of the Navy Department, my congratulations to the Corps for its able performance in the war and its continuing activity in peace.

"To the Nurse Corps may be attributed a substantial share of credit for the Navy's low death-rate of casualties. Throughout the war, at advanced bases, afloat and in the air, as well as at home, Navy nurses carried on their vital work with patience, devotion, fortitude and skill

in the best traditions of their profession and of the Navy."

World War II brought new experiences to the Corps. For the first time, Navy nurses took to the air as members of air evacuation service teams; for the first time they were given commissioned rank status; and for the first time they were taken prisoner by the enemy.

During the first World War, the Navy's 1,460 trained nurses had served conspicuously well in overseas hospitals. One hundred and six nurses were given military awards for distinguished service in line of duty. Four of them won the Navy Cross, and an even greater honor was given one of the four, Lenah S. Higbee, second superintendent of the Corps. The USS *Higbee*, a destroyer, was named in her honor in January, 1945, marking the first time a fighting ship had been named for a woman in the service.

Flight nurses of the air evacuation service served with distinction during the recent war. Assigned to ambulance squadrons which evacuated wounded during battle, flight nurses were responsible for all patients aboard their planes. Assisted by pharmacist's mates, they dressed wounds, administered whole blood or plasma, and fed and cared for the men while in flight. Air evacuation service flew 4,500 casualties out of Okinawa in one month alone, and there is no possible estimate of the number of wounded saved by the immediate attention given them.

Present superintendent of the Nurse Corps is Capt. Nellie Jane DeWitt, USN, who has held that position since November, 1945.



Photograph from Press Association, Inc.

SUMMER IS A COMIN' IN—and the latest in beach wear fashions for the 1946 season is modeled by these five lovelies along surf at Miami Beach.

Aviation Fair

Airplanes—all types of them—will be on parade in the sky at the World's Fair of Aviation sponsored by the Knights of Ak-Sar-Ben, a civic non-profit organization of Nebraska.

The Navy, simultaneously with the AAF, in letters to the chairman of the sponsoring organization, approved plans for the air show and announced intentions of participating in flight demonstrations of newest planes and tactics.

Aerial attractions from Offutt Field in Omaha will include precision flying, fighter maneuvers and the first showing of the jet-propelled aircraft in the midwest.

Member countries of the UN have been invited through the State Department to exhibit military and civilian aircraft and equipment at the World's Fair of Aviation and to send their representatives to the event. The Fair will be held concurrently with the first postwar meeting of the National Aeronautic Organization from 18 to 21 July.

For the first time in aviation history a major air show and aircraft exposition will be combined in one great event. Included in the ground show will be a complete display of radar and other aircraft accessories.

Proceeds of the World's Fair of Aviation will be divided among the Air Forces Aid Society, Navy Relief and the educational and charitable activities of the Knights of Ak-Sar-Ben.

Naval Ordnance Award

The Johns Hopkins University Applied Physics Laboratory is carrying out a research and development program on guided missiles for the Bureau of Ordnance. Johns Hopkins, which maintains the laboratory at Silver Spring, Md., recently was pre-

sented the Naval Ordnance Development Award.

The laboratory's fundamental research on basic theories, measurements and instrumentation of guided missiles is expected to have commercial as well as military application.

Vice Admiral George F. Hussey, Jr., USN, Chief of BuOrd, presented the naval award at a ceremony in Silver Spring. Dr. Isaiah Bowman, president of Johns Hopkins, accepted for the university. D. Luke Hopkins, vice president of the board of trustees and the university's representative for administration of the Navy contract under which the laboratory operates, represented the laboratory.



Official U. S. Navy photograph

LT. D. S. LYONS, USN, made 13 successful carrier landings in a day despite the handicap of an artificial leg.

Marine Athletics

Marines on active duty can expect continued emphasis on athletics. The Marine Corps has announced an athletic program to include combat conditioning and sports competition. Combat conditioning will be emphasized and will be compulsory mass participation exercises encompassing all sports with special emphasis on body contact and self survival. The sports competition will be voluntary.

Councils and committees will be organized by units down to battalion level to determine athletic policy, hours, equipment, facilities and funds. This council will be made up of the CO or exec, an officer from the operations and training section, a representative from the supply section, the special service officer, the athletic officer and chaplain. The athletic officer, the special service officer and one athletic officer from each subordinate unit will carry out the plan of the administrative group. Prizes, transportation, and incidental expenses will be paid for out of the recreation funds of the various units.

Annual tournaments will be held in all sports. Winners of east and west coast play-offs will meet for the Marine Corps championship in each sport, and the Corps will sponsor an all-Marine team to represent it in leagues and tournaments with service and civilian teams.

Rest in Peace

Ninety-three years ago, in a little cemetery near Naha, the capital of Okinawa, Commodore Mathew C. Perry laid to rest the bodies of six American sailors who had died at sea during his pioneering expedition to Japan. Today, there are on Okinawa and nearby islands, seven cemeteries, containing the graves of 6,832 Americans who fought valiantly to wrest the island from the Japanese in one of the bitter battles of World War II.

The little burial ground was reclaimed by U. S. Army engineers from the litter on the beach, where elements of the Sixth Marine Division launched an amphibious assault against the Oruku Peninsula, south of Naha, on 4 June 1945. It was on this spot too, the Marine division landed its supplies in its attack on Naha.

The cemetery was almost hopelessly ruined when found by the engineers, but the graves were restored, markers were repaired and placed on concrete bases, and a white picket fence was constructed around the site. Later a flag was raised. Graves of several British seamen and three Chinese were also found. These too have been restored, and the burial ground is now known as International Cemetery.

For years after Commodore Perry sailed away from Naha on his mission to open Japan to western commerce and influences, the National Geographic Society said, graves of the American sailors were cared for by missionaries, who decorated them with flowers on Memorial Day. During the war the graves went unattended, but even before Japanese resistance on the island ended Army engineers instituted a search for the graves.

ComDesPac Goes Home

Headquarters for all destroyers assigned to the Pacific Fleet was changed from Pearl Harbor to the prewar base in San Diego recently, with the arrival of Rear Admiral Francis S. Low, USN, aboard his flagship USS *Prairie* (AD 15).

Admiral Low, who relieved Vice Admiral William H. P. Blandy, USN, as ComDesPac last November, said he would maintain headquarters on the *Prairie*. Admiral Blandy now is directing preparations for the joint Army-Navy atomic bomb test.

Hands Across the Sea

Three new U. S. warships of the 12th Fleet recently made a goodwill cruise to key ports of United Kingdom waters in which they are operating.

In response to British public interest in new American ships, Admiral H. Kent Hewitt, USN, Com12thFleet and ComNavEu, sent the heavy cruiser, USS *Helena* (CA 75) and the destroyers USS *Cone* (DD 866) and USS *Glennon* (DD 840) on "visits of courtesy." All three vessels were commissioned after the cessation of Japanese hostilities.

With wartime restrictions against visiting lifted, Britons satisfied their curiosity about how seagoing Americans live afloat. All the features of U. S. ships, the modern galleys, the soda fountains, the model crew's quarters and entertainment facilities, were open to visitors in Southampton, Plymouth, Edinburgh, Glasgow, Newport and Belfast.

Negotiations to visit these ports were made through the British Admiralty and American consuls in cities which had extended invitations. As soon as plans for the cruise were announced, councils of the port cities went into action. Official ceremonies with peacetime pomp were scheduled. Welcomes were spoken by Lord Mayors in ceremonial regalia and with retinues of mace bearers and officials. There were luncheons, dinners, dances and sightseeing trips.

In Belfast, Sir Basil Brooke, Prime Minister of Northern Ireland, was host to officers of the two destroyers at a state luncheon. Sir Crawford M'Cullagh, Lord Mayor of Belfast, presented the destroyer skippers with plaques with inscriptions commemorating "the visit of friendship."

At Edinburgh a band of kilted pipers greeted the ships; at other ports Royal Navy and Marine bands played on the docks as the vessels came alongside.

Bluejackets did their share to make the cruise memorable. During a reception for officers and men of the *Helena* at Torquay in the course of the Plymouth visit, the Mayor of Torquay interrupted the celebration to announce that two guests would be late. It seems that 2 members of the ship's crew had stopped on their way to the party to rescue a drowning boy in Torquay harbor. That story ended happily when they joined the party after their uniforms had been dried at a nearby sailors' rest center.

By the tour's end, more than 45,000



Official U. S. Coast Guard photograph

TEAR RESISTANT rain and exposure suit, modeled by its designer, Lt. Sidney Margolis, proved successful after twenty days trial in North Atlantic.

Britons had gone aboard the ships during the two general visiting days in each port.

Shortly after completing the cruise, the *Helena* was relieved of her duty with 12th Fleet by USS *Houston* (CL 81) and assigned to join 7th Fleet in the Pacific.

The British Embassy in Washington on behalf of Foreign Minister Ernest Bevin has expressed England's thanks to the American armed forces for courtesies extended repatri-

ated British subjects from the Far East.

Pending arrival of British representatives, U. S. Army and Navy authorities had cared for British subjects after their liberation from Japanese internment camps. Particular appreciation was expressed by the British "for the most efficient arrangements which were made by the United States authorities for the provision of rations, medical attention and transport for these victims of Japanese aggression."

Noting the "spirit of sympathy" which extended beyond the "generous material aids," the Embassy felt that feelings of the deepest gratitude thus evoked could only "strengthen the ties of sympathy and friendship uniting our two countries."

Heavy Surplus Declarations

Reconversion material included in declarations to disposal agencies totaled \$40,000,000 during February, the Navy reported. Among items labeled surplus were trucks, cranes and tractors originally worth \$11,000,000, office supplies (exclusive of furniture and machines) totaling \$4,000,000, wire rope \$2,000,000, cordage \$1,000,000, and camera and photo equipment \$1,000,000.

Total surplus declarations for February amounted to \$251,781,000, of which \$192,159,000 was declared to the War Assets Administration. Capital goods declarations to WAA totaled \$123,020,000, consumer goods \$47,917,000. The Maritime Commission received declarations in the amount of \$57,151,000 and other disposal agencies took \$2,471,000 worth of Navy property.

From July 1944 to March 1946, the Navy processed more than \$2,000,000,000 worth of declarations to various agencies created to transfer government property to civilian activities.



Acme Photo

AUSTRALIAN WAR BRIDE Mrs. June Liabo, wife of ex-marine captain, shows ingenuity in carrying her baby in a cloth shoulder 'cuddle seat' sling.



Photograph from Press Association, Inc.

AN APPEAL for housing for returned veterans is made on this float, a feature of the GI housing parade recently staged in Washington, D. C.

Poll Reveals War Fears

War for the U. S. within the next 25 years! This is the opinion of nearly seven of every 10 persons in the U. S., according to a recent Gallup poll. This marks a sharp increase from last year in pessimism concerning the outlook for world peace. Field reporters asked men and women in all parts of the country this question (the same as that asked in March 1945): "Do you think the U. S. will find itself in another war within the next 25 years?"

Here are the results:

	Today	March 1945
Yes	69%	38%
No	19%	45%
No opinion	12%	17%

When asked if they expected the U. S. would be in a war within 10 years, more persons thought that it would (49 percent) than thought that it would be at war within 25 years in the poll taken last year (38 percent).

When a poll was taken on the question by age groups, a slightly greater proportion of people 20 to 49 years of age expect war within the next 25 years than is the case among people over 50 years of age. The same held true last year. This is shown in the following table:

Age	Yes in 25 years	No	No opinion
21-29 years	70%	17%	13%
30-49 years	70%	18%	12%
50 and over	65%	22%	13%

Sea Scouts Get Boats

The Sea Scouts of America will get Navy boats under 100 feet in length which have been surveyed and recommended for disposal, under a new policy similar to one in effect before the war.

AlStaCon 031425 April permits setting aside for a 30-day period of certain types of craft requested by the Sea Scouts. The Sea Scouts may obtain the boats for training purposes without cost, but if that organization does not exercise its option during that time, the Navy disposes of them through regular channels. Requests for transfer of the craft to the Scouts are made directly to BuSandA by the National Director of Senior Scouting in New York.

Curtailed during the war, the Sea Scout program now needs such craft as motor launches, picket boats, dinghies, sailing vessels and rescue boats. Requests for certain obsolete landing craft, including 39-foot LCV's, also have been made by the Scouts. Operating costs, however, have limited the size of boats usually acquired by the organization to 50-foot overall length.

Originally authorized in 1929, the transfer program reserves to the Navy the right to recall the boats in event of an emergency.

Faulty Navigation

A Navy board of investigation has attributed to faulty navigation the disappearance of five Navy torpedo bombers at sea last 5 December. Dispatched from Ft. Lauderdale, Fla., the planes were forced down at sea after exhausting their fuel. The investigation also covered the loss of a large patrol plane which crashed and burned at sea, through causes undetermined, while searching for the lost bombers. Twenty-seven officers and men are listed as dead.

The Board's report said a radio message, intercepted at 1534 on 5 December, indicated that the bomber flight leader thought he was south of the Florida peninsula or over the Gulf of Mexico.

CNO Housing Survey

A survey to determine on-station housing needs of naval personnel at activities throughout the nation was begun last month by CNO. Aim of the survey was to disclose stations within the continental U. S. most in need of housing, for the purpose of allocating funds for construction. The Navy hopes to spend 30 million dollars on such housing for its personnel during the next fiscal year.

Commandants of all naval districts in CLUSA, and of the Potomac and Severn River Naval Commands, and the Commandant of the Marine Corps, were requested to forward to CNO prior to 10 May surveys of on-station housing at stations which will exist in the postwar Navy, or stations the postwar status of which still is doubtful.

The housing reports were to include:

- Number of married officers' quarters and married enlisted men's quarters existing (adequate for surrender of rental allowance), under construction or approval for construction by SecNav.
- Number of married civilian quarters existing, under construction or approved for construction by SecNav.
- Number of temporary quarters for married officers and married enlisted men not adequate for surrender of rental allowance.
- Any other on-station housing suitable for married personnel and not covered by above classes.

Equipment For Vets

Photographic and dark room equipment valued at approximately \$100,000 has been obtained by the Veterans Administration for pre-vocational re-training of hospitalized ex-servicemen. As part of the medical rehabilitation activities, this acquisition will provide basic dark room materials for 100 hospitals. The dark room equipment and 47 cameras were secured as surplus from the War Assets Corporation.



Photograph from Press Association, Inc.

RUPTURED DUCK emblem appears on special three-cent stamp issued to honor all veterans of World War II.

Navy Saves Food

The Navy is saving \$11,000,000 worth of foodstuffs per month, in addition to 1,100 tons of wheat flour each month, as its contribution to the President's Famine Emergency Committee. The Navy has reduced its annual consumption of food per man 12 percent under the prewar figure. Under the current 1946 program, food saving in the first quarter of the year amounted to over \$33,000,000.

Converted into terms of foodstuffs, the 1946 figures mean that tons of scarce commodities are made available to famine-stricken countries. A large proportion of the foodstuffs are the critical items of flour and fats.

Unusual conservation methods are used. Believing that conservation must come from the men as well as from mess administrators, BuSandA has used directives and posters in handling the problem. These posters are put up in mess halls where the men going through the chow line will see them. The directives order limits on rations of bread, butter and fats. The posters press home one point—"take what you want, but eat what you take."

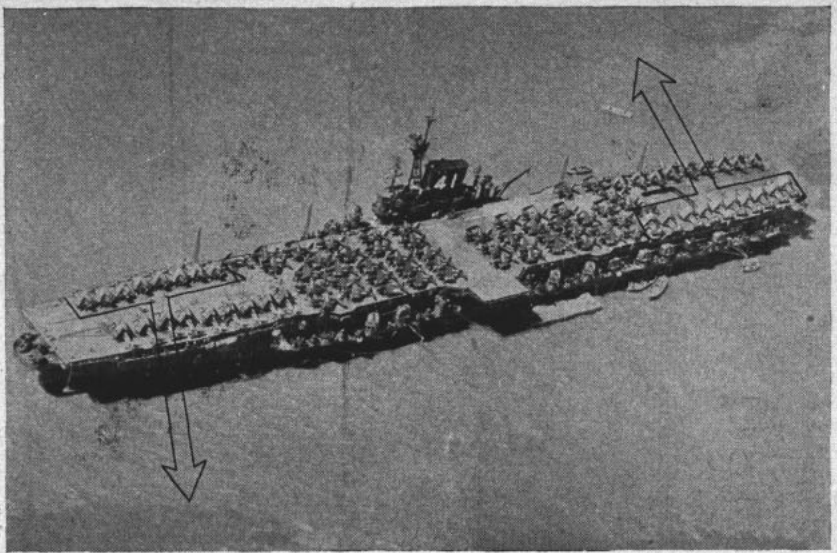
All Navy galleys have been ordered to reduce the thickness of slices of bread and the size of wheat rolls and sweet doughs. Half-portions of wheat bread are now served. Corn bread is substituted for white bread at least two days each week and corn and buck-wheat griddle cakes have replaced wheat griddle cakes. Rolled oats, corn-meal and hominy grits are used in place of wheat cereals and potatoes are used instead of wheat and rice. Substantial additional savings are expected to result from these practices.

The Navy has succeeded in feeding its men on an average daily cost per man of slightly more than 66 cents. Despite the small sum the nutritional value of the food served is high. Food now served in Navy messes is 30 percent above the recommended dietary standards set by the National Research Council.

How Nazi Ships Escaped

Blame for the escape of the German battle cruisers *Scharnhorst* and *Gneisenau* and the heavy cruiser *Prinz Eugen* from Brest to German Baltic ports, was laid mainly upon the Royal Air Force, according to a British government white paper. Minor events leading to confusion on the part of the RAF gave the Germans the advantage of surprise and led to their successful escape on 12 Feb 1942, the paper said.

According to the findings of the board, "Operation Fuller," the code name for the combined plans to prevent the escape of the German ships from Brest, failed for seven reasons. They were: a breakdown in the night patrols of the RAF's coastal command; weakness of the British forces available; the RAF's failure to fly a strong morning patrol that day; failure of the fighter command of the RAF to appreciate the importance of the German attempts to jam radar reception; inefficient training of air crews on the bombing of fast-moving ships; the RAF's lack of dive bombers; and weather conditions that deteriorated steadily throughout the day.



Official U. S. Navy photograph

TURNING TO PORT—Planes on *Midway's* starboard bow (left) pull bow to port while planes secured on port quarter (right) pull stern to starboard.

PROP THRUST SWINGS CARRIERS

A new method of maneuvering large carriers in confined waters of a harbor through use of planes secured to flight decks has been used successfully on USS *Midway* (CVB41), largest of the Navy's carriers. Developed under stress of wartime conditions, "Operation Pinwheel" employs the thrust of airplane engines to turn a ship in a slow spinning motion or to pull it sideways through the water. It can be used to help get a carrier under way or moor it to a dock in confined waters, independent of tugs.

First use of the method was at Guam in June 1945, when closeness of dangerous shoals and heavy harbor traffic made it impossible for the USS *Randolph* (CV15) to gain sufficient headway to turn around under her own power. Large tugs were not available. Capt. Felix L. Baker, CO, ordered five planes placed on the port bow facing inboard and five similarly placed on the starboard quarter. As props of the starboard planes turned at cruising speed, the ship's stern swung to the left and in such a position that the port bow caught the trade wind. The forward planes were not required.

Since that time, the procedure has been used in occasional emergency situations and led to the installation on the *Midway*. The carrier uses 32 planes, eight on each corner of the flight deck. Planes with wings folded and lashed securely to the deck are lined up facing inboard. When engines of any group are started, the propellers exert a strong forward pull in whatever direction they are facing. The result is to swing the ship in the same direction.

The basic idea for the new method was discovered by chance. The *Randolph* was fueling at sea while some of its planes were warming up on the flight deck. Capt. Baker noticed

that the planes exerted a force that increased the speed of the ship. Speed of the ship's main engines had to be reduced to maintain station. The chance discovery of the effect of idling planes on a flight deck was used later to a good advantage at Guam.

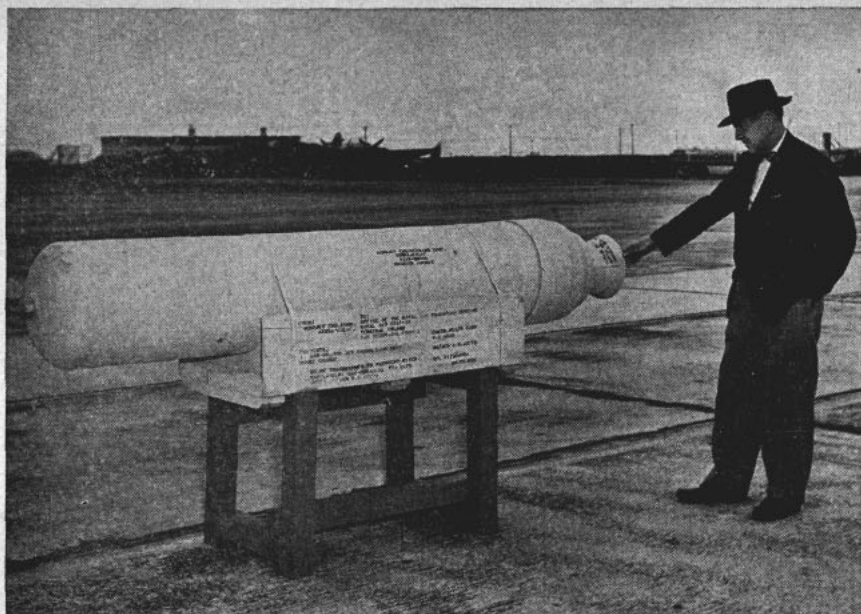
Capt. Baker is convinced that this new method is practical but doubts that it will be put to widespread use. In maneuvering with idling planes on the flight deck, a skipper has definite and positive control of the ship, he declared. He concedes, however, that it does the airplane engines no good.

The new method never will replace tugs for the purpose of maneuvering carriers in confined waters, in Capt. Baker's opinion. In emergency situations where tugs are not available, however, the idea is practical and can be used as an alternative means of getting a ship under way or maneuvering to a dock.

Capt. Herbert S. Duckworth, USN, CO of the *Midway*, also has used the new method. He put it to use while commanding an escort carrier in Tokyo Bay after the Japanese surrender.

On the *Midway*, planes used to maneuver the ship are controlled by the ship's air officer from the primary flight control station in the "island." A different colored flag is used for signalling each group of planes. In addition, regular flight deck hand signals are used.

Radio communication is used as a double check to communicate instructions to pilots of the planes. Four different radio frequencies are used to give each group its own circuit and to prevent confusion. In normal operation the planes are not stopped and started repeatedly, but are allowed to idle at low speed when not supplying actual thrust.



Official U. S. Navy photograph

MOBY DICK, the most powerful rocket motor in the world, exceeds by more than one-third the thrust of German rocket that was used to bomb London.

Navy Unveils 'Moby Dick'

The Navy unveiled "the newest and most powerful rocket motor in the world," and demonstrated a jet-assisted takeoff of a heavily-loaded plane, before 100 members of the Institute of Aeronautical Sciences at the Naval Air Test Center, Patuxent River, Md., last month.

"Moby Dick" is the new rocket motor which develops in excess of 30 tons of thrust, greater by more than one-third the thrust of Germany's V-2 rocket. Use of Moby Dick would increase the speed of an aerial rocket, such as the Navy's 10-foot "Tiny Tim," from 900 to about 2,700 feet-per-second. "Tiny Tim" is a 1,200-pound aircraft-launched rocket that gives a fighter plane the punch of a heavy gun.

The Navy believes such rocket motors as "Moby" may find commercial and military use to assist takeoff of heavy aircraft. William F. O'Neil, president of the General Tire and Rubber Company which is sponsoring rocket research through its subsidiary Aerojet Engineering Company, declared a JATO unit could add 2,000 pounds to the maximum payload of most commercial airliners, permit shorter takeoff runs and add a margin of safety should one of the conventional engines fail.

To demonstrate this use of JATO, a Martin Marauder (JM) was jetted into the air for the scientist-spectators.

Musicians Fund Commended

The Musicians Emergency Fund, Inc., New York City, and its president, Mrs. Lytle Hull, have been commended by Secretary of the Navy James Forrestal for contributing to the rehabilitation and morale of servicemen. Mr. Forrestal's statement: "On behalf of the Navy Department it is a pleasure to commend the Musicians Emergency Fund and Mrs. Lytle Hull for your generous and whole-hearted interest in service personnel. Through numerous beneficial activities during the war years, and now through the reconstruction and reconditioning program in Army and Navy hospitals, your organization is contributing materially to the rehabilitation and morale of servicemen. May I extend my personal gratitude and best wishes."

The Musicians Emergency Fund is an organization in New York which arranged musical entertainment for

servicemen during the war. It also provided free music lessons, and now is engaged in rehabilitation work in Army and Navy hospitals.

German Scientists Aid U. S.

The U. S. now has rocket bombs more effective than those the Nazis used against England and Belgium, Secretary of War Robert P. Patterson said. They have been developed in collaboration with German scientists brought to the U. S. by the Army.

The Army sorted out the qualifications of some 6,000 German technical specialists, brought 160 to the U. S., and plans to bring in 120 more.

The Germans selected played a dominant role in fields where German progress was significant. They were brought to the U. S. only if their fullest exploitation could not be carried out in Europe and Secretary Patterson said that under War Department policies, "No scientists who are alleged war criminals are brought to the U. S."

TF 58 Disbanded

Task Force 58, which slashed its way across the Pacific to the shores of Japan as the most destructive sea-going unit in naval history, was deactivated in late March on orders of CNO to make way for peacetime Navy fleet organization. TF 58's alter ego, Task Force 38 which consisted in large part of the same ships and men, was dissolved late last year.

Task organization, primarily a wartime development, will see use in the peacetime Navy only when fleet units are assembled for specific duties, such as the coming A-bomb test (Joint Task Force 1), training exercises and cruises.



Official U. S. Navy photograph

DRESSED IN THEIR NATIVE GREEK COSTUMES, girl members of the Greek-American Society of Piraeus do a dance on the deck of the USS Missouri during the battleship's four-day courtesy call at the port of Piraeus, Greece.

Hurricane Plan

With the onset of the hurricane season, which starts this month and runs through November, the Army and Navy have set up their annual joint plan for evacuation of aircraft. Navy evacuation operations in Southeastern and Gulf States is under direct control of the Chief of Naval Air Training, with headquarters in Pensacola, Fla., and in Northeast States under ComAirLant in Norfolk. Coordination of plans for evacuation of all naval aircraft is effected by CNO.

This mass movement of planes runs into good proportions when a hurricane hits. Last year a field at Corpus Christi, Tex., for example, flew out nearly 1,450 planes during a storm in August with only one mishap—a belly landing—and with more than a million miles covered during evacuation and return. Overall, about 5,000 planes and 9,000 flight personnel were flown out of the way of hurricanes in the Gulf and southeastern states last season. During a blow in September, 28 airfields were used and more than 3,300 planes flown out.

Ordinarily the evacuation plan is a matter of determining the number of planes each command has, and of assigning refuge fields in other localities for aircraft in the event of a storm. This year, however, the problem is complicated by the old bugaboo of demobilization—there are nearly as many airplanes as ever, but fewer pilots to fly them out if a hurricane comes.

A meeting at Pensacola, Fla., a few weeks ago threshed out this problem. Three solutions were offered as follows:

Removal of excess aircraft for disposition and/or storage to areas outside the danger zone as soon as practicable.

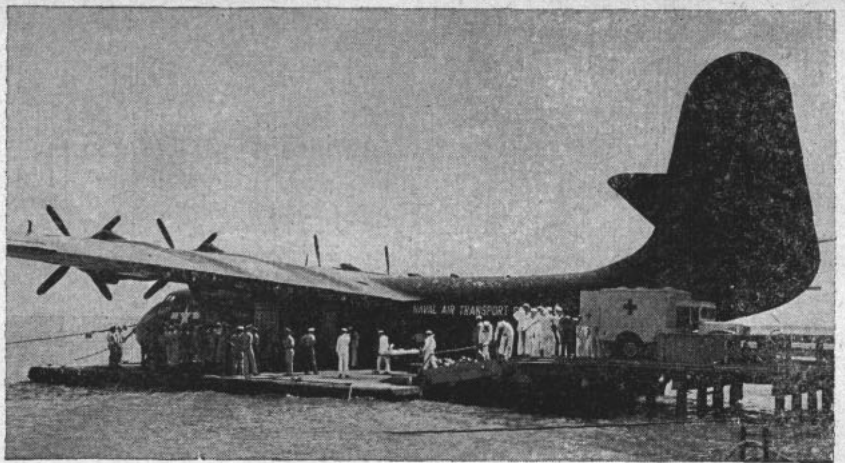
Utilization of available hangar space for inside storage when evacuation is ordered.

Effect tie-down procedures in accordance with current instructions from Bureau of Aeronautics or equivalent AAF directives. The latter plan probably will utilize procedures tested and developed on aircraft carriers in the Pacific.

Some pertinent recommendations were made by the AAF Weather Services and the Navy Aerological Service at the Pensacola meeting. These included: that radar observations, including scope pictures, be made on all hurricanes coming within range of land-based Army and Navy radar installations and that positions of the storms be dispatched to the cognizant center; and that radar observations be made by hurricane reconnaissance planes in flight near the storm center.

Short Occupation Feared

Some liberal Japanese fear to help U. S. occupation authorities because of their belief the Americans will not stay long enough to finish the job of reeducation of Japan along democratic lines, according to Brigadier General Ken R. Dyke, civil information and education chief to General of the Army Douglas MacArthur.



Official U. S. Navy photographs

ONE HUNDRED Navy, Marine and Coast Guard patients are flown from Pearl Harbor to Oakland, Calif., in mass air evacuation by Hawaii Mars.

NATS OPERATES MERCY AIR FLEET

Reaching the hand of mercy nearly halfway around the world, the Naval Air Transport Service's "hospital express" carries hundreds of patients to medical care every week. Some are flown into the U. S. by Navy JRMs, giant Mars flying boats, others are whisked about the country in R5D Skymasters.

And when "Hawaii Mars" takes off on a hospital trip it's something to consider. The big ship landed in Honolulu one morning not long ago with a record pay load of 35,000 pounds on board. Within eight hours the mighty plane was unloaded, cleaned, set up as a hospital ship, and loaded once more. Her new load consisted of 100 evacuation cases from Aiea Heights Naval Hospital,

overlooking Pearl Harbor, six medical attendants, a crew of 12 and two other passengers for a total of 120 persons. NATS believes this to be the largest number of persons ever carried in an aircraft, and is certain it's the largest number to be carried on such a whopping long flight (2,424 statute miles). NATS says the patients on this trip were pleased with the efficient, comfortable ride and with the turkey dinner served four hours out of Honolulu. The trip takes about 15 hours.

When the "hospital express" arrives at NAS Alameda, the patients are taken to Oak Knoll Naval Hospital, Oakland, Calif., where they are screened and placed aboard R5Ds heading East. These R5Ds, which make three round trips, coast to coast, per week, can accommodate 12 litter patients, 24 ambulatory cases, a nurse and a corpsman, in addition to the plane crew.

NATS calls its JRM, used on the Pacific run and also on hospital duty, the newest, largest and most advanced flying boat in existence. The big planes, three of which have been delivered and a fourth ordered, currently shuttle on regular three-a-week schedules between the West Coast and Honolulu. R5Ds take care of the hospital load in the Western Pacific. Mars planes, however, are scheduled for duty on the main line from California to the Philippines and Western Pacific Areas.

NATS says the new JRM is bigger, better, faster than the original Mars. She is a veritable flying warehouse with wide open cargo spaces and cargo doors big enough to load a bulky item like a 20-ton tank. She can carry 133 fully equipped troops in comfortable troop seats when she is used as a troop transport. The seats can be quickly converted to provide 27 bunks. She can accommodate a maximum of 84 litter cases with room for 25 other persons seated.



HAWAIIAN MARS evacuation patients arrive in U.S. from Hawaii.



Official U. S. Navy photograph

ENSIGN Nathalie Vouksanovitch, SFF, (Services Feminins de la Flotte) models uniform of French Waves.

Merchant Fleet Expands

The U. S. Merchant Marine reached the half-way mark in its reconversion program from global war to global trade 22 May, when National Maritime Day was celebrated throughout the country. At the same time, the Maritime Commission announced a plan under which more American flag vessels will be seen on more trade routes than ever before.

The present goal is to carry a substantial portion of U. S. exports and imports in American flag ships. Before the war, less than 30 percent of U. S. foreign trade was transported in American bottoms. To this end, a fleet of speedy, safe, and superior merchant ships is being assembled and a minimum active fleet of some 1,050 vessels is to be engaged in foreign trade. The Maritime Commission, furthermore, has received bids on five modern passenger liners.

Final studies have been completed on some 30-odd essential foreign trade routes, on which the government will make parity payments to enable American flag vessels and services to meet competition of low-wage foreign flag lines. A need has been indicated for four million dead-weight tons of dry cargo shipping on foreign routes, and two and a half million tons on coastwise and intercoastal routes. Studies also indicate the need for one million tons of tankers in foreign service and three million tons in domestic service, bringing the minimum ocean-going fleet to 10½ million tons.

Citing the American war record, the Maritime Commission pointed out that more than 5,300 merchant type ships were built in U. S. yards before we entered Tokyo. A total of 268,283,000 tons of cargo moved in U. S. flag ships during the war. Today two-thirds of the world's merchant fleet

flies the American flag. In 1939, the British Empire controlled about one-third of the world's ocean shipping, and the U. S. about one-seventh. The U. S. now has more than the rest of the world combined.

Admiral Smith Nominated

Vice Admiral William Ward Smith, USN, was nominated by President Truman in May to succeed Vice Admiral Emory Scott Land, USN, (Ret.), who resigned as Chairman of the Maritime Commission in January, 1946. Admiral Smith's term of office on the Maritime Commission, if approved by the Senate, will expire 16 April, 1949. He will not, however, necessarily be chairman, as that post is designated by the President.

Captain Edward Macauley, USN, (Ret.), resigned 21 May from the Commission and the acting Chairmanship because of ill health. Named to the Commission in 1941, Captain Macauley also served as Deputy War Shipping Administrator during the war and had charge of labor relations and training.

A member of the Naval Academy class of 1909, Admiral Smith saw duty on the Asiatic Station during the Chinese Revolution of 1911-12. In World War I he was aide on the staff of the Commander, U. S. Naval Forces in Europe. From January 1942 until the fall of that year Admiral Smith commanded cruiser task forces and was awarded the Distinguished Service Medal for service in the Battle of the Coral Sea. Until March 1945, when he became ComServPac, Admiral Smith was Director, Naval Transportation Service. Since February, 1946, he has been a member of the General Board, Navy Department.

Coast Guard Reduced

A reduction of Coast Guard personnel from a wartime peak of 172,952 officers and enlisted personnel to 22,104 has been announced by the Commandant, Admiral Joseph F. Farley, USCG. The Coast Guard will be reduced to peacetime allowances in number and ranks of commissioned, chief warrant and warrant officers and in ratings of enlisted personnel.

The following reductions in ranks of commissioned officers of the regular service will be effected by retirements prior to 30 June or by reversion to lower ranks on 30 June: flag officers from 40 to 25; captains from 137 to 100; commanders from 284 to 193; lt. commanders from 981 to 304; lieutenants from 1,447 to 457; and warrant officers from 1,059 to 857. A total of 900 lieutenants (jg) and ensigns will be on duty, drawn largely from officers reduced to those ranks.

There are now 2,300 commissioned officers in Coast Guard service whose permanent status in the regular service is chief warrant, warrant and enlisted. Officers who will retain temporary commissions and reserve officers to be retained (800 in all) are being selected by a board composed of regular officers, officers temporarily promoted from chief warrant, warrant and enlisted, and reserve officers.

Nearly all ranks retained by officers will be temporary ranks. No perma-

nent promotions have been made since 1942 and none can legally be made until 12 months after the end of the fiscal year in which the emergency is declared ended.

Commissioned personnel in service on active duty on 1 July are expected to total 2,517 officers, composed of 962 regular officers, 800 temporarily promoted from chief warrant, warrant and enlisted grade, and 855 reserve officers of whom 467 are officers formerly with the Bureau of Marine Inspection. This reduction in officer personnel brings the Coast Guard down from 12,682 commissioned and warrant officers to a total of 3,474.

Before having to revert to enlisted status, officers will be given terminal leave privileges in commissioned status.

By 1 July, enlisted personnel, which numbered 160,270 at its peak, will be cut to 18,630. All enlisted reservists will be released by 30 June 1946. It is estimated that about a third of the enlisted personnel holding petty officer ratings will suffer at least a temporary reduction in rating. However, specialists in which an excess exists are being given the option of discharge at their own request. Other personnel in excess in specific ratings will be transferred to other ratings if qualified or will be trained for other ratings.

The greatest excess occurs in the ratings of boatswain's mate and gunner's mate, while radiomen and technicians are scarce.

Five Days, Five Nips

The USS *Harder*, an American submarine, rang up an underseas record when she sank five Japanese destroyers in five days in June, 1944, it was revealed last month. She was declared overdue and presumed lost in August of that year. To her credit are 78,000 tons of Jap shipping sunk and another 33,500 tons damaged.



Photograph from Press Association, Inc.
HITLER'S PRIVATE SECRETARY smiles as she talks with reporters in her jail cell in Wuerzburg, Germany.

Admiral Rock Is Dead

Rear Admiral George Henry Rock, USN (Ret.) 77, former chief constructor of the Navy and former president of the Webb Institute of Naval Architecture, New York, died in the Naval Hospital, Brooklyn, 20 April after a brief illness. Burial was in Arlington Cemetery.

Born in Hastings, Mich., Admiral



Admiral Rock

Rock was graduated from the Naval Academy in 1889, and later received a B.S. degree in naval architecture at the University of Glasgow, Scotland. Upon his return from Glasgow, the admiral began his long naval career in the construction branch, holding

many posts before becoming chief of Construction and Repair in 1929, a position he held until his retirement 1 Oct 1932.

Admiral Rock was awarded the Navy Cross during World War I as construction officer at the New York Navy Yard where he supervised refitting of captured German ships for naval transport duty.

New Naval Hospital

Construction has begun on the new six million dollar Naval Hospital at Beaufort, S. C., designed to add 300 beds to permanent Navy hospital facilities. The hospital will be a major unit in the Navy's network of 20 permanent hospitals with a total bed capacity of 9,000.

The structure was authorized originally as a 500-bed unit, but conservation of materials required a reduction in size. Facilities and services will be so constructed, however, that eventual expansion will be possible.

The main building, 500 by 600 feet in size, will face southeast toward the Beaufort River, so oriented as to give patients a maximum of breeze and sunshine. The five-story, red brick, limestone-trimmed structure will be designed for eventual air-conditioning. Only the operating rooms will have air-conditioning apparatus installed initially. Eighteen months is the Bureau of Yards and Docks' estimate of time required to complete the project.

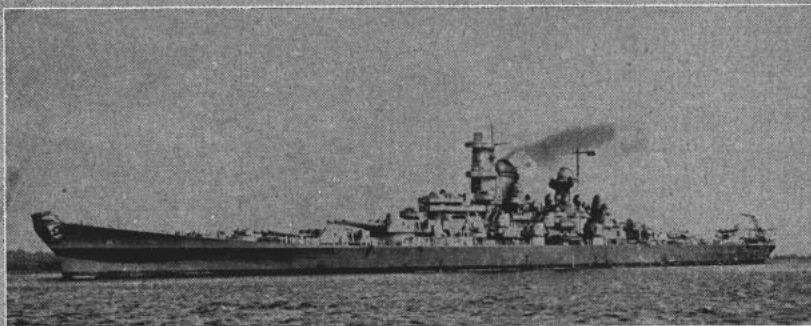
Training Tragedy

Twenty-seven Navy airmen were killed last month when two PB4Y-2s, engaged in training maneuvers from NAS, Pensacola, collided and crashed in flames in a remote wooded area five miles north of Munson, Fla. The big four-engined planes were accompanied by an F6F, which sent word of the collision by radio to Whiting Field.

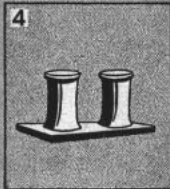
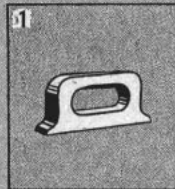
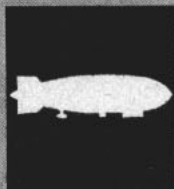
Going into a turn in an attempt to outmaneuver the F6F, the planes crashed together, knocking out one engine in the lead plane, which immediately went into a spin and crashed. The other plane flew straight and level for a short time and then it also spun in and crashed.

QUIZ AWEIGH

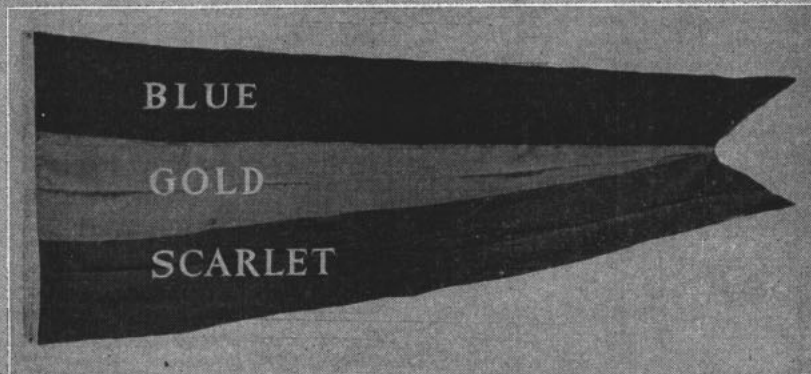
The powers of observation and memory frequently play tricks on us all. In your Navy days you have seen the photos below or the "real thing". Have you observed them closely enough to identify them and do you recall the following details about them? Why not test yourself?



1. Above is an Iowa class battleship. What is the caliber of the main and secondary battery guns?
2. What is the approximate standard displacement of a ship of this type and class?



3. Identify the four distinguishing marks pictured above.
4. Which two of the four are worn only on the right sleeve?
5. Match the numbered items with the most closely related item: (A) bits; (B) bull-nose; (C) rope stopper; (D) chock; (E) cleat; (F) bollard.
6. Bits are used on dock for securing mooring or towing lines—true or false.



7. Identify the above burgee pennant.
8. What does a star on the pennant signify and what is the highest number of stars that can be added?

NEW ENEMY: INFLATION



Herewith 'The Word' to Veterans and Regulars On the Economic Trends And What They Could Do To Our Peacetime Living

Office of Price Administration. (See table of price increases on next page).

Let's suppose you and your family are getting along on \$150 a month. If you're like most people, you spend 40 percent of that (\$60) on food. Since 1939, food prices have increased an average of 49 percent. To buy \$60 worth of food now costs you \$89.40, an increase of \$29.40—just about equal to your pay increase when you sweated your way from seaman first to a second class PO rate. Your hard-won salary increase goes for groceries—all but 60 cents of it.

Importance of the Navy man's part in the fight against inflation was underlined recently when Secretary of the Navy James Forrestal issued a statement to the Fleet (see *ALL HANDS*, May 1946, p. 56) and Fleet Admiral Chester W. Nimitz, CNO, appealed to former Navy men to hold the line against rising prices. (For ways in which you can help keep prices down, see boxed story on this page).

Inflation is no bugaboo dreamed up by economists. It's already with us, as the Navy man supporting a family on the beach, the Navy veteran returned to civilian life, has learned the hard way. Prices went up 108 percent during and after World War I; they've gone up 31 percent during and after World War II. The problem, then, is to understand the causes of inflation and to do something about them before higher prices make paupers of us.

Inflation is really just the old law of supply and demand operating in an abnormal situation. As illustration: A merchant's counter is stacked with radio sets and there are only 10 people in the store (supply high, demand low). If the merchant wishes to sell all of the radios he must quote a low price. The 10 persons might buy one radio each at a high price, but they would refuse to load up on radios at that price. The opposite is true: A merchant has one radio and 10 customers who want it (supply low, demand high). Now the merchant could hold an auction and the radio would go to the highest bidder. The man with the most money in his pocket would walk off with the set; the other nine persons would be out of luck.

That's the situation that grew out of America's wartime economy of high production of war materials and low production of civilian goods. Demand is high: People have money to spend and they need goods. Supply is low: There was little civilian production in the war years; during that period pre-war goods were wearing out; reconversion of industry to civilian production has not begun to meet the backlog of demand. In this situation it would be possible to sell the available civilian

WHEN THERE ARE 10 buyers for each radio, price is sure to be bid up.

HOW MUCH does it cost you and your family to live? Now subtract that from your salary. Anything left? (According to the best family budget experts, there ought to be about 10 percent left, representing savings and insurance). Now double the cost of living, and see how deep into the red you go each month.

That's how it was during and after World War I. The cost of consumers goods went up an average of 108 percent from 1914 to 1920. That's how it is with inflation.

Persons on small, fixed incomes (most Navy men and Navy veterans

fall in this category) are the first to feel the squeeze when prices rise. It hurts to walk into a shoe store and find shoes that sold in 1939 at \$6, now selling at \$8.22; or a clothing store and find work shirts, formerly \$2, now \$3.60; or a grocery store where 25 cents worth of oranges now costs 52 cents, 30-cents-a-dozen eggs sell at 48 cents, a dime's worth of potatoes sets you back 22 cents. And those figures aren't just something that happened in the spending spree after World War I; they're figures on the rising cost of living between August of 1939 and February of 1946, as reported by the

HOW YOU CAN HELP FIGHT PRICE INCREASES

Ways in which Navy men and Navy veterans can aid the fight against inflation, suggested by Secretary of the Navy James Forrestal in *Alnav* 182-46 (NDB, 30, April), and Fleet Admiral Chester W. Nimitz, CNO, in an appeal to former Navy men, are:

- Keep your dollars off the market. The more persons bidding for scarce goods and services, the greater the pressure for a price increase on those goods and services.
- Refuse to deal with black marketeers.
- Refuse to pay premiums for

rental or purchase of housing, and report to the OPA the names of persons suggesting premium payments.

- Refuse to pay over-the-ceiling prices for any goods.

- Maintain National Service Life Insurance. It helps keep your dollars off the market, and provides you with the most reasonable and valuable insurance investment available.

- Invest extra dollars in United States Savings Bonds. They'll buy more in the future than they will now.

goods at extremely high prices, out of reach of the average man. We would have a developed inflation. What does that mean?

Well, we had a sample of it after the last war. The causes of inflation are bred during a war; but the worst effects of inflation are apt to come after the fighting is over. As the OPA tells it, in 1918 consumers with wartime savings and incomes wanted the goods they had been unable to get while factories turned out war materials. A lack of controls permitted the consumers to go out on the open market and bid for the scarce goods. Encouraged by this tremendous market, industries began to bid against each other for limited supplies of raw materials to fill the huge orders for goods. Many firms ordered twice and three times what they needed. This created a wave of speculative buying and artificial scarcities. As a result operating costs were forced up, followed by further price increases. To the outward glance it looked like prosperity: There was

heavy demand, heavy buying and selling (at least on paper).

By mid-1920 prices and costs were far ahead of buying power. The individual whose savings or whose small, fixed income would have been sufficient to buy him a fair share of goods at prewar prices, found himself in 1920 with the same amount of money but with prices so high he could buy less than half as much. People in general could not pay for the goods produced at inflated costs and offered for sale at inflated prices. Orders and production dropped, and prices crashed.

The result: 106,000 firms went bankrupt; merchants, farmers and industries suffered inventory losses of 16 billion dollars as goods on their shelves awaiting sale were devalued; 5½ million workers lost their jobs as factories went out of production; corporation profits dropped from six billion dollars to a net loss of 500 million dollars; weekly factory payrolls dropped from 246 million dollars in March 1920 to 136 million dollars in January 1922;

Latest on Price Control

The Senate version of the OPA bill, providing for a full year's extension of price controls, received a favorable 11 to 5 vote in the Senate Banking and Currency Committee on 15 May. On the other side of Capitol Hill, the House had approved its own measure, carrying a nine-month limitation of price controls.

It was expected that the Senate committee would report out a bill by about 24 May. Tentative arrangements were made to bring such a bill to the floor for action 27 May.

453,000 farmers lost their farms. In short, we had a full-fledged depression, traceable directly to uncontrolled inflation, which in turn was traceable to the nation's all-out war effort.

War leads to inflation, which leads to financial disaster for the nation as a whole. What can be done about it? Chester Bowles, director of the Office of Economic Stabilization, former administrator of the OPA, quotes these figures:

In World War I industrial production increased 25 percent to turn out the machines of war. During the same period, wholesale prices shot up 148 percent over prewar levels by mid-1920. In World War II industrial production increased nearly five times as much as it had in World War I. But wholesale prices had increased only 44 percent up to February of 1946. The cost of living went up 108 percent in World War I; 31 percent in World War II. Most of the World War II increase was prior May of 1943 when the late President Roosevelt, alarmed at price increases, issued his "hold-the-line" order to the nation and the OPA clamped down hard. Since May of 1943 the cost of living has increased only 3.4 percent (up to February of this year).

The OPA clamped the lid on prices and rents to control the cost of living. The high demand for goods and services has been prevented from bidding the prices up. As a result, prices still are low enough to keep the necessities of life within the reach of persons of average means. This has been doubly important as it concerns the families of servicemen, living for the most part on small, fixed incomes. Your family would be in the soup if prices had risen as much during this war as they rose during the last one.

That's why there are OPA price tags on most essential items. Clothes are tagged with the legal OPA ceiling price. Durable goods, such as washing machines, radios, refrigerators, plumbing, vacuum cleaners, bear OPA tags. New and used cars are sold under ceiling prices, and the legal price must be stated on the certificate of transfer. Building materials for new houses are covered by ceilings; OPA controls rents in most cities and towns.

With continued success in controlling prices, Mr. Bowles has predicted most price ceilings will be off by the middle of next year and America will have returned to peacetime economy, avoiding disaster of inflation and depression.

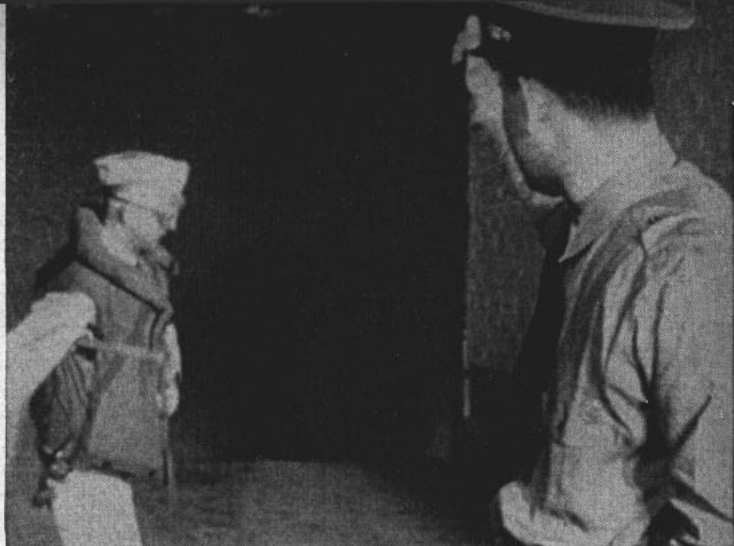
U.S. Inflation In Two Wars Compared

One remedy for inflation is price control. The following table compares price increases during World War I and World War II. Price rises in World War II are shown before and since the late President Roosevelt's "hold-the-line" order 8 April

1943. Figures below were taken from an "Annual Report to the President," signed by Chester Bowles, director Office of Economic Stabilization; Paul Porter, administrator OPA; Clinton P. Anderson, Secretary of Agriculture, and others.

Percent of average family expenditure	Goods	World War I Percent price increase July 1914 to peak of inflation	World War II Percent price increase Aug. 1939 to Feb. 1946	World War II Percent price increase since hold-line order (May 1943 to Feb. 1946)
100%	All consumer prices.....	108%	31%	3.4%
40	Food	126	49	-2.4
	Round steak	85	18	-11.1
	Pork chops	125	24	-10.7
	Eggs	208	59	1.4
	Bread	92	12	.1
	Milk	94	31	-4
	Cereals	139	18	2
	Canned goods	*	43	-2
	Fruits, vgs.	*	108	-6.2
	Potatoes	291	119	-23
16	Rent	54	4	.3
13	Clothing	200	50	17.2
	Men's suits	*	42	6.5
	Men's shoes	*	37	4.7
	House dresses	*	148	54
	Cotton work shirts.....	*	80	15.9
6	Electricity, fuel, ice.....	91	14	3.2
3	House furnishings	179	48	18.6
21	Miscellaneous	101	25	8.5
	All Wholesale Prices...	148	44	3.5
	Industrial Prices	165	27	4.8
	Building matl.	218	35	9.4
	Plate glass	271	0	0
	Steel plate	232	13	13.1
	Copper	65	15	0
	Anthracite	82	44	15.9
	Bituminous coal	675	30	7.8
	Textiles	252	51	4.9
	Denims	266	104	16.4
	Men's cotton hose....	277	77	3.2
	Average weekly earnings of factory workers	140	74	-4.2
	Average hourly earnings of factory workers	150	61	5.4

* No data available.



Official U. S. Navy photographs

STANDING A FEW yards away, Lt. Comdr. A. P. Webster, USNR, prepares to fire at his friend, Lt. Comdr. E. L. Corey, USNR, wearing a new type plastic armor plate. Jolted by the shock of the heavy slug, Lt. Comdr. Corey slumps from the impact, but is otherwise unhurt. The armor offers protection against bullets and flying fragments.

MODERN KNIGHTS-IN-ARMOR

REMEMBER THAT PICTURE, published about five years ago, which showed Henry Ford hacking lustily with an axe on a shiny new V-8?

All right—now take a look at the pictures accompanying this story. They show one lieutenant commander shooting at another lieutenant commander with a .45-caliber pistol.

No, you're wrong. Henry Ford did not go berserk from watching too many Fords go by. And the two lieutenant commanders were neither crazy nor angry with each other. In fact, they're the best of friends.

Spectacular Navy Tests Demonstrate How New Plastic Combat Jackets Stop Heavy Bullets Fired at Close Range

Mr. Ford was demonstrating the virtual indestructibility of a new plastic automobile body when that picture was made in 1940. The two naval officers were demonstrating, four years later and in even more spectacular

fashion, a new plastic body armor developed by the Naval Research Laboratory in cooperation with commercial scientists. The pictures symbolize the initiation and climax of Navy research which perfected a modern version of the knight-in-armor's suit of mail.

Now it can be revealed that the Marines would have stormed the beaches of Japan, had there been no pre-invasion surrender, clad in laminated glass cloth combat jackets to protect them from bullets and flying fragments.

That Henry Ford picture, in December 1940, caught the eye of Rear Admiral Harold G. Bowen, then director of NRL and now Chief of the Office of Research and Inventions. He telephoned Dr. G. R. Irwin, head of the laboratory's ballistics section, who immediately began research work in plastics.

BuAer and the Army Quartermaster Corps subsequently lent their support to the research, which reached a turning point when samples of Doron, a glass cloth laminate developed by the Dow Chemical Co., reached NRL for testing. A joint Army-Navy committee was established to evaluate the use of plastic armor by both services. Army Ordnance had maintained Hatfield manganese steel would provide the best protection but airmen found steel flak suits too hot and heavy.

Most of the opposition to use of plastic armor was overcome by Navy tests in which shell fragments, both simulated and actual, were fired at the armor. The most spectacular test, however, was that pictured. Lt. Comdr. Andrew P. Webster, USNR, of Washington, D. C., fired a .45-caliber automatic pistol at his friend, Lt. Comdr. Edward L. Corey, USNR, of Charlottesville, Va., who was wearing the plastic armor. Although staggered by the impact, Lt. Comdr. Corey was unhurt. The heavy bullet blunted itself against the armor and fell harmlessly into his hand.



THE TWO friends examine the bullet after the firing test is completed.

DECORATIONS & CITATIONS

For reasons of security, the deed for which a man receives a decoration sometimes cannot be fully described either in this section or in the actual citation which he receives. There may accordingly be reports here which do not tell the whole story.

Medal of Honor Awarded Skipper Of Submarine

The Medal of Honor recently was awarded Comdr. Richard H. O'Kane, USN, of Durham, N. H., for gallantry as CO of the USS *Tang* on 23 and 24 Oct 1944. Despite relentless fire from the enemy, Comdr. O'Kane operated his ship, itself winner of two unit citations, against two Jap convoys and sent four torpedoes into the group of vessels, before the *Tang* was sunk on her fifth and last war patrol.

Boldly maneuvering on the surface into the midst of a heavily escorted convoy, Comdr. O'Kane stood in a fusillade of bullets and shells from all directions to score hits on three tankers. He coolly swung his ship to fire at a freighter and, in a split second decision, shot out of the path of a transport, missing it by inches.

Boxed in by blazing tankers, a freighter, transport and several destroyers, he blasted two of the targets with his remaining torpedoes and retired from the area with pyrotechnics bursting on all sides.

Twenty-four hours later he again made contact with a heavily escorted enemy convoy steaming to support the Leyte campaign with reinforcements and supplies. Crated planes were piled high on each ship. Torpedoes from the *Tang* exploded a tanker in a burst of flame and hit a transport and a destroyer before the submarine went under.



Comdr. R. H. O'Kane

2 LCS(L)s Awarded Unit Commendation For Action During Okinawa Campaign

The Navy has awarded the Unit Commendation to two LCS(L)s for action during the Okinawa campaign.

The USS *LCS(L) 84* was awarded the coveted commendation for action on 11 May 1945. While on radar picket patrol, she was taken under attack by kamikaze planes of a 25-unit suicide group. The *LCS(L) 84* immediately opened fire on the attacking craft as they plunged toward the picket ships, shooting down three planes and assisting in the destruction of two others.

With her own forward deck blazing as a result of a plane exploding 10 feet off the starboard bow, the *84* proceeded to the assistance of the USS *Evans*, stricken by the crash of two suicide planes, and rescued 47 survivors from the water. Then, mooring alongside the disabled destroyer while still under aerial attack, she conducted salvage operations and furnished electrical power to aid in saving the disabled ship.

The USS *LCS(L) 122* was cited for action on 10 and 11 June 1945. Promptly going alongside the USS *William D. Porter*, after that vessel had been crashed by a suicide plane, the *LCS(L) 122* put aboard a salvage and pumping party despite the dangers of explosion, heavy list and imminent sinking, in an effort to keep the stricken ship afloat. Failing in this after two perilous hours, the amphibious craft took aboard about 98 survivors before the destroyer went down.

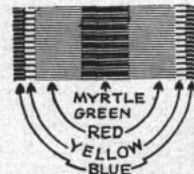
Taken under concerted attack by three Jap planes on 11 June, the *LCS(L) 122* immediately opened fire, shooting down one kamikaze, scoring a hit on the second before it crashed

through her decks and hull to explode in the water. The third aircraft was driven off. Despite raging gasoline fires and an injury-ridden crew the officers and men of the *122* finally brought their ship into a friendly port under her own power.

Reserve Special Commendation Ribbon Authorized

The Reserve Special Commendation Ribbon recently authorized by SecNav will be awarded to reserve officers for meritorious service in keeping reserve components ready for mobilization, according to Alnav 180-46 (NDB, 30 April).

Officers of the Naval Reserve who officially commanded, in a meritorious manner, an organized battalion, squadron or separate division not part of a battalion, of the Naval Reserve, or an organized battalion or squadron of the Marine Corps Reserve for



a total period of four years (need not be continuous) between 1 Jan 1930 and 7 Dec 1941, and who have a total of not less than 10 years reserve service, are eligible for the ribbon. The change of designation from Fleet Reserve to Organized Reserve in 1938 does not affect eligibility.

No medal is authorized for the ribbon. It will be worn in the same manner as other decorations and takes precedence before any campaign or service ribbon. Authorization to wear the ribbon will be a letter from SecNav.

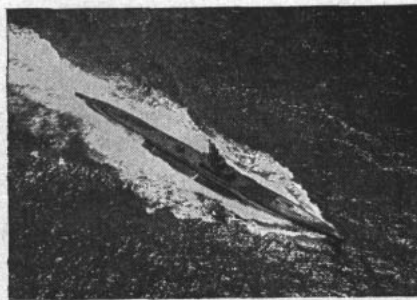
The Reserve Special Commendation Ribbon is the same as the Naval Reserve except for a three-eighth inch vertical stripe of myrtle green in the center.

The Reserve Commendation Ribbon has no connection with the Naval Reserve Medal and will not be made a general award for past service (duty in the Organized Reserve, Communications Reserve and other volunteer branches) but will be reserved for specific purposes mentioned above, according to Alnav 223-46 (NDB, 15 May). Requirements for future awards will be determined when the organization and operation of the postwar reserve indicates its best application.

USS Trepang Cited for Tokyo Patrol

For outstanding service during her first war patrol in the Tokyo Bay area from 13 Sept to 23 Oct 1944, the USS *Trepang* has been awarded the Navy Unit Commendation.

Operating in defiance of persistent and severe hostile counter measures, the submarine *Trepang* maneuvered to strike at a heavily escorted Jap battleship sighted leaving Tokyo Bay. Going in under relentless depth charge and air opposition, she penetrated the enemy's formidable screen to deliver accurate and intensive torpedo fire against her targets and, by her tenacious attacks, succeeded in sinking a large enemy landing craft and seriously damaging the battleship and a destroyer.



Official U. S. Navy photograph
USS TREPANG has been awarded the Navy Unit Commendation for exceptional service in Tokyo Bay area.

12 HEROES RECEIVE NAVY CROSS AWARD



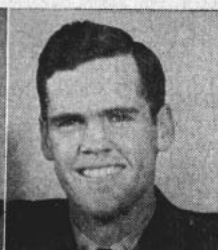
Ens. Bitzegaio



Lt. Burns



Comdr. Clarey



Lt. (jg) Hughes



Lt. (jg) Jones



Lt. Comdr. Leonard



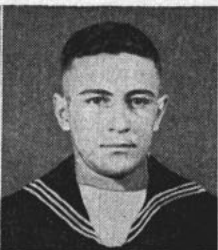
PhM1c Messer



Capt. Norgaard



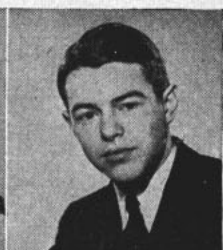
Comdr. Ottinger



Sp(X)1c Poitras



Lt. (jg) Weickhardt



Lt. Williams



Gold star in lieu of third award:

★ CLAREY, Bernard A., Comdr., USN, Oskaloosa, Iowa: While CO of *USS Pintado* during her third war patrol in the South China Sea areas, 9 Oct 1944 to 1 Jan 1945, Comdr. Clarey was also OTC of a coordinated search and attack group which intercepted a retiring enemy task force. One of the submarines under his command sank an enemy light cruiser of this force. On 3 November Comdr. Clarey led his own sub in a daring attack on a large aircraft carrier escorted by three destroyers and one light cruiser. One destroyer was sunk and the carrier damaged, while the *Pintado* successfully escaped the subsequent depth charging. On the night of 12-13 December the *Pintado* attacked three unescorted merchantmen, destroying all three. This made a total of 21,300 tons of enemy shipping sunk and 28,000 tons damaged during the *Pintado's* third war patrol.

Gold star in lieu of second award:

★ CLAREY, Bernard A., Comdr., USN, Oskaloosa, Iowa: As CO of a submarine during a war patrol he delivered successful torpedo attacks against heavily escorted enemy shipping, resulting in the sinking of over 46,000 tons. Despite strong enemy air and surface anti-sub measures, his skillful evasive tactics enabled him to avoid severe damage to his ship and bring her back to port.

★ JOHNSON, Frank L., Capt., USN, Delaware City, Del.: While CO of the *USS Purdy* in the vicinity of Okinawa on 6 April 1945, Capt. Johnson ordered his ship placed alongside the *USS Mullany*, which had been abandoned after being severely damaged by an enemy suicide attack. In the presence of enemy planes and the threat of attack he assisted in supervising the extinguishing of serious fires in the vicinity of the stricken ship's magazines. Knowing that the *Mullany's* magazines were expected to blow up any minute, Capt. Johnson disregarded personal safety to make possible the salvage of a valuable combatant unit of our fleet.

First award:

★ BITZEGAIO, Norman B., Ens., USNR, Terre Haute, Ind. (posthumously): While a torpedo bomber pilot attached to the *USS Hancock* during operations against Jap battleships, cruisers and carriers in Kure Harbor, 24 July 1945, Ens. Bitzegaio flew through a savage barrage of enemy anti-aircraft fire to bomb a heavy cruiser, scoring a direct hit which contributed materially to major damage on the fiercely defended enemy vessel.

★ BURNS, William S., Lt., USNR, Lebanon, Va.: As carrier based torpedo bomber pilot in action against major enemy fleet forces in the central Philippines on 24 Oct 1944, he led his division through extremely intense and accurate anti-aircraft fire to make a successful torpedo attack on an enemy cruiser. Pressing his own attack to close range, he scored a hit, damaging the cruiser.

★ CLAREY, Bernard A., Comdr. (then Lt. Comdr.) USN, Oskaloosa, Iowa: As CO of a submarine during the vessel's war patrol, Comdr. Clarey pressed home cleverly planned and well executed torpedo attacks, resulting in the sinking and damaging of about 35,000 tons of enemy shipping. Subsequent antisubmarine efforts by the enemy were effectively countered by his skillful evasive maneuvers, enabling his ship to escape and avoid serious damage.

★ GREBER, Charles F., Capt., USN, New York City: Although finding his ship, *USS Marcus Island*, between three groups of escort carriers and major units of the Japanese fleet, consisting of battleships, cruisers and destroyers on 25 Oct 1944, Capt. Greber handled his ship in such a manner as to make his officers and men, his air personnel, and his carrier instrumental in the defeat of the enemy force.

★ HENKEL, Donald W., Ens., USNR, Portland, Ore. (posthumously): While fighter pilot in FightRon 23 aboard the *USS Langley* during action off Kyushu on 29 Mar 1945, Ens. Henkel intercepted a hostile fighter maneuvering to strike a heavy unit of his task force. He followed his division leader through a terrific barrage of protective anti-aircraft fire sent up by friendly vessels in an effort to stave off the attack of the oncoming plane. He pursued the enemy through the overcast to a position in the clear above his own ships, assisting his leader in blasting the hostile craft and diverting the attacker before his own plane was struck by anti-aircraft fire, forcing him to make a water landing.

★ JOHNSON, Frank L., Capt., USN, Delaware City, Del.: While CO of *USS Purdy* off Okinawa on 12 Apr 1945 Capt. Johnson led his crew in combating repeated and determined attacks by enemy aircraft. During these attacks his ship destroyed four enemy planes, assisted in the destruction of two and damaged another. When his ship was severely damaged in the final phase of this action he was instrumental in restoring the battle efficiency of the ship and enabling her to remain on station until relieved.

★ JONES, Thomas R. III, Lt. (jg), USNR, Savannah, Ga.: As fighter pilot in the Inland Sea on 28 July 1945, Lt. (jg) Jones piloted his plane through adverse weather conditions in a dive bombing attack against major units of the enemy fleet, including carriers, battleships, cruisers and destroyers. During the action he attacked a heavy cruiser in the face of intense anti-aircraft fire and scored a direct hit.

★ LEONARD, William R. Jr., Lt. Comdr., USN, Los Angeles, Calif.: While torpedo plane pilot in action against enemy shipping in the Inland Sea on 24 July 1945, he led a flight of torpedo, dive and fighter bombers in an attack on the *xcv-BB Hyuga*. He attacked the battleship-carrier despite accurate opposition fire, scoring a direct hit and two near misses with his bombs, contributing materially to the sinking of this capital ship.

★ NORGAARD, Rollo N., Capt., USN, Dell Rapids, S. D.: As CO of *USS Hyman* off Okinawa, on 6 Apr 1945, he met the attack of seven suicide planes, shooting down two before another crashed into the superstructure deck. Two minutes after the plane hit, one of the warheads detonated, causing a heavy fire and inflicting numerous casualties. Determined to save the ship from the spreading flames, he personally directed fire fighting measures and restored the *Hyman* to maximum combat efficiency in 10 minutes. Later, the ship, despite the previous damage, shot down three more attacking planes.

★ ORTIZ, Peter J., Major, USMCR, La Jolla, Calif.: From 8 Jan to 20 May 1944, Major Ortiz, together with two other officers, reorganized existing Maquis groups and additional groups in the region of Rhone, after having been dropped from an airplane in civilian clothes. He was largely instrumental in the acceptance of the mis-

sion by local resistance leaders and in effecting the organization of parachute operations for the delivery of arms, ammunition and equipment for the Maquis in his region. When four RAF officers were shot down in his region, Major Ortiz, although his identity had become known to the Gestapo with the resultant increase in personal hazard, voluntarily conducted them to the Spanish border, after which he returned and resumed his duties, leading successful raids against enemy forces greatly superior in number, inflicting heavy casualties with small losses to his own forces.

★ OTTINGER, George M., Comdr., USN, Memphis, Tenn. (posthumously): While task group strike commander and target coordinator of a flight of aircraft from seven carrier groups in action over Shikoku on 19 Mar 1945, he led the first wave of strike planes across the Jap island and over the heavily defended Inland Sea in a daring assault upon vital enemy positions. He coolly struck with unflinching precision, scoring direct hits and inflicting severe damage on two carriers, two battleships, two cruisers and two destroyers. Six of his torpedo planes released their deadly bombs upon the enemy's Kure Naval Arsenal with devastating results.

★ PADDOCK, Merlin, Lt. Comdr., USN, Wayne, Neb. (MIA): Fighter plane pilot and commander of an air group attached to USS *Langley* during action against the Jap fleet off coast of Kyushu on 7 Apr 1945, Lt. Comdr. Paddock led our bombers to their striking area through extremely adverse weather and flew over an enemy light cruiser through concentrated anti-aircraft fire. He promptly maneuvered for maximum striking power and, despite low visibility, scored a direct bomb hit, neutralizing the shattering gunfire and enabling our torpedo bombers to complete the destruction of this vital hostile fleet unit.

★ POITRAS, Edwin W., Sp(X)1c, USNR, Lowell, Mass.: While in civilian clothes, thereby at all times subject to capture and execution as a spy, Poitras operated against the enemy in axis territory on the European continent from 2 May to 23 Sept 1944. Poitras, after having been dropped from an airplane, acted as wireless operator and assistant to a British army officer. He was responsible for the transmission of numerous operational messages to England and the receipt of operational orders from England and assisted his chief in the organization of resistance forces and in their training for sabotage and guerilla warfare. In the vicinity of Nods, France, his group was attacked by a greatly superior force. Poitras remained behind to cover the retreat of his comrades, enabling them to withdraw with small losses.



Golden Eagle (PerSepCen (enlisted), Great Lakes, Ill.)
"But sir—I! It's a hardship case—I have to support my new convertible!"

★ WEICKHARDT, Charles E., Jr., Lt. (jg), USNR, Washington, D. C. (posthumously): While fighter pilot and division leader attached to USS *Langley*, he intercepted a hostile fighter maneuvering to strike a heavy unit of his task force while flying combat air patrol off Kyushu on 29 Mar 1945. Lt. (jg) Weickhardt faced a terrific barrage of protective fire from friendly vessels in an effort to break off the attack of the oncoming plane. He pursued the hostile craft and, skillfully maneuvering for maximum advantage, succeeded in blasting the enemy and diverting his course before his own craft was struck by anti-aircraft fire.

★ WILLIAMS, Clair T., Lt., USNR, Highland Park, Ill. (MIA): As dive bomber pilot in BomRon16 attached to USS *Randolph*, Lt. Williams was one of four pilots assigned to sink railway car ferries and other vital shipping operating between Honshu and Hokkaido on 14 July 1945. Withholding his bombs until assured of maximum damage opportunity he remained over the target alone and made a shallow gliding attack at 400 ft., scoring a direct hit on a large passenger ferry, leaving it ablaze, later to sink. He placed his last bomb directly amidships of a railway car ferry, leaving it in flames.

DISTINGUISHED SERVICE MEDAL

First Award:

★ COTTER, Carl H., Rear Admiral (CEC), USN, Jacksonville, Fla.: While director of the Pacific Division, BuDocks, from 4 Feb 1943 to 22 June 1945, and as director, Western Pacific Division, BuDocks, 23 June to 8 Nov 1945, Admiral Cotter was the direct representative of the Chief of BuDocks in the Central, South and SoWesPac Areas. He exercised general supervision over matters pertaining to the construction of advance bases, use and replacement of construction equipment and materials under the cognizance of BuDocks and the assignment and administration of all CE personnel. Conducting frequent detailed inspections of every naval base and naval air base in these vast areas, he continually advised all echelons of command concerning problems of construction.

★ FLANIGAN, Howard A., Rear Admiral, USN, (Ret), New York City: While operations and shipping officer, assistant and chief of staff for operations and shipping, deputy chief of staff to ComNavEu, December 1941 to December 1944, and as director NTS, January to 30 Aug 1945, Admiral Flanigan contributed to the integration of U. S. and British anti-sub effort for both surface and air forces in Atlantic convoy activities and was instrumental in achieving efficient distribution and operation of passenger, cargo and oil-carrying vessels to meet the United Nations' war needs.

★ KILAND, Ingolf N., Rear Admiral, USN, Coronado, Calif.: As ComPhibGrp7, Admiral Kiland contributed materially to the sustained westward advance of our forces during the Pacific drives and especially during the assault and capture of Okinawa and other islands of the Ryukyu chain.

★ RAMSEY, Dewitt C., Admiral, (then Rear Admiral) USN, Avon, N. J.: As Chief BuAer from 6 Aug 1943 to 1 June 1945, Admiral Ramsey formulated and executed brilliant plans for the participation of naval aviation in the vast operations in the Pacific. He rendered invaluable service in handling the complexities of aviation design, production and distribution during the critical years of the war and assumed an important role in the development of fighter aircraft provided PacFlt for the closing operations against Japan.

SILVER STAR MEDAL

Gold star in lieu of third award:

★ ZAHM, John C., Capt., USN, San Diego, Calif.: OTC, radar picket station unit, Okinawa, 4 May 1945.

Gold star in lieu of second award:

★ DOBRONTE, Ernest, PhM2c, USN, Trenton, N. J.: Serving with 1st Batt. 23d Marines, 4th MarDiv, Saipan, 19 June 1944.
★ JOHNSON, Stephen L., Lt. Comdr., USN, LaFayette, Ind.: Assistant approach officer of a submarine.
★ MAURER, John H., Comdr., USN, Groton, Conn.: CO, USS *Atule* during war patrol.
★ SHARP, U. S. Grant Jr., Capt., (then Comdr.), USN, Rosemead, Calif.: CO, USS *Boyd*, action at Nauru Is., 8 Dec 1943.

First award:

★ BROWN, James H. Jr., Comdr., USN, Chamberlain, S. D.: CO, USS *Ammen*, Leyte Gulf, P. I., 29 Oct to 17 Nov 1944.
★ BURNS, Edward S., Comdr., USN, Pittsview, Ala.: CO of destroyer on radar picket duty, Okinawa, 1-6 Apr 1945.
★ CLAREY, Bernard A., Comdr. (then Lt.), USN, Oskaloosa, Iowa: Assistant approach officer, USS *Amberjack* during war patrol.
★ CLINE, Dean A., Sp(P)2c, USNR, Hollywood, Calif. (posthumously): Service in China theater 8 Nov 1945.
★ COPP, Belton A., Lt., (then Lt. (jg)), USNR, Noank, Conn.: OTC of a two-boat patrol at Japanese-controlled Mariveles Harbor, P. I., 7 Feb 1945.
★ DOBRONTE, Ernest, PhM2c, USN, Trenton, N. J.: 1st Batt. 23d Marines, 4th MarDiv on Saipan, 17 June 1944.
★ DUNN, Davis H., Lt. (jg), (then Ens.), USNR, Ridgewood, N. J. (MIA): Torpedo data computer operator, USS *Bonefish* during eighth war patrol.
★ DURBIN, Lloyd T., Corp., USMC, Tyler, Tex.: Action in P. I. prior to 1942.
★ FRAVEL, James W., Lt. (jg), USN, Vincennes, Ind., (posthumously): Aboard USS *Laffey* off Okinawa, 16 Apr 1945.
★ HAYES, Vernard A., Jr., PhM1c, USNR, North Bend, Ore.: Serving with 2ndMarDiv at Tarawa, 27 Nov 1943.
★ HEARNE, Edwin J., PhM1c, USNR, San Francisco: Service with 2ndMarDiv. at Tarawa, 21 Nov 1943.

DSM WINNERS



Rear Admiral Cotter Rear Adm. Flanigan



Rear Admiral Kiland Admiral Ramsey

against enemy held Philippine-Borneo area, 5 Dec 1944 to 7 July 1945.

Silver Star (Cont.)

- ★ HOWARD, Herbert E., PhM2c, USNR, Leominster, Mass.: Attached to 1st Batt 23d Marines, 4th MarDiv on Saipan and Tinian, 15 June to 1 Aug 1944.
- ★ JIBILIAN, Arthur, Sp(X)3c, USNR, Toledo, Ohio: Co. B, 2677th regiment, OSS, operations in Balkans, 16 April to 16 June 1944.
- ★ JOHNSON, Stephen L., Lt. Comdr., USN, LaFayette, Ind.: Torpedo data computer operator aboard a U. S. submarine.
- ★ KIRKPATRICK, Charles C., Comdr., USN, Atlanta, Ga.: CO of a U. S. ship off Okinawa, 4 May 1945.
- ★ LANEY, Arch M. Jr., PhM3c, USNR, Galena, Mo. (posthumously): Serving with HQ.Co1st Batt.21st Marines, 3d MarDiv on Iwo Jima 26 Feb to 2 Mar 1945.
- ★ LITALIEN, Joseph G., Sp(X)1c, USNR, Leominster, Mass.: Military operations against the enemy, E.T.O., 25 May to 9 Oct 1944.
- ★ MARQUARD, Carl F., Sp(P)1c, USNR, Hollywood, Calif.: Attached to a field photo branch of OSS during invasion of France, June 1944.
- ★ McMILLIAN, Ira E., Capt. (then Comdr.), USN, Honey Grove, Tex.: CO of USS *Newcomb*, Lingayen Gulf, Luzon, P. I. on 6 Jan 1945.
- ★ ODELL, Jay G. Jr., Lt., (then Lt. (jg)), USNR, Coronado, Calif.: Serving as air liaison officer with 2ndMarDiv, Tarawa, 20-24 Nov 1943.
- ★ PUGSLEY, Raymond G., CMoMM, USN, Seattle, Wash.: CMoMM in charge, USS *Pogy* during 10th war patrol, 2 July to 21 Aug 1945.
- ★ RODIMON, Warner S., Comdr., USN, Long Beach, Calif.: CO of USS *Hopewell* participating in bombardment of Corregidor, P. I., 14 Feb 1945.
- ★ ROSE, Russell A. II, Lt. (jg), USNR, Dallas, Tex., (MIA): Gunnery and plotting officer, USS *Bonefish*, during eighth war patrol.
- ★ SCHMIDT, Louis E. Jr., Comdr., USN, Middleton, Ohio: CO of a U. S. destroyer off Okinawa, 22 Apr 1945.
- ★ SORENSON, Norman L., Lt., USN, New London, Conn.: Plotting officer, USS *Pogy* during 10th war patrol, 2 July to 21 Aug 1945.
- ★ STOWELL, Robert G., Lt. (jg), USNR, Bellflower, Calif.: Pilot during a glide bombing attack on enemy heavy cruiser.
- ★ WOODALL, Reuben F., Lt., USN, New London, Conn.: Assistant approach officer, USS *Pogy*, during 10th war patrol, 2 July to 21 Aug 1945.

LEGION OF MERIT

Gold star in lieu of fourth award:

- ★ RUDDOCK, Theodore D. Jr., Rear Admiral, USN, Washington, D. C.: Commander fire support bombardment unit of vessels, Southern Marianas, 14 June to 27 July 1944.

Gold star in lieu of third award:

- ★ KITTS, Willard A. III, Rear Admiral, USN, Oswego, N. Y.: Assistant chief, BuOrd, 10 Dec 1943 to 31 Aug 1945.
- ★ NOBLE, Albert G., Rear Admiral, USN, Ardmore, Okla.: Assistant director of the production division, BuOrd; later as director of newly established planning and progress division, from outbreak of hostilities to 13 Feb 1943.
- ★ REDMAN, John R., Capt., USN, Reno, Nev.: Attached to communications division of CNO, 12 Feb to 30 Oct 1942.
- ★ RIGGS, Ralph S., Rear Admiral, USN, Amarillo, Tex.: ComCruDiv12 and a cruiser destroyer task group in operation

Gold star in lieu of second award:

- ★ BUCK, Walter A., Rear Admiral (SC), USN, Drexel Hill, Pa.: Director of Navy material redistribution and disposal administration and as Chief of property disposition branch, material division, office of the AstSecNav, 2 May 1944 to 15 Oct 1945.
- ★ BURROUGH, Edmund W., Rear Admiral, USN, Washington, D. C.: Senior naval member of joint war plans committee, 25 June 1943 to 28 Mar 1945; director of postwar planning, 30 Apr to 15 Oct 1945; and as AstCNO for logistics plans, 24 July to 31 Aug 1945.
- ★ CARPENDER, Arthur S., Vice Admiral, USN, Great Lakes, Ill.: Com9, 3 Jan 1944 to 31 Aug 1945.
- ★ CRISP, Frederick G., Rear Admiral, USN, Baltimore, Md.: Chief of the office of industrial relations, 20 Jan 1944 to present time.
- ★ GARDNER, Matthias B., Rear Admiral, USN (Ret), Alexandria, Va.: Asst. chief of staff (plans) to Cominch, July and August 1945.
- ★ HOTTEL, Martin P., Capt., USN, Annapolis: ComSubDiv 41 and ordnance developments officer on staff of ComTraCom, Sub-Pac.
- ★ JAMES, Jules, Rear Admiral, USN, Danville, Va.: Com6, 14 May 1943 to 31 Aug 1945.
- ★ KNOWLTON, Don S., Commodore (then Capt.), (MC) USNR, Washington, D. C.: Division surgeon of MarCorps infantry division on Okinawa, 1 Apr to 21 June 1945.
- ★ MONTGOMERY, Alfred E., Vice Admiral, (then Rear Admiral), USN, Piedmont, Calif.: ComFairWest Coast, 12 Feb to 14 July 1945.
- ★ OREM, Howard E., Capt., USN, Newport, R. I.: Aide and flag secretary to Cominch, 15 Oct 1943 to 18 June 1945.
- ★ POWELL, Paulus P., Commodore, USN, White Plains, Va.: Chief of staff to Com-3dPhibFor, October 1944 to 15 Aug 1945.
- ★ RADFORD, Arthur W., Vice Admiral (then Rear Admiral), USN, Washington, D. C.: AstDCNO (Air), 6 Apr to 5 Oct 1944.
- ★ RIGGS, Ralph S., Rear Admiral, (then Capt.), USN, Amarillo, Tex.: CO, USS *South Dakota* against enemy forces in SoWesPac, 18 Mar to 30 Nov 1944.
- ★ WARDER, Frederick B., Capt., USN, Groton, Conn.: ComSubDiv122, April 1943 to August 1944.

First award:

- ★ ADAMS, John C., Commodore (MC), USN, Mobile, Ala.: Flight surgeon in charge of division of aviation medicine, BuMed prior to and during World War II.
- ★ ALBERT, Francis L., Capt., (ChC), USN, Osage, Iowa: Fleet chaplain on staff of Com7thFlt, January 1945 to August 1945.
- ★ ANDERSON, Charles C., Capt., USN, San Francisco: CO of a U. S. ship during assaults on Saipan, Guam, Leyte, Lingayen and Iwo Jima, June 1944 to March 1945.
- ★ ANDERSON, Thomas C., Rear Admiral, (then Commodore), (MC), USN, Volin, S. D.: Fleet medical officer on staff of CincPacPoa, September 1943 to September 1945.
- ★ BAILEY, Carlos A., Commodore (then Capt.), USN, Great Lakes Ill.: Chief of staff to Com9 and Com Midwest area, June 1944 to October 1945.
- ★ BECK, Harris W., Capt., (SC), USNR, Glendale, Calif.: OinC passenger transportation division, BuSandA, 23 Nov 1942 to 15 Oct 1945.
- ★ BOLLAY, William, Comdr. (then Lt. Comdr.), USNR, Alexandria, Va.: OinC jet propulsion and gas turbine development in the power plant design branch, BuAer, 2 Oct 1941 to 29 Aug 1944.
- ★ BOLSTER, Calvin M., Capt., USN, Youngstown, Ohio: Head of ships and installations branch, engineering division, BuAer, May 1940 to October 1945.



Sky Supply (Naval Aviation Supply Depot, Philadelphia, Pa.)

"I like to get it all down while it's still fresh in my mind!"

- ★ BONVILLIAN, Claude A., Capt., USN, Jeanerette, La.: Director of naval boiler and turbine laboratory, Philadelphia, throughout World War II.
- ★ BOONE, James D., Lt. Comdr. (MC), USN, Alhambra, Calif. (posthumously): Surgeon on staff of naval hospital, Canacao, Philippines, during hostilities 8 Dec to 25 Dec 1941, and as POW December 1941 to May 1942.
- ★ BRIGGS, Harold M., Capt. (then Comdr.), USN, Shelbyville, Mich.: Subsection chief, and assistant director of production division, BuOrd, October 1940 to February 1944.
- ★ CARTER, James B., Capt. (then Commodore), USN, Ozark, Ark.: Staff of CincPac/Poa, 20 July 1943 to 1 Sept 1945, naval member, plans division until 1 Jan 1945.
- ★ CHAPLINE, Vance D., Rear Admiral, USN, Washington, D. C.: Director of Fleet maintenance division, CNO, 20 Feb 1942 to 31 Aug 1945.
- ★ CHEW, John J., Capt. (CEC) USN, Washington, D. C.: Director of finance and operating Dept., BuDocks, 15 Dec 1941 to present time.
- ★ COLE, Raymond, Comdr. (then Lt.), USN, Washington, D. C.: Executive officer and later CO of radio materiel school, naval research laboratory, February 1942 to October 1945.
- ★ COLEMAN, William B., Capt., USN, San Diego, Calif.: CO of U. S. warship operating in northern Pacific waters, September 1944 to July 1945.
- ★ COLLINS, Ross F., Capt., USN, Kansas City, Mo.: Attached to Cominch, February 1942 to August 1945.
- ★ CONGDON, Carl L., Lt., USN, Kingston, Pa.: Assistant to OinC naval supplementary radio station, Guam, Marianas Is., 3 Sept 1944 to 10 Feb 1945.
- ★ CONRAD, Cuthbert P., Commodore (then Capt.), (CEC), USNR, Washington, D. C.: Deputy director and director, advance base Dept. of BuDocks, 12 Feb 1942 to 15 Oct 1945.
- ★ DAVIS, Frank A., Lt. Comdr., USNR, San Diego (posthumously): Interned as POW at Cabanatuan, Philippines, September 1942 to October 1944.
- ★ DAVIDSON, Henry P., Comdr., USNR, Long Island, N. Y.: ACI officer, February 1943 to cessation of hostilities.
- ★ DERINGER, Harry H., Comdr., USN (Ret), Chestertown, Md.: Chief of ammunition division in naval ordnance laboratory.
- ★ DICKEMAN, Charles T., Commodore, (then Capt.), (CEC), USN, Washington, D. C.: Director, advance base dept., BuDocks, 1 Jan 1944 to 10 June 1945.
- ★ DODSON, Harry L., Capt., USN, Charlottesville, Va.: Assistant head, maintenance division, BuShips, December 1941 to October 1945.
- ★ DORSEY, Benjamin H., Rear Admiral, (MC), USN (Ret), Washington, D. C.: President of Navy retirement board and

President of board of medical examiners of the Navy, prior to and during World War II.

★ **DREISONSTOK**, Joseph Y., Capt., USN (Ret), Washington, D. C.: Inaugurating and directing maintenance program of landing craft in support of amphibious operations of U. S. Fleet during World War II.

★ **DRELLER**, Louis, Capt., USN, Drull Hill, Pa.: Design superintendent, planning officer and production officer, Philadelphia Navy Shipyard, August 1942 to September 1945.

★ **ECCLES**, Henry E., Capt., USN, Washington, D. C.: OinC of advanced base section, on staff of ComServPac, December 1943 to December 1945.

★ **FOCKE**, Theodore B., Capt. (then Lt. Comdr.), USNR, Cleveland Heights, Ohio: Head of postwar planning sections of the production division, and office of AstChief, BuAer, 15 Apr 1942 to October 1945.

★ **FRALEIGH**, Claud M., Lt. Comdr. (DC), (then Lt.), USN, Chevy Chase, Md.: Dental officer at Manila and Bataan during action against the enemy; POW at O'Donnell and Cabanatuan in Philippines; in military hospital at Moji, Japan, and in prison camp at Mukden, Manchuria, 10 Dec 1941 to Aug 1945.

★ **HATCH**, Sinclair, Lt. Comdr., USNR, New York City: Director, contract termination division, industrial readjustment branch, office of procurement and material, 16 Feb 1944 to 20 Aug 1945.

★ **HEATH**, John A., Comdr., USN, Annapolis: Gunnery officer for commander of amphibious attack group during assaults on Gilberts, Marshalls, Marianas, Iwo Jima and Okinawa Gunto, 1 Oct 1943 to 11 June 1945.

★ **HENSEL**, Karl G., Capt., USN, Arlington, Va.: ComSubDiv, January 1943 to October 1944, administrative representative, SubForPacFlt, Hunter's Point, Calif.: October to December 1944, ComSubForPacFlt Administrator, December 1944 to April 1945.

★ **HIBBARD**, Donald L., Capt., USNR, New York City: Assistant director, and later director of Navy special devices division.

★ **HUNTE**, Louis H., Capt., (then Comdr.), USN, Coronado, Calif.: Executive officer, USS *Saratoga*, August 1944 to March 1945.

★ **JACKSON**, Warren B., Comdr., USN (Ret), Arlington, Va.: Assistant to director theater division, Army-Navy Petroleum board, 11 Aug 1943 to 14 Aug 1945.

★ **JARRELL**, Henry T., Capt., USN, La Grange, Ga.: Naval attache and naval attache (Air), Chungking, China, 16 June 1944 to 11 Oct 1945.

★ **JOHNSON**, Alfred W., Vice Admiral, USN

(Ret), Washington, D. C.: Naval delegate to Inter-American defense board, with temporary additional duties as Naval member on Joint Mexican-U. S. defense commission, and senior Naval member of permanent joint board on defense, Canada-U. S., 30 Mar 1942 to Aug 1945.

★ **JOHNSON**, Stephen L., Lt. Comdr., USN, La Fayette, Ind.: CO of USS *Segundo*, captured and placed prize crew aboard 5,000-ton Jap sub, 29 Aug 1945.

★ **JONES**, Leonard T., Comdr., USCG, New York City: Attached to division of naval communications, 15 May 1942 to 2 Sept 1945.

★ **JONES**, Raymond E., Capt., USNR, Washington, D. C.: Head of industrial engineering section of facilities branch, then as assistant head of facilities branch, BuShips, April 1942 to 15 Oct 1945.

★ **KAUFMANN**, Joel S., Lt. Comdr., USNR, Washington, D. C.: Assistant head of production group of sections and head of equipment plants section, BuShips, November 1942 to November 1945.

★ **KEENE**, Campbell, Capt. (then Comdr.), USN, Coronado, Calif.: CO of Fair Detachment from PatWing 2 on Wake Island prior to World War II until taken prisoner, 23 Dec 1941.

★ **KEMPNER**, Harris L., Comdr., USNR, Galveston, Tex.: Advisor to chief of procurement, BuAer, later as special assistant and chief of the price revision division, June 1942 to October 1945.

★ **KEMPNER**, Isaac H., Jr., Lt. Comdr., USNR, Houston, Tex.: Contract negotiator and later chief of BuOrd negotiation unit, November 1942 to October 1945.

★ **KENNEDY**, John A., Capt., USNR, Charleston, W. Va.: Liaison officer under Vice CNO between Navy and special committee of Senate investigating national defense program, 6 Aug 1943 to 12 Aug 1945.

★ **KEPPLER**, Chester H., Capt., USN, Newtonville, Mass.: PNSandT, Tufts College; director of naval officer procurement, 1st NavDist and later CO of all naval training schools, Harvard University, 7 Dec 1941 to 31 Aug 1945.

★ **KILGOUR**, Frederick G., Lt. (jg), USNR, Arlington, Va.: Assigned to interdepartmental committee, research and analysis branch, OSS, March 1942 to August 1945.

★ **LAUMANN**, Philip G., Capt., USN (Ret), Washington, D. C.: Head of finance division and later fiscal director, BuShips, December 1941 to January 1946.

★ **LAYTON**, Edwin T., Capt., USN, San Francisco: PacFleet combat intelligence officer, CincPac, July 1942 to 1 Sept 1945.

★ **LONNQUEST**, Theodore C., Capt., USN, Chevy Chase, Md.: Assistant director and later director of the engineering division, BuAer, February 1941 to October 1945.

★ **LUDWIG**, Joseph W., Capt., USN, Washington, D. C.: ComDecRon25, operating as part of 3d Fleet off Japan, 31 July 1945.

★ **LYON**, George M., Capt. (MC), USNR, Huntington, W. Va.: Medical OinC of the safety of personnel employed in the Manhattan project.

★ **MANNING**, John J., Rear Admiral, (then Capt.) (CEC), USN, San Diego: Head of the Fleet facilities division and later director of the construction department, BuDocks, November 1941 to November 1942.

★ **MARRON**, Adrian R., Commodore (then Capt.), USN, Denver, Colo.: Head of the development design branch and later head of the construction branch, BuShips, July 1938 to April 1943.

★ **MARSHALL**, Edward L., Rear Admiral (CEC), USN, Lynn, Mass.: Director of the finance and operating dept., BuDocks, Dec 1941 to November 1944, and as chief inspector for the bureau and CEC, November 1944 to October 1945.

★ **MARSTELLER**, Aclpar A., Capt. (MC), USN, Chevy Chase, Md.: Organizer and medical officer in command of naval mobile hospital 6, New Zealand; Navy base hospital 6 in the advanced area; and



Mainsheet (USNTC, Bainbridge)

"And then he said: 'We're in the Navy to fight, ain't we? Okay, let's wrestle!'"

naval hospital, San Leandro, Calif. successively, and special asst. in neuropsychiatry to the Chief, MuMed.

★ **MARTELL**, Charles B., Comdr., USN, Alexandria, Va.: Readiness division of Cominch, May 1943 to August 1945.

★ **MCCLELLAND**, John J., Lt. Comdr., USN (Ret), Chicago: Chief of the Naval mission to Cuba, 16 Aug 1944 to 9 Oct 1945.

★ **MCCLUNG**, Richard G., Comdr. (then Lt. Comdr.), USNR, Butler, Pa.: Attorney in the office of the general counsel, Navy dept., 6 June 1942 to 24 Jan 1945, and as aide to AstSecNav, January to August 1945.

★ **MCMANUS**, Francis J., Lt. (ChC), USN, Cleveland, Ohio, (posthumously): Chaplain for USS *Canoopis*, Mariveles harbor, Manila Bay, and at Fort Mills, Corregidor, 3 Dec 1941 to 6 May 1942, POW at Corregidor and at Philippine military prison camp 1, Cabanatuan, and on Jap prison ship sunk off Olongapo, Philippine Is., 3 July 1942 to 15 Dec 1944.

★ **MENDEL**, Clarence W., Comdr., USNR, New Haven, Conn.: Chief of instruction and OinC of the naval ACI school, NAS, Quonset Point, R. I., April 1942 to 31 Aug 1945.

★ **MICHEL**, Walter C., Comdr., USNR, Bryn Mawr, Pa.: Head of the operational research group, Navy mine warfare section, June 1944 to June 1945.

★ **MIDDLEBROOKS**, James L., Comdr., USNR, Washington, D. C.: Head of the shore electronic group, installation and maintenance branch, Electronics division, BuShips.

★ **MILES**, Paul D., Comdr., (SC), USNR, Falls Church, Va.: Frequency section of the division of naval communications, CNO, 7 Dec 1941 to 30 Sept 1945.

★ **MORRIS**, Seth I. Jr., Lt., USNR, Houston, Tex.: ComNavUnit 6, 1 Sept to 1 Dec 1944, and as ComNavUnits, eastern China, 1 Dec 1944 to 30 Mar 1945.

★ **MYERS**, Gilbert B., Capt., USN, Aurora, Ill.: Secretary of the joint communications board and U. S. secretary for the combined communications board under the joint and combined chiefs of staff, March 1942 to November 1945.

★ **NEY**, Edward F., Capt. (SC), USN, Chevy Chase, Md.: OinC of the subsistence division, BuS&A, 30 Nov 1940 to 15 Oct 1945.

★ **ORVILLE**, Howard T., Capt., USN, Rawlins, Wyo.: Head of the aerology section, BuAer, 1941 to 1943, under deputy CNO (Air), 1943 to 1945.

★ **PACKARD**, Alden C., Comdr., USNR, Claremont, Calif.: CO of airborne coordinating group, naval research laboratory, 22 July 1943 to 15 Oct 1945.

★ **PADGETT**, Lemuel P., Jr., Commodore (then Capt.), USN, Coronado, Calif.: Executive officer of the Allied tanker coordin-



Golden Eagle (PerSepCen (enlisted), Great Lakes, Ill.)

★ DECORATIONS

Legion of Merit (Cont.)

ating committee, 1 Apr 1944 to 15 Sept 1945.

★ PARKER, Stanley V., Rear Admiral, USCG, Piedmont, Calif.: Captain of the port of New York, June 1942 to 1 Aug 1945.

★ PARKINSON, John S., Comdr., USNR, Bethesda, Md.: OinC of physics at the David Taylor Model Basin during World War II.

★ PAYNE, Edward D., Capt., USNR, Stamford, Conn.: BuShips, January 1941 to October 1945.

★ PERLMAN, Benjamin, Capt., USN, San Mateo, Calif.: Director of the advance base office, Pacific, under CNO, 5 Apr 1943 to 17 Mar 1945.

★ POWELL, Paulus P., Commodore, USN, White Plains, Va.: Chief of staff to Com-3dPhibFor during Pacific offensive operations, 27 Nov 1943 to 30 Sept 1944.

★ PRAEGER, Emil, Capt. (CEC), USNR, Brooklyn, N. Y.: Design manager of Bu-Docks, 31 Dec 1941 to 13 Oct 1945.

★ PREIL, Alvin O., Capt., USNR, Washington, D. C.: OinC of the aviation ground officer distribution section, BuAer and CNO, 8 May 1942 to 15 Aug 1945.

★ PROCOPIO, Saverio F., Lt. Comdr., USNR, Alexandria, Va.: Asst chief and later chief of the insurance division of the material division office.

★ PRYOR, William L., Jr., Capt., USN, Alexandria, Va.: Technical aide to the director for radio and sound at the naval research laboratory, 11 Jan 1943 to 15 Aug 1945.

★ REEVES, Joseph M., Admiral, USN (Ret), Washington, D. C.: Lend-Lease liaison officer for the Navy, March 1941 to December 1945; senior military member of the munitions assignments board and Chairman of the munitions assignment committee (Navy), 13 Feb 1942 to 8 Nov 1945; chairman of the joint munitions allocation committee, 11 Jan 1944 to 31 Dec 1945.

★ REINICKE, Frederick G., Commodore, USN (Ret), Jamestown, R. I.: Director of the port, Com3, October 1939 to August 1945.

★ RICHARDSON, Lawrence B., Rear Admiral, USN, Methuen, Mass.: Director, procurement division, BuAer, May 1938 to July 1941, and AstChief of BuAer, November 1943 to October 1945.

★ RIVERO, Horacio, Capt. (then Comdr.), USN, Bethesda, Md.: Executive officer, USS *Pittsburgh* during operations against the enemy in vicinity of Nansei Shoto, 5 June 1945.

★ ROBINSON, Clyde R., Capt., USN, Spartanburg, S. C.: Assistant superintendent, navygun and concurrently captain of the yard, Navy Yard, Washington, D. C., during entire period of war, with other duties as senior inspector, navygun, Washington, 14 Apr 1943 to 29 Mar 1945.

★ ROSENBERG, Jacob, Comdr., USCG, Washington, D. C.: Assistant to the chief finance officer of the USCG, Washington, D. C., serving successively as chief of the division of planning and procedures, chief of the division of accounting and as chief advisor to the chief of the office of finance and supply, September 1939 to June 1945.

★ SARLES, William B., Comdr., USNR, Arlington, Va.: Executive officer and technical consultant of the office of special consultant to SecWar.

★ SAUNDERS, Harold E., Capt., USN, Takoma Park, Md.: Director of the David W. Taylor Model Basin during World War II.

★ SAWYER, Merle A., Capt., USN, Alexandria, Va.: Chief of the ammunition section, production division, BuOrd, September 1942 to May 1945.

★ SCHOEFFEL, Malcolm F., Rear Admiral, USN, Washington, D. C.: Assistant director for aviation ordnance, research and development division, BuOrd, later avia-

tion assistant to the chief of the bureau, December 1941 to 28 Apr 1943.

★ SCHUMACHER, Theodore, Capt., USN, Heron Lake, Minn.: Design superintendent and later planning officer, Philadelphia Navy Ship Yard, 7 Dec 1941 to 17 Dec 1943.

★ SHEPARD, Richard D., Comdr., USN, San Diego: Surface anti-submarine material officer of the 10thFleet, serving with Cominch.

★ SLARROW, Malcolm G., Rear Admiral (SC), USN, Washington, D. C.: OinC, NSD Norfolk, November 1942 to November 1945.

★ SMITH, Harold T., Rear Admiral, USN, Tacoma, Wash.: Fleet maintenance officer attached to staff of CincPac/Poa, 28 Apr 1944 to 1 Sept 1945.

★ SMITH, Harold W., Rear Admiral (MC), USN, (Ret), Boston: OinC of all research under cognizance of BuMed and Liaison officer for research with other government activities and civilian organizations.

★ SMITH, Stuart F., Capt., USN (Ret), Washington, D. C.: Head of the inventions office under coordinator of research and development, March 1944 to May 1945.

★ SMITH-HUTTON, Henri H., Capt., USN, Washington, D. C.: Intelligence officer on staff of Cominch and CNO, 18 Dec 1942 to 12 Oct 1944.

★ SULLIVAN, James E., Capt., USNR, Norbeck, Md.: Head of the equipment and materials branch, engineering division, BuAer.

★ TRUMP, Herbert, R., Lt. Comdr. (ChC), USN, Columbus, Ohio (posthumously): Chaplain for the 4thMarine Regiment at Corregidor 27 Dec 1941 to 6 May 1942, and POW at Corregidor and at Philippine military prison camp 1, Cabanatuan, and aboard prison ship sunk off Olongapo, Philippines, 3 July 1942 to 15 Dec 1944.

★ VAN KEUREN, Alexander H., Rear Admiral, USN (Ret), Chevy Chase, Md.: Director of the naval research laboratory, Bellevue, Washington, D. C., Nov 1942 to 11 Dec 1945.

★ VAN PEENEN, Hubert J., Comdr. (MC), (then Lt. Comdr.), USN, Kalamazoo, Mich.: POW at Zentsuji war prison camp on Shikoku Island, Japan, 1 Sept 1942 to 23 June 1945.

★ WHITEBECK, John E., Commodore, USCG, Miami, Fla.: DCOG of 7thNavDist, 1 Apr 1942 to 15 Oct 1945.

★ WHITE, Frank C., Ens. (then CRE), USNR, Arlington, Va.: Communications and electronics divisions, CNO, April 1943 to September 1945.

★ WILSON, William R., Jr., Comdr. (then Lt.), USN, Lake Geneva, Wis.: Gunnery officer of USS *Pope* in action against Japanese forces during battles of Macassar Strait, Badoeng Strait and Java Sea, January to March 1942.

★ WRIGHT, Edward A., Comdr., USN, Baltimore, Md.: OinC of hydromechanics at the David Taylor Model Basin during World War II.

★ Wynkoop, Thomas P., Capt., USN, Washington, D. C.: Assistant to head of the shipbuilding division, BuShips, 30 Oct 1941 to 13 Dec 1944.

★ YOUNG, John M., Comdr., USNR, Bedford Village, N. Y.: Director of planning for the industrial readjustment branch, office of procurement and material, 9 Dec 1943 to 1 Dec 1944, as deputy to chief of that branch 1 Dec 1944 to 31 Aug 1945.

★ ZEMMER, Harold M., Capt., USN, San Francisco: Duty with CincPac, July 1943 to August 1945.

DISTINGUISHED FLYING CROSS

Gold star in lieu of third award:

★ OTTINGER, George M., Comdr., USN, Memphis, Tenn. (posthumously): Strike leader, USS *Bunker Hill*, Okinawa, 23-24 Mar 1945.

★ ZELLER, Richard S., 1st Lt., USMCR, Jackson, Mich.: Scout bomber pilot, Philippines, 3 Mar to 16 June 1945.

Gold star in lieu of second award:

★ MCDONALD, Harold W., Comdr., USN, Wetumpka, Ala.: Patrol plane commander, South China Sea, 26 Dec 1944.

★ POWELL, Gene S., Lt. (jg), USNR, Cowpens, S. C. (posthumously): fighter pilot, USS *Bunker Hill*, Kikai, Ryukyus, 11 Apr 1945.

★ SMITH, Grant A., Ens., USNR, Mankato, Minn. (MIA): Pilot, BomFitRon83, Nansei Shoto and Kyushu, Japan areas, 18 Mar to 2 May 1945.

★ ZELLER, Richard S., 1st Lt., USMCR, Jackson, Mich.: Scout bomber pilot, Philippines, 3 Mar to 16 June 1945.

First award:

★ BAZZELL, Adrian S., Lt. (jg), USNR, Bainbridge, Ga. (posthumously): Fighter pilot, USS *Lunga Point*, off Okinawa, 6 Apr 1945.

★ DODGE, Edward H., Ens., USNR, Chicago (MIA): Fighter pilot, USS *Hancock*, Nansei Shoto, Kyushu, Tokyo, Wake Is. and Hokkaido, 18 Mar to 25 July 1945.

★ DULAN, Eugene F., Lt. (jg), (then Ens.), USNR, Kingsford, Mich.: Navigator, PatBomRon136, Paramushiro Straits, 26 Aug 1944.

★ EBERLE, William C. Jr., Ens., USNR, Skaneateles, N. Y. (MIA): Fighter pilot, USS *Hancock*, Nansei Shoto, Kyushu, Tokyo, Wake Is. and Hokkaido, 18 Mar to 16 July 1945.

★ FISHER, Oren F. Jr., Ens., USNR, Mexia, Tex. (posthumously): Fighter pilot, USS *Bennington*, 14-28 July 1945.

★ FLORENCE, Joseph F., Ens., USNR, New York City (posthumously): Torpedo plane pilot, USS *Santee*, near Sakishima Gunto, 23 Apr 1945.

★ FRANK, Lewis C., 1st Lt., USMCR, Charlotte, N. C.: Fighter pilot, Philippines.

★ HEAN, James H., Capt. (then Lt. Comdr.), USN, Selma, Ala.: PBY-5A pilot, Goldstone Lake, Calif., 3 July 1942.

★ INNES, Irwin L., 1st Lt., USMCR, Portland, Ore.: Pilot, Philippines, 18 Dec 1944 to 11 Apr 1945.

★ JOYCE, James J. Jr., ARM1c, USNR, Portsmouth, N. H. (posthumously): Air-

HOW DID IT START?

Ensign

Though today we look upon the rank of ensign as purely naval, an ensign was originally the lowest commissioned rank in the army.

The word itself stems directly from the old Norman "enseigne," meaning flag.

In the 16th century it was borrowed from the land service by the British navy to denote the flag then introduced on the poop of vessels. Today, it is still used to apply to any national flag.

As a title the term dates back to the days when it was customary for privileged squires, generally junior officers, to carry the "colors" of their masters into battle. These became known as ensign bearers and subsequently by the name of the banner itself—ensign.

The French navy, borrowing from the army, introduced ensign as a naval rank at an early date. It was not until 1862 that the U. S. Navy adopted the rank of ensign in place of "passed midshipman," used to denote those awaiting promotion to lieutenant.



crewman torpedo plane, *USS Subannee*, Nansei Shoto area, 1 Apr to 5 May 1945.

★ **KELLY**, George P., Lt. (jg), USNR, Alhambra, Calif.: Pilot, Nanpo Shoto, Tokyo, Kyushu and Nansei Shoto, 10 Feb to 11 June 1945.

★ **LANDAU**, Vincent L., Ens., USNR, Maukato, Kans. (posthumously): Fighter pilot, *USS Bennington* 23 July and 9 Aug 1945.

★ **MACDIARMID**, Donald B., Comdr., USCG, Clifton, Mass.: PBM, pilot and co-pilot, off California, early 1945.

★ **MACLACHLAN**, Archibald W., 1st Lt., USMCR, Los Angeles: Fighter-bomber pilot, Philippines, 28 Feb to 5 Mar 1945.

★ **PETERBERG**, Emil M., Lt. (jg), (then Ens.) USNR, Preston, Idaho: Co-pilot, patrol bomber, Paramushiro Straits, 26 Aug 1944.

★ **SCOLES**, Glen R., Sp(X)2c, USNR, Vandalia, Ill.: Air drop supply crew member, 18 Mar to 4 Apr 1945.

★ **SIMPSON**, Robert F., Lt. (then Lt. (jg)), USNR, Jacksonville, Fla.: Fighter pilot, Battle of Leyte Gulf, 24-26 Oct 1944.

★ **SPEGAL**, Bruce, Sp(X)2c, USNR, Paris, Ky.: Air drop supply crew member, 17 Mar to 3 Apr 1945.

★ **STENGLIN**, Robert F., Lt. (jg), USNR, Hartford, Conn. (MIA): Co-pilot, patrol bomber, Korea, 23 June to 24 July 1945.

★ **TASSOS**, William C., Capt., USMCR, San Antonio, Tex.: Pilot, dive bomber, Solomon Is. and Bismarck Archipelago, 31 Dec 1943 to 10 Sept 1944.

★ **WEEK**, Rodney E., Ens., USNR, Minneapolis (MIA): Torpedo bomber pilot, *USS Shamrock Bay*, Okinawa and Sakishima, 25 Mar to 22 June 1945.

★ **WEICKHARDT**, Charles E. Jr., Lt. (jg), USNR, Wash., D. C. (posthumously): Fighter pilot, *USS Langley*, Honshu, 17 Feb 1945.

★ **WHITTAKER**, Donald L. A., Lt. (jg), USNR, Quincy, Mass.: Fighter pilot, Okinawa, 4 May 1945.

★ **WILLIAMS**, Merlin H., Ens., USNR, Shawnee, Okla. (MIA): Co-pilot, patrol bomber, Korea, 23 June to 24 July 1945.

★ **ZELLER**, Richard S., 1st Lt., USMCR, Jackson, Mich.: Scout bomber pilot, Philippines, 3 Mar to 16 June 1945.

BRONZE STAR MEDAL

Gold star in lieu of third award:

★ **WHITFIELD**, James D., Jr., Capt. (then Comdr.), USN, Franklin, Tenn.: CO of destroyer, Okinawa, 26 Mar 1945.

Gold star in lieu of second award:

★ **DRAKE**, Donald L., Lt., USNR, Shelton, Wash. (MIA): Engineering officer, *USS Kete*, during patrol, Ryukyus, March 1945.

★ **GUILLIAMS**, Charles E., Gunner, USN, Groton, Conn.: Assistant Torpedo data computer operator, *USS Tautog*, Truk and Marshall Islands areas, 24 April to 11 June 1942.

★ **MILLER**, Shirley S., Capt., USN, Annapolis, Md.: Commander of an air support control unit, Guam and Palau Islands, July to October 1944.

★ **PETERSON**, Abbot Jr., Comdr. (ChC) USN, Hanover, Mass.: Senior chaplain, *USS Bunker Hill*, Okinawa.

★ **REILAND**, William F. Jr., Ens. (then CTM) USN, El Monte, Calif. (posthumously): Torpedoman's mate in charge, *USS Seawolf*, Formosa and Bonin Islands areas, 3 April to 3 May 1943.

First award:

★ **ABEL**, Donald A., Lt. (jg), USNR, Chicago (MIA): Assistant plotting officer, *USS Bonefish*, action against the enemy, Japan Sea.

★ **ALBERT**, Francis L., Capt. (ChC), USN, Arlington, Va.: Staff chaplain, 7th Flt., 31 Jan to 31 Aug 1945 and chaplain on staff, *ComPhilSeaFron*, from latter date until 1 Oct 1945.

★ **ANDERSON**, Howard M., Ens. (SC) USNR, Cleveland, (posthumously): Supply officer, *USS Frederick C. Davis*, action against a German sub, 24 Apr 1945.

★ **ANTHONY**, Henry M., Comdr. (then Lt. Comdr.), USCG, San Francisco: While attached to division of naval communications, 7 Dec 1941 to 2 Sept 1945.

★ **ANTLE**, W. S., Lt. Comdr., USN, Petersburg, Ill.: Executive officer and navigator, *USS Gabilan*, near Honshu, 20 June to 17 Aug 1945.

★ **AYRAULT**, Arthur D., Capt. (then Comdr.), USN, Tacoma, Wash.: Executive officer, *USS Washington*, convoy operations, Northeastern Atlantic and Arctic oceans, 4 April to 14 July 1942.

★ **BAKER**, Harold E., Comdr., USN, Yakima, Wash.: Operations and gunnery officer, sub squadron, task groups operating from advanced bases in Pacific.

★ **BIECHLIN**, Louis E., Lt. (jg), (then Carpenter), USN, Long Beach, Calif.: Assistant damage control officer, *USS Houston*, during attack by Japanese, 4 Feb 1942.

★ **BLICK**, Charles A., Comdr. (SC) USN, Collingswood, N. J.: Logistics and supply officer, staff of a *ComPhibGrp*, December 1943 to 18 Apr 1945.

★ **BRIGGS**, Cameron, Capt. USN, Pensacola, Fla.: Executive officer, *USS Yorktown*, Pacific area, 21 Oct 1943 to 29 June 1944.

★ **BROWN**, Bert F., Capt., USN, Salt Lake City: Task unit commander, during assault landings, SoWesPac area.

★ **CARPENTER**, Harlow J., Capt., USN, New London, Conn.: CO, submarine repair unit, Brisbane, Australia, December 1941 to April 1943.

★ **COGGINS**, Cecil H., Capt., (MC), USN, Germantown, Pa.: Field medical officer, naval group, China, 30 Oct 1943 to 15 Apr 1945.

★ **COLLETT**, James D. Comdr., USN, Winterport, Maine: CO of destroyer, *Nojima Saki*, Honshu, 22-23 July 1945.

★ **COMPTON**, James P., Capt., USN, New Haven, Conn.: While serving on staff, *ComServPac* May to Sept 1943, staff of *CincPac*, September 1943 to March 1944.

★ **CONY**, Charles E., Capt., USN, Roanoke, Va.: CO *USS Nashville*, Mindoro, 13 Dec 1944.

★ **DAGGETT**, Samuel K., CMoMM, USN, Chicago: Aboard *USS Pogy*, war patrol, Japan Sea, 2 July to 21 Aug 1945.

★ **DAVIS**, Henry A., CMoMM, USN, Sioux City, Iowa: Chief Motor Machinist's Mate in charge, *USS Atule*, near Nanpo Shoto, 3 July to 25 Aug 1945.

★ **DICKENSON**, Ben W., Ens., (then EM1c), USN, Greenwood, Fla. (MIA): Leading battle stations controllerman, *USS Gudgeon*, east China Sea area, 31 October to 10 Dec 1943.

★ **DINGWELL**, John E., Capt., USN, Wollaston, Mass.: Base plans officer, staff of *Com7thFlt*, January 1943 to December 1944.

★ **DUERFELDT**, Clifford H., Capt., USN, Alexandria, Va.: Personnel officer, staff of *ComAirPac*, 23 Oct 1944 to 2 Sept 1945.

★ **DYER**, George C., Rear Admiral (then Capt.), USN, Chevy Chase, Md.: CO, *USS Astoria*, action at Okinawa and against the Japanese homeland, 18 Mar to 27 May 1945.

★ **EMERSON**, Walter W., Comdr. (then Lt. Comdr.), USNR (Ret), San Francisco: Photographic interpretation officer, Fleet air photographic unit, staff of CTF 8, Wake Island, 4 February to 29 May 1942.

★ **FELDMAN**, Herman A., Comdr. (SC), USN, Baltimore: OinC, spare parts distribution center, Pearl Harbor, 11 Feb 1944 to 8 Sept 1945.

★ **FERRARA**, Maurice, Comdr., USN, San Diego, Calif.: CO, *USS Gar*, landing supplies in Philippines, November 1944.

★ **FISHER**, Allen J., Lt., USN, Ontario, Calif.: Battery officer, *USS Pope*, Java Sea, 1 Mar 1942.

★ **FITZGIBBON**, Thomas F., Lt., USNR, Beverly, Mass.: Damage control officer and first lieutenant, *USS Oberrender*, Manus, 10 Nov 1944, off Okinawa, 9 May 1945.

★ **FOLEY**, William T., Comdr. (then Lt.) (MC), USN, Flushing, N. Y.: POW in China, camp comdr., Sendai, Japan.

★ **GALBRAITH**, William J., Comdr., USN, Knoxville, Tenn.: While POW, Zentsuji, Japan, August 1943 to June 1945.

★ **GAVIGLIO**, Peter M., Comdr., USN, San Francisco: Gunnery officer and later executive officer of a cruiser, North Pacific, 11 Jan 1943 to 15 June 1945.

★ **HERBERT**, Philip P., Lt., USNR, Menlo Park, Calif.: Exec., *USS Baxter*, Pacific area, 30 July to 20 Aug 1944 and 12 Nov 1944 to 11 July 1945.

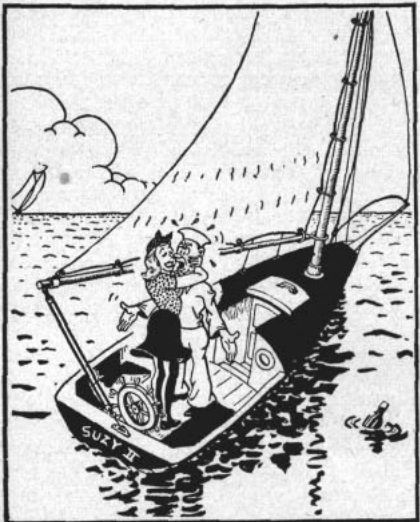
★ **HIDALGO**, Edward, Lt., USNR, New York City: ACI officer, night *TorpBomRon90*, *USS Enterprise*, Pacific area, 5 January to 14 Apr 1945.

★ **HOFFNER**, Carleton C., Capt., USN, Arlington, Va.: CO, *USS Hamul*, tending and repairing destroyers during Philippines and Okinawa campaigns, January to Aug 1945.

★ **HORNBERGER**, Robert F., ETM1c, USNR, Lebanon, Pa.: Radar operator, *USS Pogy*, patrol in Japan Sea, 2 July to 21 Aug 1945.

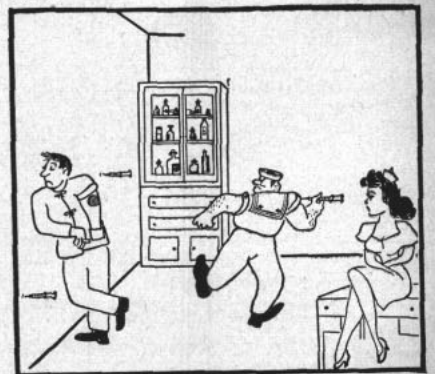
NAVY AND MARINE CORPS MEDAL

★ **NILON**, Leo W., Capt., USN, New York City: *ComDesDiv20*, off Marseilles, 2 Oct 1944.



Heaving Line (USMMTraSta, Sheephead Bay, N. Y.)

"Darling I wish you wouldn't throw your arms around my neck every time I say, 'Luff!' "



San Leandro Hospital News (San Leandro, Calif.) "No, no, Wheeler—you job the needle in."

★ DECORATIONS

Bronze Star (Cont.)

- ★ **HOWE, George T., Lt. Comdr., USN (Ret),** Santa Monica, Calif.: Convoy commodore, EastSeaFron, October 1943 to June 1944 and May to July 1945.
- ★ **HUFF, Marvin C., WT2c, USNR,** Detroit: Member of landing craft crew, during invasions in New Guinea area.
- ★ **JONES, Charles A., Lt. Comdr., (MC), USNR,** Philadelphia: Attached to naval group, China, 3 Oct 1943 to 22 July 1945.
- ★ **KATZ, Benjamin, Capt. (then Lt. Comdr.), USN,** Chelsea, Mass.: CO of a destroyer minelaying and bombarding shore installations, Kolombangara, New Georgia, British Solomon Islands, 7 and 13 May 1943.
- ★ **KING, Archer E., Comdr., USN (Ret),** Norfolk, Va. (posthumously): Convoy commodore, EastSeaFron, May 1943 to Jan 1944.
- ★ **LANG, Robert L., MoMM1c, USNR,** Forreston, Ill.: Member of landing craft crew, New Guinea.
- ★ **LOUTHEN, Willard V., Lt., USNR,** Sparta, Wis.: Aerologist, aircraft carrier, WestPac, 24 April to 15 Aug 1945.
- ★ **MASCAYAGE, Anthony A., EM2c, USN,** Lyndwood, Pa.: Attached to USS *Min-danao*, Bataan, 9 Apr, 1942.
- ★ **McMILLIAN, Ira E., Capt. (then Comdr.), USN,** Honey Grove, Tex.: Gunnery officer, staff of amphibious task force commander, Dec 1943 to Aug 1944.
- ★ **METZGER, Edward F., Comdr. (SC) USN,** Lynn, Mass.: Force supply officer, staff of ComSubForPacFlt, April 1944 to June 1945.
- ★ **MIDGELEY, Donald R., Lt., USN,** Hopedale, Mass. (MIA): Diving officer, USS *Gudgeon*, east China Sea, 31 October to 10 Dec 1943.
- ★ **MILLS, Clarence Y., Lt., USNR,** Smithville, Tex.: Deck watch officer, boat wave comdr., assistant communications officer and operations officer, staff of ComTransDiv 60, Atlantic and Pacific, November 1942 to 30 Sept 1945.
- ★ **MOMNIEE, Frederick J., F1c, USNR,** Toledo, Ohio: Member of landing craft crew, action against the enemy, New Guinea area.
- ★ **NELSON, John B., Lt. Comdr (then Lt.), USN,** Orange, Tex.: Turret and division officer, USS *Houston*, action against Japanese, Pacific area, 4-28 Feb 1942.
- ★ **NUTT, Gaius W., Jr., MoMM1c, USNR,** Nashville, Tenn.: Member of landing craft, action against Japanese, New Guinea area.
- ★ **O'DONNELL, Edward J., Capt., USN,** Annapolis, Md.: Operations officer, staff of commander, administrative command, PhibFor, May 1945 to Jan 1946.
- ★ **PHILLIPS, Thomas W., Sgt., USMC,** Grand Prairie, Tex.: While serving with marine rifle company, Okinawa, 7 May 1945.
- ★ **PINNEY, Frank L., Jr., Comdr. USN,** Washington, D. C.: Gunnery officer, USS *Iowa*, Saipan, Tinian, Ponape, 21 Mar to 8 Dec 1944.
- ★ **QUILTER, Joseph F., Capt. (then Comdr.), USN,** Washington, D. C.: Executive officer of aircraft carrier, action against enemy, Pacific, 24 Apr to 15 Aug 1945.
- ★ **REIS, John F., Lt. (jg), (then Ens.), USNR,** Indianapolis: Only surviving officer, YMS-30, rescue of part of crew, Anzio, Italy, 25 Jan 1944.
- ★ **RIGGS, Ralph S., Rear Admiral, USN,** Amarillo, Tex.: ComDesDiv, action against enemy, Bougainville, 20 Feb 1942, Battle of Coral Sea, 4-8 May 1942, Battle of Midway, 4-6 June 1942.

FOREIGN AWARDS

The Medal of French Recognition:

- ★ **LASH, Frank H., Capt., (ChC), USN,** Albuquerque, N. M.: Force chaplain, staff of ComNavEu, January 1944 to May 1945.



ADVANTAGE OF THE PLAN is one man acts as a 'balance' to the other.

BUDDY, CAN YOU SPARE YOUR TIME?

In union there is strength—strength of character, apparently, as well as the extra muscular power accruing from eight, six, or four biceps instead of the two with which the ordinary Navy man is endowed. This, at least, is the reasoned conclusion of ships which have made profitable use of the "buddy system" to keep their personnel from getting fouled up in oriental ports.

The port of Jinsen, Korea, and the neighboring capital city of Seoul constitute an area which in the past has provided its share of trouble for sailors on liberty. The two cities are typical of that area. They offer the usual attractions of a liberty port—and the usual hazards for strangers.

There are narrow, twisting, unlighted streets where servicemen can easily, and have, become lost or have been slugged and robbed. As a result of contact with wily sharpers, many a sailor has lost his *yen*. (In Korea, Mac, that just means moola—currency—hard-earned pay to you). There are strong, strange, and wonderful liquors, some of them containing methyl alcohol which can kill or blind the drinker. Although *geisha* houses and kindred attractions are "off limits" to military personnel, MPs cannot be all-observant, and venereal disease has been high in the area. And with men becoming involved in these difficulties and others, AWOL cases have not been uncommon.

To counteract this situation, ships sending men ashore have made the "buddy system" compulsory in Jinsen. The system itself is simple. It means just this: that men go on liberty in pairs, not alone.

Advantage of the plan is that one man will act as a "balance" to the

other. When two heads are working, the chances of getting lost are decreased. Two men are seldom attacked in murky streets. If something does happen, there is always one man to give aid. And though you might suppose that two men could drink twice as much, or get in twice as much girl trouble as one man, it doesn't work out that way; an individual may not worry about himself, but he feels responsible for seeing that his buddy gets back to the ship safely and on time. It seems that there are occasions when a man is willing to take seriously the trials and tribulations of becoming his buddy's keeper.

Capt. John Quinn, USN, CO of the *Guadalupe*, a large fleet tanker which recently put in at Jinsen for two months, found the system highly successful. None of the *Guadalupe's* crew was assaulted, and all men going ashore returned on schedule after the plan was in effect.

Mutual responsibility has maintained the health of the crew, and has cut sharply the number of undesirable entries in service records, despite the high percentage of inexperienced recruits—ages 17 to 19—among the ship's company.

Furthermore, the crews favor the system. Men pick their own buddies, and voluntarily travel in good-sized groups while ashore. The ship's officers of the *Guadalupe*, as a matter of fact, arrange group tours when the ship reaches a new port. In Seoul and other places, incidentally, sight-seeing excursions have been arranged by such organizations as the American Red Cross. The excursions give the men a chance to get their bearings for further individual liberties—with their buddies.

BOOKS:

THE INTERESTING LIVES OF GREAT AND HUMBLE

The kernel of literary art through the ages has been the study of mankind; the touchstone of literary excellence has been the ability to record human experience and to make come alive the pictures of the individuals living that experience. Perhaps the most direct approach to this aim has been that of the biographical writers—from Plutarch to Carl Van Doren—whose material has been living men. Not necessarily great men: the subject may be of the great, he may be of the humble. The only test that need be applied is, are we interested in what makes the subject tick?

A Filipino immigrant, an itinerant reporter, an American military hero, and the founder of a great religion—these are the subjects of four books, biographical and autobiographical, which are being forwarded by BuPers to ship and station libraries.

One of Our Own

● **"My Three Years with Eisenhower"** by Captain Harry C. Butcher, USNR; Simon and Schuster, \$5.

This book, the personal diary of General Ike's naval aide during the battle years of 1942-1945, was named by the Book-of-the-Month Club as its May selection. The choice was a good one.

It is what it purports to be—a personal diary, and no more—but Capt. Butcher's ability to record the minutiae of war as well as its hugeness, and his faithfulness in depicting what and who the General is as well as what he says and does, entitles *"My Three Years with Eisenhower"* to discussion as a biographical work. It is excellent as it stands, and it will increase in value as source material for the future formal biographer and historian.

Capt. Butcher recounts the intimate, day-by-day life of the General in his

growth from a comparatively unknown staff officer to his emergence as the commander of one of the great military operations in the world's history. Throughout one feels the weight of events, the external pressure and the internal dissensions, and the quality of the man who could deal effectively not only with the enemy but also with his allies and subordinates. Steadfast decisions, unsatisfying compromises, sometimes distasteful bargains—all these Ike had to deal with. These and the men, great and small, who were concerned with them, are faithfully recorded in Capt. Butcher's diary.

The book is rich in detail and the maps and illustrations are good.

The Last of the Bison

● **"A Solo in Tom-Toms"** by Gene Fowler; the Viking Press, \$3.

Two months before Gene Fowler was born, his father asked for a cup of coffee. The demand was directed at the man's formidable mother-in-law, and was not softened by an appended "please." The coffee was not forthcoming; Charles Devlan kissed his wife, picked up his hat, and sallied forth to Squaw Mountain, near Denver, where he lived in solitude for thirty years. That much time had elapsed before Gene Fowler saw his father, or Devlan, his son.

Bizarre? When you have finished *"Solo in Tom-Toms"* (and once starting it, you are likely to finish it), you will not consider this incident particularly remarkable. The book is the story of Gene Fowler's life; Fowler is romantic, irreverent, colorful, a little fantastic, and he has lived that kind of a life.

Born in Denver in the gay nineties, Fowler (that is one of three surnames that he bore) lived a tumultuous boyhood which included work in a taxidermist's shop, delivering groceries to the city's red-light district, and an introduction to journalism through the characteristic (to Fowler) approach of encountering by chance a piccolo player in a cemetery. Some of his friends were Jack Dempsey, then a rugged but unknown young fighter; Damon Runyon; Buffalo Bill Cody; Trixie, until her marriage and reform a lady no better than she need be; and Paul Whiteman.

Though Fowler ultimately found a niche as a New York newsman, the out-size figures of the old West never lost their fascination for him, nor was the mark of the West upon him ever completely eradicated. Hence the aptness of the sobriquet the late Ring Lardner bestowed on him—"the last of the bison."

Fowler has always written ably and with gusto of exciting, non-conformist figures—as witness his *"Goodnight, Sweet Prince,"* the biography of John Barrymore. And he himself is an admirable subject for his own pen.

Attention, Americans!

● **"America Is in the Heart"** by Carlos Bulosan; Harcourt, Brace & Co., \$3.

This is the story—a familiar one, unfortunately, in American biography of the 1940's—of youth and young manhood lived in privation, squalor, and contempt as the result of being born one of America's minority citizens. What is unfamiliar is that the youth was not embittered by his experience; the result is, as one reviewer has expressed it, "loyalty in spite of all." The reader, American in the conventional racial sense, finally lays aside the book shamefaced.

Carlos Bulosan, Filipino, born of a simple peasant family on the island of Luzon, found life a struggle. At first the struggle, shared by his family and his folk for generations past, was to wrest a living from the stubborn land. And tragedy resulted when that land was lost, principally as the result of efforts to educate an older brother. The second struggle—to win the right to individual, decent existence in the shining land of America—would have been lost, too, one suspects, by any person less courageous, less steadfast, and perhaps less talented than the author. But it was not lost. For after poverty, insults, beatings, Bulosan's final word is this: "I knew that no man could destroy my faith in America that had sprung from all our hopes and aspirations, ever."

The book is simply, directly, and powerfully written, and it is written without self pity. It is easy to read, if any strongly based indictment of the betrayal of America's democratic ideals is easy to read. Anyone interested in driving from America the scourge of intolerance should read this book; and all of us may find it profitable to look into our own hearts to see if America, in its truest and best sense, is there.

Prophet and Fighting Man

● **"The Messenger"** by R. V. C. Bodley; Doubleday & Co., \$3.

During the first 40 years of his life, Mohammed was a thoroughly extraordinary youth and man; then he had a vision.

The vision, revealing to him his mission as founder and leader of a new religious cult, had far reaching consequences. The Moslems can point back to history of power and glory—and blood, but more important, to a sustained vitality. About one-seventh of the world's population, some 300,000,000 persons, are Mohammedan.

Mohammed himself was at once Pope and Caesar. When persuasion failed, he encouraged conversion by the sword, and the battlecry that first burst from his followers' throats in 624 A.D. has been heard down the centuries by many nations. Yet he moderated some of the blood-thirsty habits of his fellow Arabs, and improved in some respects the position of their women.

Islam will not often enjoy a more qualified or sympathetic advocate than Bodley—a friend of Lawrence of Arabia.



Official U. S. Army photograph
CAPTAIN HARRY C. BUTCHER, author of "My Three Years with Eisenhower" is shown with subject of book.

THE BULLETIN BOARD

POSTING MATTERS OF PARTICULAR INTEREST AND IMPORTANCE TO ALL HANDS

Navy Needs Your Constructive Ideas To Improve Performance of Equipment

Got any good ideas, mate? Well, the Navy wants and needs 'em, and is planning to make it worth your while.

The Office of Research and Inventions has asked the men who use Navy gear and Navy methods to send constructive ideas or possible solutions (inventions) to problems to the Navy Department via the CO, in Alnav 227-46 (NDB, 15 May).

The Navy may send out a ship-load of trained engineers to study and improve gear, but it's the bluejacket who uses the equipment every day who is best able to see what's wrong with it and how it can be improved. The engineers don't sleep in a bunk every night, or fire a gun. They don't man the galley ranges, the signal lights, stand boiler watches, train the torpedo tubes, load ammo, rev up the main or auxiliary engines, drop the hook, lower the whale boat, scrape paint and swab decks. The bluejacket is the one who knows the most about those jobs.

Possible suggestions might be improved safety devices of all kinds; simplified maintenance, or redesign of certain parts of machinery that wear out too frequently; simplification of the use and operation of equipment; reduction of man hours or energy required to perform a specific operation; new types of weapons and equipment; desirable additions to present equipment; new and improved uses for present equipment; and even new methods for handling office work problems.

Many enlisted men have sent in suggestions that ORI has found to be useful and valuable for both war and peace. Some of the ideas that have been used, or will be used in the future are: a straightedge pivot angle gauge, for measuring or determining rotor pivot angle, invented by a Wave AMM(1)2c; a valve for aero riveters, developed by two AMMS3cs; an engine transfer sheet, production rate and progress report, thought of by a Marine PFC; and a reference book holder, by a RM2c.

There are three types of inventions under General Order 31.

• Those developed on special assignment, which immediately become Navy property.

• Those developed on a man's own initiative, but using Navy time and equipment. The inventor may sell the rights to, or license a commercial com-

pany to make it for other than government use. However, the Navy is licensed to use the invention without paying a royalty to the man.

• An invention made on a man's own initiative, time and equipment. In this type the man has full rights to the invention, and the Navy is not entitled to a free license for its use unless the patent is taken out through the Navy, in which case the Navy is given a license to cover any government use, but the man retains the commercial rights on his patent.

For the man who may feel that he needs more background to develop an idea, the Navy offers many educational facilities such as the USAFI courses. There are also shops and hobby-craft programs at nearly every ship and station where a man may develop his ideas.

A budding inventor might wish privacy in the submission of his ideas. This privacy is assured by Alnav 227 which requires COs to respect such wishes.

Many new and needed ideas have not yet reached anyone in a position to do anything about them. Alnav 227 urges men to think creatively and send in their suggestions and inventions without delay.

21 More Rates Opened For Transfer to USN; Three Others Deleted

Twenty-one more rates have been opened for changeover of USNR and USN-I personnel to the regular Navy, and three rates deleted from the original list of ratings open for changeover, by Alnav 238-46 (NDB, 15 May). Alnav 238 modifies Alnav 112-46 (NDB, 15 March) which published the original list.

Effective on 1 June the following rates will no longer be open to changeover: AOM3c, AOMT3c, AR3c.

Effective immediately, rates newly opened for changeover are: QM3c, SF2c, PM2c, MMG2c, B2c and 3c, AMM3c, AMMC3c, AMMF3c, AMMH-3c, AMMI3c, AMMP3c, AMMT3c, ARM3c, PhoM1c, Y1c, SK1c, SKD1c, Prtr2c, CPtrM, PrtrM1c.

Alnav 112, as modified by Alnav 238, provides a complete listing of rates open for changeover to USN except for CB and specialist ratings (see ALL HANDS, April 1946, p. 67).

1 July Discharge For Marines With 30 Months Service

Marine Corps Headquarters has announced that any inductee or reservist in the Corps with 30 months of active duty will be eligible for discharge on 1 July, regardless of his point credits.

Male personnel with 28 discharge points were eligible for separation from the service on 1 June. Previously announced schedules for demobilization of the Marine Corps Women's Reserve are: 1 June, four points; 1 July, 0 points.

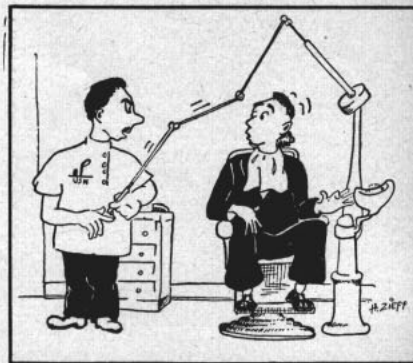
Naval Reserve Enlistment Available Upon Discharge

Enrollment in V-6, the Naval Reserve, was clarified under two dispatches issued by BuPers in April: A1StaCons 152105 and 171852.

• A1StaCon 152105 declared that enlistments and reenlistments in V-6 may be made on the date of discharge, such enlistments to be effective on the following day.

• A1StaCon 171852 ruled that written consent of parents for enlistees between the ages of 18 and less than 21 is not required in cases of men who served in World War II on active duty in USN, USNR or USN-I, and who desire to enlist in class V-6. Such consent is required for regular Navy enlistments.

Enlisted personnel will be able, while on inactive duty in the naval Reserve, to train and advance at a rate comparable to men on active duty in the regular Navy, it was pointed out. Enlistments in the Reserve generally are accepted in the same rate held at time of discharge, and pay and allowances for training duty are paid to members of the Organized Reserve.



The Hoist (NTC, San Diego)

"But I TOLD the classification department I used to be a drill press operator."

V-5 Training Program Will Remain Active Through Summer

All students qualified for retention in Navy V-5 program will remain on duty during the summer of 1946, according to Navy V-12 Bulletin No. 369. A peacetime plan for the Navy's flight training program will be placed in operation at the beginning of the academic term in the fall of 1946, if authorized by legislation now being considered.

Students may at their own option, so far as possible, either enroll for a summer semester at an accredited college or university, with payment of tuition, normal fees and cost of books by the Navy; or if it is found that admission is not possible due to crowded conditions, prior to 1 June students will be transferred to a NAS having a selective flight training program unit. If possible they will be given an opportunity to fly.

Responsibility for application and acceptance for any school rests on the individual students, who will remain in an active duty status but will be authorized to wear civilian clothes.

Trainees not qualified and those not desiring to remain in the flight training program will be transferred from class V-5 to general service and separated from the naval service in accordance with the provisions of Alnav 161-46 (NDB, 15 April) which set up the quota system for demobilization to insure release of all personnel prior to 1 Sept 1946.

Recruit Centers Train Rated Men as Physical Fitness Instructors

A 30-day training program to prepare rated men to serve as physical fitness instructors in recruit areas was started 3 June. The men will replace Specialist (A)s, whose total strength in the Navy has dwindled to less than 200. About 15,000 Specialist (A)s were trained during the war.

Schools were opened at the naval training centers at San Diego, Bainbridge, Md., and Great Lakes.

Men taking the course will be given no special rate. Only rated men on duty at the above stations may apply to their training officers for the course. They will retain their present rates while on duty as instructors.

After completion of the course, men will remain on duty at the center where they received their training. They will administer the physical fitness program in recruit camps and serve as coaches.

No special quotas have been set for the schools. The number of men trained will be determined by the commandants of the recruit centers, based on need. It has been recommended, however, that there be one instructor for each 500 recruits.



The Hoist (NTC, San Diego)
"Well, I guess that ends the game!"

Supply Corps Opens Postgrad Instruction

The Supply Corps' postwar postgraduate educational training program was under way last month as 19 officers went into industry to study their specialties at first hand, and 20 others prepared to enroll at Harvard Graduate School of Business Administration this month. (See story on postgraduate education, ALL HANDS, May 1946, p. 70).

There was a slight departure from announced plans. Ordinarily, about 40 officers (generally those having completed about seven years of service and entering their second shore cruise) would be assigned first to the School of Business Administration and then would go into industry. This year, however, the class has been split, and half of the class will take its industrial training before the schooling; the other half will complete the two-year business course before going into industry. The industrial training phase will be from four to six months, permitting the 19 officers to enter Harvard about October of this year.

The training program in industry was worked out by the Navy Department and the Navy Industrial Association, which is an association of more than 400 nationally prominent industrial concerns. All of the industries in which the officers will study are located in the Third Naval District.

Specialties represented by the 19 officers include purchasing, accounting, inventory control and transportation. Their industrial training will be in concerns which include these fields as important phases in their operations.

Purchase of Khakis Once Again Approved

Officers again may purchase khaki working uniforms, it was announced in Alnav 211-46 (NDB, 15 May). The Alnav states that either the gray or khaki uniform may be bought, and wearing of either is optional. Previously, gray was the approved working uniform, although officers were permitted to wear khakis until stocks in officers' possession or manufactured were exhausted. The regulations apply also to CPOs.

Transferring Procedure Clarified for Appointees to Academy from V-12, V-5

A clarification of procedure for transfer of V-5, V-12 and NROTC students who have received Congressional appointments to the Naval Academy has been made in BuPers Circ. Ltr. 90-46 (NDB, 15 April). The superintendent of the Naval Academy has requested that the procedure be as follows:

- Candidates will be ordered to the Naval Academy on temporary additional duty orders for a physical examination prior to admission as midshipmen.

- V-5, V-12, and NROTC activities concerned should retain the records and accounts, and as much of the government clothing and equipment as possible.

- Candidates accepted for admission to the Academy should request an honorable discharge from the USN or USNR by letter promptly forwarded by the superintendent, U. S. Naval Academy, to the CO who ordered the candidate to the Academy.

- Candidates who fail to fulfill the requirements for admission as midshipmen will have their orders appropriately endorsed for return to the naval activity from which they were ordered.

Navy V-12 Bulletin No. 200, para. 1020-22, provides opportunity for Navy V-5, V-12 and NROTC students to take examinations for entrance to the Naval Academy upon receipt of an appointment.

Film Damage Reduction Instructions Issued; Inventory Directed

If the film breaks in the middle of the movie tonight, mate, you can be assured that the Navy is taking action to prevent such interruptions.

Instructions have been issued to COs to make sure that only competent projectionists run the movies, and that all equipment is kept clean and in good mechanical condition. This directive was issued by BuPers in Alnav 185-46 (NDB, 30 April). Disciplinary action will be taken in cases where negligence and carelessness by personnel result in destruction of film.

In an effort to determine more accurately future movie requirements, BuPers in Alnav 179-46 (NDB, 30 April) directed all ships and stations to make an inventory of entertainment motion pictures in their possession as of 30 April. Exceptions to this directive were those activities which obtain film from local distributors under the optional naval district motion picture plan. Under this plan, various naval districts obtain pictures from commercial distributors and book them at activities within their areas.

Enlisted Repatriates Will be Considered For Officer Status

Enlisted repatriates who held rates below first class prior to capture, escape, or evasion of capture by the enemy may be given special consideration by their COs leading to promotions to warrant grades or commissioned status. This point was made by BuPers in Alnav 208-46 (NDB, 30 April). BuPers stated that, except for their capture, escape, or evasion, they presumably would have been advanced to first class in the period of separation from U. S. jurisdiction and subsequently some would have been recommended for appointment to warrant or commissioned status.

"When an enlisted repatriate is advanced to a first class petty officer rating retroactively in accordance with BuPers Circ. Ltr. 39-46," the Alnav said, "it is considered that on the date from which this rating is made effective for seniority purposes he became eligible retroactively for subsequent recommendation for appointment to warrant or commissioned officer status."

Circ. Ltr. 39-46 (NDB, 15 February) provides for retroactive advancement in rating of repatriates. It also established the dates from which such advancements are made effective, retroactively, for seniority purposes.

Alnav 208-46 also broadened the definition of enlisted repatriates eligible for recommendation for warrant or commissioned status to include those who escaped enemy custody or evaded capture, in addition to ex-prisoners of war. Alnav 122-46 (NDB, 15 March) governs the recommendation for warrant or commissioned officer status to men who were first class or chief petty officers at the time of capture.

COs having repatriates ordered to them for duty, following hospital and rehabilitation leave, were directed to check the record of each man carefully and to submit recommendations, in appropriate cases, for appointment to warrant or commissioned status.

Ex-POWs Get More Time To Qualify for Rates

Repatriated enlisted personnel (former POWs) will have more time to qualify professionally for successive retroactive advancements in ratings under provisions of BuPers Circ. Ltr. 101-46 (NDB, 30 April). They now will have 18 months after reporting to new permanent duty stations, following processing and leave, to qualify for retroactive advancements, instead of eight months. Circ. Ltr. 101-46 amended paragraph 8 (d) (7) of Circ. Ltr. 39-46 (NDB, 15 February) to provide for this additional time. Paragraph 8 sets up standards for promotion of repatriated enlisted personnel.

In cases where the retroactive date of advancements in rating would occur prior to 10 March 1946, service in present pay grade requirements

specified in paragraph 8 (d) (2) of Circ. Ltr. 39-46 (NDB, 15 February) are to be used. Where the retroactive date of advancements occur on or subsequent to 10 March service requirements specified in Circ. Ltr. 72-46 (NDB, 31 March) are to be applied. Sea duty requirements are waived.

Circ. Ltr. 101-46 listed seven common errors that have occurred in the administrative handling of repatriates, and said that positive steps should be taken to adhere strictly to existing directives to avoid penalizing repatriates for administrative errors.

President Authorizes Regular Navy Transfer In Warrant Grades

The President on 15 May authorized appointments to permanent commissioned warrant and warrant grade in the regular Navy in numbers not to exceed 2,500 and 456 respectively. Appointments are to be made from the ranks of temporary officers, commissioned warrants and warrant grades of the regular Navy (former enlisted men) and male officers, commissioned warrants and warrant grades of the Naval Reserve who have requested transfer to the regular Navy.

Public Law 347 (See ALL HANDS, May, p. 41) established the permanent authorized strength of the Navy in regard to enlisted men and officers and left the number of commissioned warrants and warrant grades to the discretion of the President.

Temporary and reserve officers of the Navy who have been recommended by the selection board convened by SecNav to the Senate for transfer to the regular Navy totalled 4,490 according to Alnav 167-46 (NDB, 15 April) and Alnav 206-46 (NDB, 30 April), with a third Alnav scheduled to appear. About 45 percent of the applications for transfer received have been revised by the selection board. About 2,900 applications for transfer in the line and staff corps were not submitted to the board because educational tests, local board report, college transcript, special fitness report or the Navmed form Y were not satisfactory or have not been received.

A breakdown by corps of the officers recommended for transfer to the regular Navy follows: General service and line officers, 3,440; aerological engineering, 4; aeronautical engineering, 43; chemical engineering, 2; communications intelligence and security, 21; diesel engineering, 9; electrical engineering, 14; electronic engineering, 50; industrial and management engineering, 8; law specialists, 6; mechanical engineering, 42; metallurgical engineering, 2; naval architecture, 73; naval intelligence, 13; ordnance, 10; photography, 1; petroleum engineering, 3; Medical Corps, 216; Supply Corps, 285; Civil Engineer Corps, 120; Dental Corps, 77; Chaplain Corps, 51.

Latest reports released by the Marine Corps show 2,300 officers have been recommended for transfer to the regular Marine Corps.

Latest Developments Of Warfare Stressed In New Academy Courses

Aerial science and other up-to-the-minute developments in warfare will be stressed in future midshipman training at the Naval Academy, Vice Admiral Aubrey L. Fitch, superintendent, announced. The course will cover everything from atomic energy to huge submarines, capable of discharging close to the target, whole convoys of either airplanes or guided missiles.

Annapolis will teach about 1,000 men a year in a course which is estimated to make pilots out of 40 percent of the graduates.

Midshipmen have a required total of 2,188 hours of recitation, of which 131 will be in aviation; 1,453 laboratory hours, with 206 in aviation; and 141 lectures, with 42 on air warfare.

Foreign Language Training Offered

A chance to learn a foreign language is offered under BuPers Circ. Ltr. 89-46 (NDB, 15 April). Officers of Naval Academy Classes 1938 to 1943 inclusive and temporary and reserve officers transferring to the regular Navy with corresponding dates of precedence, and between the ages 19 to 29 inclusive, may submit application. Classes in Chinese, Japanese, Russian, Spanish, French and German will begin 1 July at the Naval School (Naval Intelligence), Building T-30, Naval Receiving Station, Washington, D. C.

The course in Chinese will last 18 months, Japanese 14 months, Russian and German six months, Spanish and French three months with a minimum of four and a half hours of classroom instruction daily, six days a week.

Upon satisfactory completion of the course, students will be qualified as translators and interpreters of the language studied, with the qualification of "language officer."

Form OPNav-23-164 rev. 1-46 should be used in making application and should be forwarded through official channels by the CO to the Chief of Naval Personnel. Attn: Pers-422, Navy Department, Washington, D. C.

Spot-Promoted Officers To Remain If Needed

Officers who were promoted in return for agreement to stay on active duty beyond date of eligibility for separation, may remain on active duty in certain circumstances beyond 20 August, it was announced in Alnav 210-46 (NDB, 15 May).

Officers in this situation shall be retained on active duty until expiration of their agreements, if their agreements extend beyond 20 August and their services are required beyond that date. This modified Alnav 161-46 (NDB, 15 April), which provided that, with certain exceptions, all reserve personnel were to be on their way to SepCens prior to 20 August under a quota system (see ALL HANDS, May 1946, p. 63).

National Guard Duty Before 18th Birthday Counts on Longevity

Service in the National Guard before attaining the age of 18 may now be counted in computing service for longevity, it was announced in Alnav 191-46 (NDB, 30 April). Under authority of Alnav 200-44 (NDB, July-December 1944), such credit was denied.

This ruling was made retroactive to 1 June 1942 and will remain in effect until six months after the present war has been officially declared terminated by the President or Congress. Disbursing officers are authorized to adjust pay accounts for checkages made subsequent to Alnav 200-44 and to credit personnel not formerly credited for such underage service, provided such credits do not involve lapsed appropriations.

Existing rules authorizing credit for other National Guard Service (Alnav 200-44) remain in effect.

Plastic Artificial Eye Production Is Limited

The production of plastic artificial eyes, as developed by the Navy, has been discontinued at all but three activities, it was announced by BuMed in AlStaCon 231525 April. Naval Dental School, National Naval Medical Center, Bethesda, Md.; Naval Hospital, Philadelphia; and the Naval Hospital, San Diego, will continue making the artificial eyes.

The plastic eye differs from the conventional glass eye in that each one is custom made for the individual.

Six-Month CIC Courses, Starting 6 July, Offered

USN and USNR line officers of ranks of lieutenant commander and below may apply for a six-month training course in operational phases of combat information center, including fighter direction, under NavAct 50 (NDB, 31 May). Classes will convene 6 July and every two months thereafter at NRTS, Saint Simons Island, Ga.

To be eligible, reserve applicants must transfer to the regular Navy in accordance with BuPers Circ. Ltr. 288-45, revised (NDB, 15 November). Letters of application must include a signed statement to remain on active duty for one year after completion of the course, if selected, and be forwarded through official channels to reach BuPers, attn: Pers 4223, 30 days prior to the convening date of

each class. Naval aviators must forward applications via CNO. Applicants must indicate by date the class desired. Endorsement by CO should include a statement of availability and suitability for the training.

Marine Corps Eligible For Navy Prep Schools

Marine Corps reserve and selective service personnel who volunteered to remain on active duty until 1 Mar 1947, were eligible for nomination to the Naval Academy Preparatory School class convening 1 October of this year. Application deadline was 17 May.

Regular Marine Corps enlisted personnel also are eligible for appointment to the Preparatory School each year. Dates for nomination of future classes have not been set.

To be eligible, applicants must have three years of high school or the equivalent, must pass the required physical examination and must be between 17 and 21 years of age. For candidates who had had one year or more of active service, the age limit has been extended to 23.

Commercial Airlines Call for Communicators

Commercial airline companies of the U. S., among many other businesses, need trained radio operators. Veterans who were trained in communications while in the service comprise a large percent of communications personnel employed this year by airline companies.

When forwarding applications for employment, applicants should have in their possession a government license issued by the Federal Communications Commission. Telegraph licenses are issued in three classes, namely, radio telegraph operator first class and second class, and the restricted telegraph operators permit. Qualifications include practice and theory, extent of each depending on type of license. Application for license should be on FCC Form 756, in duplicate, filled out as an affidavit, but does not have to be notarized. Submit form to the examining officer or to the office concerned at the time the examination is to be taken.

Pamphlet containing part 13 of the rules and regulations of FCC, priced at five cents, is available on request addressed to the Superintendent of Documents, Government Printing Office, Wash., D. C. The same office will forward, on request enclosing 15 cents in cash, the study guide and reference material for commercial radio operators examinations.

Ships To Fly Citation Pennant At Foretruck

Ships authorized to fly the Presidential Unit Citation henceforth will display the pennant at the foretruck from sunrise to sunset while at anchor. General Order No. 232, thus amended provisions of General Order No. 187.

Public Information Service Being Placed On Firmer Footing

The Navy's Public Information Service has been put on firmer footing by the following developments:

- Enlistment of USNR and USN-I naval correspondents in the regular Navy was made possible by Alnav 220-46 (NDB, 15 May). They would enlist in the rating Sp(X) (NC), with provision they later change over to a general service rating (possibly journalist's mate, if that rating is established).

- SecNav has revealed postwar plans for the Public Information Service in a letter to the Chief of Naval Personnel.

- BuPers is considering establishment of a journalist's mate rating in the postwar rating structure (see p. 57).

Alnav 220 added Sp(X) (NC) to the list of specialist ratings which may be enlisted in the regular Navy under Alnav 51-46 (NDB, 31 January). The naval correspondent rating was added to category B of the list under Alnav 51, which states "functions of specialist ratings in category B will be integrated with general service ratings as determined by studies now in progress. Male specialists in category B will be required to change to general service ratings prior 1 Sept 1948 . . ."

SecNav's letter to the Chief of Naval Personnel declared the Navy's war-expanded Public Information Service will be continued in peacetime, and it was expected at least 250 enlisted billets would be open in the field. The letter said that experience gained in the war had demonstrated the worth of enlisted naval correspondents and the Fleet Home Town News Center as news gathering and information agents, and that it is considered essential that Navy Offices of Public Information continue to function in peacetime. The Fleet Home Town News Center is the agency which, toward the close of the war, began channeling news of naval personnel to their home town newspapers. ENC's gathered the news which the News Center published.

It is planned that billets will be established within all staffs, ashore and afloat, and in other naval activities as deemed necessary, for assignment of PIO personnel to assure adequate public information coverage, SecNav said. Provisions will be made for training personnel assigned to PIO activities.

The number of naval personnel assigned to public information will be prescribed by SecNav. Initially it will be limited to 500 persons, of whom not more than 250 will be commissioned.

For further information on ENC's, see ALL HANDS, April 1946, p. 77. For information on officer public information specialists, see ALL HANDS, February 1946, p. 37, and May 1946, p. 72.



Bluejacket (NaTechTraCen, Memphis)

Method of Changing Insurance Beneficiary Outlined for Personnel

Naval personnel desiring to change beneficiaries on National Service Life Insurance and U. S. Government Life Insurance policies have in many cases misunderstood the correct procedure, resulting in failure to effect a change.

BuPers pointed out that according to Veterans' Administration rulings, the following procedure must be followed:

"A change of beneficiary to be effective must be made by notice in writing, signed by the insured or his agent, and must contain sufficient information to identify the insured. Whenever practicable, such notice shall be given on blanks prescribed by the Veterans' Administration."

Changes of beneficiary are not accomplished by such forms as the confidential data sheet, the AV(N) beneficiary slip or the beneficiary slip for the service record and fitness report. These are Navy information forms only and do not in any way authorize changes of beneficiary of any NSI or GI contracts. While it is advisable to use a VA form, direct correspondence to the VA requesting a change of beneficiary is adequate.

Dependents to Fly Free Only in Emergencies

Dependents' travel by air transportation on "TR" now is authorized only in cases of emergency, it was announced in Alnav 190-46 (NDB, 30 April).

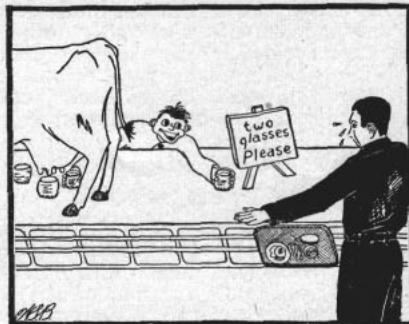
Air transportation on "TR" has been restricted to cases where it is necessary to make steamer connections for overseas travel, or when other emergency or hardship circumstances prevail as determined by the CO of the local activity at which the transportation request is issued.

Under circumstances other than the above, air travel within the U. S. must be performed at own expense, subject to claim for reimbursement. In such cases reimbursement will be made on basis of 4 cents per mile for each dependent 12 years of age or over and 2 cents per mile for each dependent 5 to 12 years of age.

New Bases Made Available To Dependents Overseas

Personnel based on Okinawa, the Philippines or Japan, or attached to fleet units based there, now may request their dependents be sent overseas to join them.

Alnav 201-46 (NDB, 30 April) announced request may be made subject to specified restrictions (including approval by the area commander) provided that personnel, after arrival of dependents, will have normal expectancy of at least one year of duty in the area. Alnav 215-46 (NDB, 15 May) later revised this to the extent that in Japan, personnel must have an expectancy of one year of duty only after submission of the application



The Irish Pennant (USNROTC, Notre Dame, Ind.)
"But it's fresher this way!"

for transportation of dependents. Approved applications are forwarded to Com 12 for furnishing of transportation.

Class A (dependents of officers, CPOs, PO1c, and PO2c) dependents will have preference over Class B (dependents of all ratings below PO2c).

Secretary Urges Salvaging of Lead

SecNav has directed that every effort be exerted to further the salvaging of lead from ships and equipment being scrapped, to help relieve the serious lead shortage. From a scrapped submarine approximately 350 tons of lead can be salvaged while airplanes contain from 20 to 250 pounds of salvageable lead, depending on the type.

The Navy declared surplus about 7,230 tons of lead and lead alloys worth \$940,000 between September, 1945, and 27 Apr 1946. Lead accumulated from equipment being decommissioned and scrapped in the U. S. is being declared surplus in 25-ton lots to the War Assets Administration. Lead declared surplus at overseas bases is given high priority space on ships returning to home ports.

Baggage Allowances Doubled for Dependents Traveling Overseas

The amount of personal baggage allowed for dependents of Navy personnel proceeding to or from overseas areas by government transportation has been increased by Alnav 187-46 (NDB, 30 April).

This order which was issued to conform to allowances of rail lines within the U. S. and commercial steamers in overseas travel, increases the allowance for each person 12 years of age or over from 175 pounds to 350 pounds. For each child 5 to 12 years of age, it has been increased from 87½ pounds to 175 pounds.

Distribution of Three Navy Medals Delayed

Delay in design and production of American Defense, Area Campaign and Victory Medals probably will hold up until late this year distribution of these medals to commands for further distribution to personnel entitled to wear them, BuPers announced in Alnav 177-46 (NDB, 15 April). BuPers Circ. Ltr. 4-46 (NDB, 15 January) previously had established procedure for distribution which now may have to be altered.

Meantime, BuPers Circ. Ltr. 86-46 (NDB, 30 April) affirmed previously announced dates beyond which service will not be counted toward eligibility to wear campaign medals. In an Executive Order signed by the President, the final dates were as follows: European-African-Middle Eastern Campaign Medal, not to be awarded for any service rendered subsequent to 8 Nov 1945; American Campaign and Asiatic Pacific Campaign Medals, not to be awarded for any service rendered subsequent to 2 Mar 1946.

WAY BACK WHEN

Pathfinder of the Seas

The traditions of our Navy come from the great deeds of our officers and men. Names such as John Paul Jones, Porter, Farragut and Dewey immediately spring to mind when naval heroes are considered. However, there are "peacetime naval heroes" as well as wartime heroes. Perhaps



their feats are not so spectacular, but these men have served their nation and their Navy with distinction.

Among these peacetime contributors was Matthew Fontaine Maury. In the field of science, no officer in the 19th century rendered so valuable a service as this "Pathfinder of the Seas."

Starting as a midshipman in 1825, he served at sea until he was beached for an injury. During this period he was shocked to learn that practically no information was available to aid the mariner in respect to winds, currents, best courses, etc. Thus in

the early 1840's, when he was appointed superintendent of the Depot of Charts and Instruments, he conceived the idea of collecting available data found in numerous log books and supplementing this with observations made several times daily by our ships—merchant as well as Navy. He instructed navigators to cast overboard at stated periods bottles containing a record of the ship's longitude, latitude, and date. They were also requested to pick up similar bottles, wherever found, and to note the exact time and position.

From these experiments, crude as they may seem to the precision instrument scientist of today, Maury derived enough information to draw important conclusions about winds, currents, paths of storms, quickest routes between great shipping ports—thereby laying the foundations of the modern science of navigation.

To this day Maury's pilot charts brought up to date are indispensable in making ocean travel safe and expeditious for all hands at sea.

Directive Clarifies Leave Policy for Men Returning to States

Men coming back to the States from tours of overseas duty can expect rehabilitation leave only if they come under the following categories:

- Those ineligible for immediate separation but who will become eligible for separation prior to 1 July.

- Those who departed from continental U. S. prior to 1 June 1945 and who have not had rehabilitation leave.

- Those entitled to combined rehabilitation-reenlistment leave for enlistments, reenlistments or extensions in accordance with BuPers Circ. Ltr. 308-45 (NDB, 15 October).

As announced in Alnav 226-46 (NDB, 15 May) men reporting from overseas who are not eligible for rehabilitation leave under the above provisions will be assigned by ComWesSeaFron and ComServLant respectively, and all matters pertaining to separation will be administered by the command to which assigned.

Rehabilitation leave accrues only for the period of continuous active duty outside the continental U. S. from the date of departure to the date of return. Sea duty in waters of the continental U. S. does not count for this leave.

Higher Pay Privileges, Cash Subsistence Ordered for Nurses

Navy nurses "got a raise" last month when Alnav 183 (NDB, 30 April) ordered subsistence payments in cash rather than in kind and ruled nurses shall receive pay of higher pay periods when eligible. The Alnav, based on Public Law 244 approved 3 Dec 1945, put nurses on an equal pay and allowance basis with all other Navy officers.

Prior to Alnav 183, nurses had been subsisted in kind at hospitals. Effective 1 May they are to receive cash subsistence at the rate of at least 70 cents per day (higher in case of dependents, or in certain ranks), but will have to reimburse the mess from which they eat. (Refer Art. 2147-3 (A), BuSandA Manual for subsistence amounts).

Nurses previously had not been credited with higher pay upon becoming eligible by length of service to enter the next higher pay period. Alnav 183 confers this benefit on them. (Refer Art. 2140-0 BuSandA Memoranda for information on pay periods).

Explaining what is meant by advancement to the next higher pay period, BuSandA pointed out there are six pay periods corresponding to ranks ensign through captain. An ensign with five years service may be advanced to the next pay period, without promotion in rank, and receive the base pay of a lieutenant (jg). A lieutenant (jg) with 10 years service may be advanced to the next pay period,

without actual promotion, and receive the base pay of a lieutenant, and so on.

Provisions of Alnav 183 will result in payments retroactive to 10 July 1944, where advancement to the next pay period is concerned, but not in the case of subsistence payments.

Although Public Law 244 was enacted last December, Alnav 183 was delayed pending a decision by the Comptroller General to clarify the law.

Nurses to be Separated At SepUnit (WR) Nearest Station or Entry Port

Navy Nurse Corps officers no longer will be transferred to the SepUnit (WR) nearest their home of record for discharge but instead will be separated at one of the SepUnits (WR) nearest their continental U. S. duty station or port of entry, as the case may be.

The only SepUnits (WR) where Navy Nurse Corps officers may be separated are: 2162 Broadway, New York; West Potomac Park, Wash., D. C.; Naval Repair Base, New Orleans; Naval Training Center, Great Lakes; and Balboa Park, San Francisco, according to Alnav 188-46 (NDB, 30 April).

Extra Mail Pay Forbidden, Regardless of Source

Extra compensation for performance of postal duties, regardless of the source of funds, is forbidden, it was announced in NavAct 48-46 (NDB, 15 May).

Additional compensation, which was paid by the government, for personnel holding MaM rating was \$4 per month on and after 1 Sept 1942. At that time personnel other than rated MaM were compensated in amounts ranging from \$10 to \$25 per month, depending on the class of post office to which they were assigned, plus an additional compensation of \$5 per month in post offices where money orders were written.

12,040 First Enlistments From 15 April to 10 May

During the period 15 April to 10 May there were 11,797 first enlistments in the regular Navy at recruiting stations; 243 first enlistments in the regular Navy outside the continental limits of the U.S.; 4,785 transfers to the regular Navy from USNR and USN-I; and 2,403 reenlistments and extensions of enlistments in the regular Navy.

From V-J Day through 10 May 218,556 men had enlisted in, transferred to or reenlisted or extended their enlistments in the regular Navy.

On 15 May, 465,590 regular Navy enlisted men were on active duty. On that same date there were 39,100 officers on active duty.

Activities Reminded To Guard Provisions From Deterioration

Further Navy efforts to conserve food in these days of mounting worldwide scarcities were seen in AlStaCon 262336 April. The dispatch ordered all activities receiving provisions from decommissioned vessels for storage to take every precaution to protect the stores from deterioration. The message covered all provision stocks, including those which are or may be declared surplus.

Previously, Alnav 71-46 (NDB, 15 February) had directed conservation of flour and reduction of waste, and Alnav 121-46 (NDB, 15 March) had directed conservation and effective use of food stocks on hand. SecNav James Forrestal has declared: "The U. S. Navy gladly joins in the vitally important work . . . and will do all in its power to increase the supply of food for the relief of starving populations abroad."

Retired Enlisted Men, Some Fleet Reservists May Remain Until March

Fleet Reservists transferred to or recalled from the Fleet Reserve prior to 15 Aug 1945, and retired enlisted men, may remain on active duty voluntarily after 1 Sept 1946, but not beyond 1 Mar 1947, under Alnav 213-46 (NDB, 15 May). Previously, under Alnav 137-46 (NDB, 31 Mar), only USNR and USN-I men were accepted for this program.

Coat Issue to Separatees Dependent Upon Weather

Overcoats no longer will be issued to separatees except in cases where in the opinion of the commanding officer weather conditions at the ultimate destination warrant them, according to Alnav 196-46 (NDB, 30 April). Alnavs 385-45 (NDB, 30 November) and 437-45 (NDB, 31 December) authorized issuance of one dress blue jumper, one pair of blue trousers and one overcoat. With advent of warmer weather, however, it was decided that overcoats generally are no longer necessary.



The Hoist (NTC, San Diego)
"Bostrum sure knows how to get those dress edges!"

Here Are Rules Governing Wearing of Awards

Rules outlining the correct manner in which decorations, medals and ribbons must be worn have been summarized by BuPers. The rules previously have been published separately in circular letters, Alnavs and other directives.

Ribbons of decorations, medals and badges should be worn in horizontal rows of three each without intervals between ribbons, and the rows should be spaced ¼ inch apart. If not in multiples of three, the upper row should contain the lesser number and the center of this row should be over the center of the one below.

Ribbons. The ribbons are to be worn on the left breast and clear of the lapel, so far as is practical, or in the same approximate position if the uniform has no lapel. The arrangement of ribbons by seniority shall be from top down and from inboard to outboard. The upper edge of the bottom row shall be on a line one inch below the point of the shoulder, or halfway between the top and bottom of the shoulder where the sleeve is joined.

Precedence Of Ribbons. Ribbons of American decorations, medals and badges are worn in the following order:

- Medal of Honor (Navy and Army).
- Marine Corps Brevet Medal.
- Navy Cross.
- Distinguished Service Cross (Army).
- Distinguished Service Medal (Navy and Army).
- Silver Star Medal (Navy and Army).
- Legion of Merit (Navy and Army).
- Distinguished Flying Cross (Navy and Army).
- Navy and Marine Corps Medal.
- Soldier's Medal (Army).
- Bronze Star Medal (Navy and Army).
- Air Medal (Navy and Army).
- Commendation Ribbon.
- Purple Heart (Navy and Army).
- Specially Meritorious Medal (no longer awarded).
- Presidential Unit Citation.
- Distinguished Unit Badge (Army) (worn by naval personnel on left breast with other awards).
- Navy Unit Commendation.
- Army Commendation Ribbon.
- Navy Good Conduct Medal.
- U. S. of America Typhus Commission Medal (awarded by the President).
- Gold Life Saving Medal (Treasury).
- Silver Life Saving Medal (Treasury).
- Dewey Medal.
- Sampson Medal.
- NC-4 Medal.
- Byrd Antarctic Expedition Medal (1928-30).
- Second Byrd Antarctic Expedition Medal (1933-35).
- Reserve Special Commendation Ribbon.
- Good Conduct Medals (Marine Corps, Coast Guard and Army).
- Organized Marine Corps Reserve Medal.
- Civil War Campaign Medals (Navy and Army).
- Indian Campaign Medal (Army).
- Expeditionary Medal (Navy and Marine Corps).

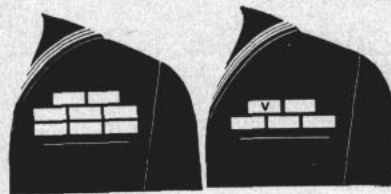
- Spanish Campaign Medal (Navy and Marine Corps).
- Spanish War Service Medal (Army).
- Army of Puerto Rican Occupation (Army).
- Army of Cuban Occupation (Army).
- Philippine Campaign Medal (Navy and Army).
- Philippine Congressional Medal (Army).
- China Relief Expedition Medal (Navy).
- China Campaign Medal (Army).
- Army of Cuban Pacification Medal (Navy).
- Nicaraguan Campaign Medal (1912).
- Mexican Service Medal (Navy and Army).
- Haitian Campaign Medal (1915).
- Mexican Border Service Medal (Army).

- Dominican Campaign Medal.
- Victory Medal—World War I (Navy and Army).
- Army of Occupation of Germany Medal (1918-23).
- Haitian Campaign Medal (1919-20).
- Second Nicaraguan Campaign Medal.
- Yangtze Service Medal.
- China Service Medal.
- American Defense Service Medal (Navy and Army).
- Area Campaign Medals (worn in order earned):
 - (a) American Area Campaign Medal,
 - (b) European-African-Middle Eastern Area Campaign Medal,
 - (c) Asiatic-Pacific Area Campaign Medal.
- Victory Medal—World War II.
- Army of Occupation Medal.
- Philippine Defense Ribbon.
- Philippine Liberation Ribbon.
- Admiral Trenchard Section, Navy League, Turret-Gun-Pointer Medal.
- Knox Trophy Gun-Pointer Medal.
- Bailey Medal.
- Naval Reserve Medal.
- Medal for Merit (for civilians only).
- Medal of Freedom (for civilians only).
- Merchant Marine Distinguished Service Medal.
- Merchant Marine Meritorious Service Medal.
- Merchant Marine Gallant Ship Unit Citation.
- Merchant Marine Mariners Medal.
- Merchant Marine Combat Bar.
- Merchant Marine Defense Bar.
- Merchant Marine War Zone Bars (worn in order earned):
 - (a) Atlantic War Zone,
 - (b) Mediterranean Middle-East War Zone,
 - (c) Pacific War Zone.

Ribbon Rules

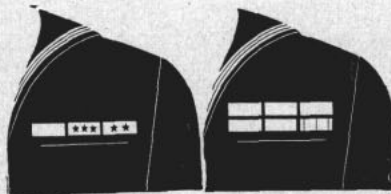
The correct manner in which ribbons of decorations, medals and badges are worn is shown in the drawings below.

• Ribbons are worn in horizontal rows of three each, if you have that many; the rows are ¼ inch apart. Any row with less than three ribbons becomes the top row and is centered over the row or rows beneath it.



• Only one "V" (Combat Distinguishing Device) may be worn upon a single ribbon. Personnel awarded the Legion of Merit or the Bronze Star for services or acts performed in actual combat with the enemy are authorized to wear the "V".

• Stars shall be placed in a horizontal line close to and symmetrically about the center of the ribbon. A silver star, worn in lieu of five bronze or gold stars, shall be located as near the center of the ribbon as the symmetrical arrangement permits.



• Ribbons for medals or badges for excellence in small arms firing are worn immediately following (note striped ribbon above) all decorations, medals and ribbons, as outlined in accompanying article. Foreign decorations and medals are worn to the left of all American decorations.

Ribbons of medals or badges awarded for service performed while in the Army, Marine Corps or other branch of the government, if not included in the foregoing, should be worn in the order specified by the respective services. If awarded for war or campaign service, they should be worn to conform with the chronological sequence outlined above. If for other meritorious conduct or service proficiency, they should be worn to conform with the general plan as outlined and as far as consistent with the order specified by their respective services.

Gold Stars. If an individual already holds any one of the Navy's decorations listed above and is awarded the same decoration a second or subsequent time, a gold star will be issued. This shall be worn on the ribbon bar of the first award when ribbons only are worn. In lieu of five such stars upon one ribbon, one silver star shall be worn. In the event the second or subsequent award is an Army decoration, an oak leaf cluster issued by the War Department shall be worn in lieu of a gold star.

Bronze Stars. Stars authorized ribbon, the Presidential Unit Citation to be worn upon the commendation

ribbon, and the Navy Unit Commendation ribbon, indicate subsequent awards. In lieu of five such stars, one silver star is worn.

Stars to indicate participation in certain engagements with Area Campaign Medal theaters are of bronze. In lieu of five such stars, one silver star is worn. The official list of engagements for which "battle stars" have been authorized will be found in Operations and Engagement Stars, NavPers 15,632, published 31 Aug 1944. A revision of this publication now is being developed. It will be ready soon and will be an up-to-date list of engagements for which stars have been authorized.

The first star authorized to be worn upon a ribbon shall be centered upon the ribbon. If more than one star is worn, they shall be placed in a horizontal line close to and symmetrically about the center of the ribbon. A silver star, worn in lieu of five bronze or gold stars, shall be located as near the center of the ribbon as the symmetrical arrangement permits. Stars are placed upon the ribbon point down.

'V' For Combat. Personnel awarded the Legion of Merit or the Bronze Star Medal for services or acts performed in actual combat with the enemy are authorized to wear a Combat Distinguishing Device, a bronze block letter "V" in the center of the ribbon. Only one "V" may be worn upon a single ribbon. Gold or silver stars indicating more than one award of the same decoration are arranged symmetrically, the first star to the wearer's right of the "V", the second to the left, etc. Personnel officially authorized to wear foreign decorations and medals place the decorations or medals to the left of all American decorations or medals. They may not be worn unless at least one American decoration or medal also is worn.

Marksmanship Awards. Medals or badges for excellence in small arms firing are worn immediately following all decorations, medals and ribbons listed above. When ribbons are prescribed, any of these medals or badges not having a ribbon may be worn one quarter inch below the center of the bottom row of ribbons. They are worn in the following order:

- (a) Expert team rifleman's medal (no longer issued).
- (b) Expert rifleman's bar (no longer issued).
- (c) Sharpshooter's medal (no longer issued).
- (d) Expert pistol shot's pin (no longer issued).
- (e) Navy and Marine Corps distinguished marksman's medal.
- (f) Navy and Marine Corps distinguished pistol shot's medal.
- (g) Fleet rifleman's badge.
- (h) Fleet pistol shot's badge.
- (i) Navy expert rifleman's medal (not worn if (e) is held).
- (j) Marine Corps expert rifleman's badge (not worn if (e) is held).
- (k) Navy expert pistol shot's medal (not worn if (f) is held).

- (l) Marine Corps expert pistol shot's badge (not worn if (f) is held; no longer issued).

These badges can be worn but none of the ribbons of the decorations, medals or badges listed above shall be worn at the same time.

- (a) The following are medals or badges for excellence in small arms:

- (1) Marine Corps sharpshooter's badge.
 - (2) Marine Corps marksman's badge.
 - (3) Marine Corps rifle competition badge.
 - (4) U. S. Fleet, Fleet and Force rifle match "place" medal.
 - (5) Marine Corps division rifle competition badge.
 - (6) Marine Corps pistol competition badge.
 - (7) U. S. Fleet, Fleet and Force pistol match "place" medal.
 - (8) Marine Corps division pistol competition badge.
 - (9) Lauchheimer trophy badge.
 - (10) Medals won by winning teams in Fleet and Force rifle and pistol matches.
 - (11) Medals won in the national matches.
 - (12) Medals given by the National Rifle Assn. at matches held under the cognizance of that association.
 - (13) Short-range battle-practice medal for midshipmen.
 - (14) Medal for Naval Reserve Officers' Training Corps.
 - (15) The Marine Corps Basic Badge (for infantry weapons other than rifle) has the following bars fastened between the holding pin and medallion of basic badge:
 - (a) Expert, bayonet (no longer issued).
 - (b) Expert or sharpshooter, pistol (.38 and .45 cal.).
 - (c) Expert or sharpshooter, automatic rifle.
 - (d) Expert or sharpshooter, sub-machine gun.
 - (e) Expert or sharpshooter, machine gun (no longer issued).
 - (f) Expert or sharpshooter, Thompson sub-machine gun (no longer issued).
 - (g) Expert or sharpshooter, howitzer (no longer issued).
 - (h) Expert or sharpshooter, light artillery (no longer issued).
 - (i) Expert or sharpshooter, defense artillery (no longer issued).
 - (j) Expert or sharpshooter, carbine.
 - (16) Marine Corps Expert Rifleman's Requalification Bar (worn with Expert Rifleman's Badge).
- (b) Badges of military societies commemorative of wars of the U. S.
 - (c) Badge of the Regular Army and Navy Unions and of the Army and Navy Union of the U. S.
 - (d) Corps and division badges of Civil War and Spanish War.
 - (e) Badge of the Enlisted Men's Abstinence League.

Naval Personnel Urged To Buy Savings Bonds

Pledging Navy cooperation in the fight against inflation, Assistant Secretary of the Navy for Air John L. Sullivan urged naval personnel to invest in U. S. Savings Bonds, in Alnav 209-46 (NDB, 15 May).

In the dispatch, Mr. Sullivan stated: "The struggle to control inflation must be greatly intensified. A basic cause of inflation well known to all of us is an excess of spending coupled with a shortage of products. It is our duty as citizens to help combat inflation by combatting rising prices. To combat rising prices means resisting the desire to acquire, the temptation to spend those extra dollars. The key is continued saving for future needs and the best and safest way to save is still U. S. Savings Bonds, their purchase through the allotment plan, and their retention.

"It is my hope that all Navy personnel will support the program to control inflation by putting more money into savings bonds that would otherwise compete for scarce goods. We are all vitally concerned with our country's future, with the dangers that threaten its well being, and just as we backed the attack we must now back our future by investing regularly in U. S. Savings Bonds."

Red Cross 'Home Reports' Now Available To COs

Navy men with family problems, other than cases of dependency discharge, may request their COs to refer directly to the American Red Cross for a "home report" on the case, according to BuPers Circ. Ltr. 93-46 (NDB, 30 April).

Dependency discharges, on the other hand, must be referred to BuPers which will take action to get a "home report" if necessary. This procedure was established in BuPers Circ. Ltr. 293-44 (NDB, July-December 1944). The CO may, however, request the Red Cross to assist dependents in preparing the required affidavits.

COs referring cases to the Red Cross should consult the nearest field director, or if none is available, they should forward request to the American Red Cross, Washington, D. C. Requests are not to be submitted to BuPers or to local chapters of the American Red Cross.

Transmission of emergency welfare messages was speeded up AlCom 77, 11 March, which authorized use of Navy communications by the Red Cross.

Security Measures Lifted on Meal Chits

Security measures affected even Navy meal tickets during the war. To keep military movements secret, the starting point and destination were omitted in filling out the tickets. Now under AlStaCon 242224 April, the meal tickets are to be filled out completely as required by Navy Travel Instructions, Article 2509-11(c).

Latest Word on Enlisted Retirement

ALL HANDS attempted to answer the question "What's the dope on retirement?" in December 1944. Since that time countless letters have been received from enlisted men with that same question as their theme. So numerous have been the inquiries on retirement directed at BuPers that ALL HANDS is reprinting that part of the article pertaining to enlisted personnel, adding such additional information as has developed.

In general, the Navy and Marine Corps operate under the same retirement laws and their retirement regulations are the same in most cases. (Coast Guard retirement is considered at the end of this article.)

Active duty service, as used for purposes of retirement, includes generally any combination of regular and reserve service, commissioned, warrant or enlisted.

An enlisted person entitled to pension for service-connected disabilities may elect to accept pension from the Navy or pension from the Veterans' Administration. Navy disability pension requires a minimum of 10 years active service. Pension or compensation varies, depending on the nature of the disability.

Once retired, an enlisted man remains on the retired list even though recalled to active duty.

Enlisted personnel under present laws cannot draw both retired pay and disability pension except that Public Law 314, 78th Congress, authorized persons of the regular Navy drawing retired pay for military or naval service and eligible for pension or compensation from the Veterans Administration to accept the latter if they waive the equivalent in retired pay. To prevent duplication of payments the department with which any such waiver is filed will notify the Veterans Administration of the receipt of the waiver, the amount waived and the effective date of the reduction in retired pay (the individual need take no other action beyond signing the waiver).

Under present ruling of the Bureau of Internal Revenue, retired pay for service is subject to federal income tax whereas retired pay for disability incurred in the line of duty and Veterans' Administration pensions are not subject to taxation.

All members of the Fleet Reserve and all personnel on the retired list of the regular Navy are eligible for medical treatment for themselves and their dependents. If a man is discharged from the Fleet Reserve or dropped from the retired list of the regular Navy at his own request he forfeits his rights to all benefits and privileges, including medical treatment.

Retirement laws and regulations affecting enlisted personnel of the Navy and Marine Corps are very com-

prehensive. A summary of retirement procedure follows:

RETIREMENT OF REGULAR PERSONNEL FOR SERVICE

(Direct to Retired List)

Enlisted men of the regular Navy and Marine Corps, upon completion of 30 years service in the armed forces and upon their own application, are entitled to be placed on the retired list. (In time of war, an enlisted man, if he is retired, may be immediately placed on active duty on the retired list.) After retirement, such a man, while on inactive duty, draws retired pay at the rate of 75 percent of the base pay and 75 percent of longevity he was receiving on the date he was retired. For the purpose of computing service, all active duty service in the Navy, Marine Corps, Coast Guard and Army and the various reserve components thereof is counted as service with a complete enlistment during minority counting as four years. Double time is counted for the following service:

Spanish-American War, from 21 April 1898 to 11 April 1899, inclusive.

Marine Corps and Army service in Puerto Rico and Hawaii prior to 24 April 1904, from date of arrival to date of departure.

Marine Corps and Army service in

China, Cuba, the Philippines Islands, Guam, Alaska and Panama, prior to 25 Aug 1912, from date of arrival to date of departure.

(Transfer to Fleet Reserve)

Class F-4-C, Fleet Reserve, Navy, or Class I (b), Fleet Marine Corps Reserve:

An enlisted man in the regular Navy or Marine Corps will be transferred to this class, upon his application, if he has completed 16 years of active naval service and if he meets one of the following conditions: (1) Serving in the regular Navy or Marine Corps on 1 July 1925. (2) Having been discharged from the regular Navy or Marine Corps prior to 1 July 1925, reenlisted in the regular Navy or Marine Corps within three months from the date of discharge. (3) Serving in the Naval Reserve Force on 1 July 1925 in an enrollment entered into within four months from the date of his discharge from the regular Navy and thereafter reenlisted in the regular Navy within three months from the date of his discharge from the Naval Reserve.

While on inactive duty a member of Class F-4-C of the Fleet Reserve receives re-tainer pay at the rate of one-third of the base pay which he was receiving at the time of transfer plus all (not one-third) longevity pay he had accumulated up to the time of his transfer to the Fleet Reserve.

Once on the inactive list of the Fleet Reserve, his accumulation of longevity pay credit stops and never begins again unless

FLEET RESERVE, RETIRED ENLISTED PAY TABLES

(for members of the Fleet Reserve and enlisted personnel retired after 30 years of service, when on inactive list.)

The following tables are based on the Pay Readjustment Act of 1942, the provisions of which are explained in detail in the accompanying article.

The totals below were arrived at in each case by adding the percentage of base pay paid for each class of the Fleet Reserve and the specified amount of longevity pay allowed. Time spent in the inactive Fleet Reserve does not increase the longevity credit upon transfer to the retired list.

FLEET RESERVE (F-3 AND 4-C), 16-YEAR CLASS

Following totals include 1/2 base pay with all longevity:

Pay Grades	1	1-A	2	3	4	5	6	7
12-15 years (20%)	73.60	67.20	60.80	51.20	41.60	35.20	28.80	26.67
15-18 " (25%)	80.50	73.50	66.50	56.00	45.50	38.50	31.50	29.17
18-21 " (30%)	87.40	79.80	72.20	60.80	49.40	41.80	34.20	31.67
21-24 " (35%)	94.30	86.10	77.90	65.60	53.30	45.10	36.90	34.17
24-27 " (40%)	101.20	92.40	83.60	70.40	57.20	48.40	39.60	36.67
27-30 " (45%)	108.10	98.70	89.30	75.20	61.10	51.70	42.30	39.17
30 & Over (50%)	115.00	105.00	95.00	80.00	65.00	55.00	45.00	41.67

Add 10% if credited with extraordinary heroism.

FLEET RESERVE (F-3 AND 4-D), 20-YEAR CLASS

Following totals include 1/2 base pay with all longevity:

Pay Grades	1	1-A	2	3	4	5	6	7
18-21 years (30%)	110.40	100.80	91.20	76.80	62.40	52.80	43.20	40.00
21-24 " (35%)	117.30	107.10	96.90	81.60	66.30	56.10	45.90	42.50
24-27 " (40%)	124.20	113.40	102.60	86.40	70.20	59.40	48.60	45.00
27-30 " (45%)	131.10	119.70	108.30	91.20	74.10	62.70	51.30	47.50
30 & Over (50%)	138.00	126.00	114.00	96.00	78.00	66.00	54.00	50.00

Add 10% if credited with extraordinary heroism or if conduct marks for 20 years exceed 95%. DO NOT add 20% if credited with both.

(NOTE: In the above tables, the 30 years and over longevity pay range is included because a Fleet Reservist may have 30 years' active duty service credited for pay purposes, covering certain active service rendered subsequent to transfer to the Fleet Reserve, which does not entitle him to receive the benefits of 30-year retirement of 3/4 of base pay and 3/4 of longevity.)

FLEET RESERVE (F-5), NEW 20-YEAR CLASS

One-half base pay, only, as Fleet Reservist:

Pay Grades	1	1-A	2	3	4	5	6	7
	69.00	63.00	57.00	48.00	39.00	33.00	27.00	25.00

Add all longevity upon completion of 30 years. Longevity, based on length of active service, makes totals the same as those given in table immediately above, except 10% increase does not accrue to Class F-5 for extraordinary heroism or 95% marks in conduct.

RETIRED LIST—30 YEARS OR MORE ACTIVE DUTY SERVICE

Three-fourths base pay plus 3/4 longevity:

Pay Grades	1	1-A	2	3	4	5	6	7
27-30 years (45%)	150.08	137.03	123.98	104.40	84.83	71.78	58.73	54.38
30 & Over (50%)	155.25	141.75	128.35	108.00	87.75	74.25	60.75	56.25

(NOTE: In the above table, the 27 to 30-year longevity pay range is included because a man may have 30 years' active duty service credited for retirement purposes but NOT for pay purposes (i.e., discharge prior to expiration of enlistment, of minority enlistment counting as full enlistment). The rates of pay of enlisted men of the insular force of the Navy (Philippines and Guam) are one-half the rates of pay prescribed for enlisted men of the regular Navy in corresponding grades. This means one-half the rates for active duty, and one-half of the above Fleet Reserve and retirement rates.)

and until he is recalled to active duty. Additional longevity pay credit is allowed for such additional active duty of Fleet Reserve and retired enlisted personnel. In addition, the Fleet Reserve pay will be increased by 10 percent for a man who is credited with extraordinary heroism in line of duty. In such cases, extraordinary heroism is determined under the same procedure as outlined for officers, namely the determination of the Board of Decorations, Medals and Awards.

Class F-4-D, Fleet Reserve, Navy, or Class I (c), F.M.C.R.:

Any man who can qualify for Class F-4-C, if he delays his application until the completion of 20 or more years of naval service, is transferred to Class F-4-D of the Fleet Reserve. A member of Class F-4-D, while on inactive duty, receives retainer pay at the rate of one-half the base pay he was receiving at time of transfer, plus all (not one-half) longevity pay. In addition, this pay will be increased 10 percent if he is credited with extraordinary heroism in line of duty or if his average marks in conduct for 20 or more years are not less than 95 percent of the maximum. He may not receive 20 percent credit for both, however.

Class F-5, Fleet Reserve, Navy, or Class I (d), F.M.C.R.:

Enlisted men of the regular Navy who first enlisted in the Navy (or Marine Corps) after 1 June 1925 or who reenlisted therein after 1 July 1925, having been out of the regular Navy (or Marine Corps) more than three months, who were not serving in the regular Navy (or Marine Corps) on 1 July 1925, may, upon application, be transferred to Class F-5 of the Fleet Reserve on the completion of at least 20 years' active duty, provided they are physically and otherwise qualified to perform duty in time of war. *Ability to perform limited duty on shore fulfills the requirements of the law.* A member of Class F-5 of the Fleet Reserve, while on inactive duty, receives retainer pay at the rate of one-half the base pay he was receiving at the time of transfer.

In computing length of service for transfer to the Fleet Reserve, there is no requirement that such service be continuous. This provision is called particularly to the attention of enlisted men of the regular Navy with broken service, that is, intermittent periods of enlistment interrupted by return to civilian life. This class of personnel has directed numerous queries to BuPers on this point, as to whether their service must have been continuous for them

to rate transfer to the Fleet Reserve. The answer is no.

Another question often raised is whether all service must be in the regular Navy. No. Active duty reservist service counts, so long as other requirements are met and the person is in the regular Navy at the time of transfer.

Class F-4-C, F-4-D Physical

Class F-4 is divided into four physical categories as follows:

- Class A—Those fit for the duties of their ratings at sea, with due allowance for age and length of service.
- Class B-1—Physically qualified for mobilization ashore only (including foreign shore).
- Class B-2—Physically qualified for mobilization ashore only, limited to duty within continental limits of U. S.
- Class C—Those unfit for any duty.

Fleet Reservists, Class F-4, who are physically examined and found unfit for any duty will be transferred to the retired list of the regular Navy upon receipt of authority from BuPers.

Class F-5 Physical Classifications

Class F-5 is divided into three physical categories as follows:

- Class A—Those fit for the duties of

RETIRED PAY FOR COMMISSIONED AND WARRANT OFFICERS

TYPE OF RETIREMENT	Length of Service for Pay Purposes	RANK FOR PAY PURPOSES													
		W. O.	C. W. O. less than 10 Yrs. Comm. Service	C. W. O. over 10 Yrs. Comm. Service	C. W. O. over 20 Yrs. Comm. Service	Ens. 2nd Lieut.	Lt. (jg) 1st Lieut.	Lieut. Captain	Lt. Cdr. Major	Cdr. Lt. Col.	Commo-dore and Capt.; Colonel	Rear Adm. Lower Half; Brig. Gen.	Other Flag and General Officers		
RETIREMENT OF ALL OFFICERS at 75% of base pay and 75% of longevity for: A—Physical disability incurred in line of duty (at any time). B—30 years or more active duty service. See article for service which qualifies. C—Upon reaching age 62.	Under 3 Yrs.	\$112.50	\$131.25	.....	.....	\$112.50	\$125.00	\$150.00	\$187.50	\$218.75	\$250.00	\$75.00—ADMIRALS AND GENERAL OFFICERS DRAW NO LONGEVITY	\$500.00—ADMIRALS AND GENERAL OFFICERS DRAW NO LONGEVITY
	3 Yrs. or More	118.13	137.81	.....	.....	118.13*	131.25	157.50	196.88	229.69	262.50		
	6 Yrs. or More	123.75	144.38	.....	.....	137.50	137.50	165.00	206.25	240.62	275.00		
	9 Yrs. or More	129.38	150.94	over 10yrs. \$172.50	.....	143.75	143.75*	172.50	215.63	251.57	287.50			
	12 Yrs. or More	135.00	157.50	180.00	.....	150.00	180.00	180.00	225.00	262.50	300.00			
	15 Yrs. or More	140.63	164.06	187.50	.....	156.25	187.50	187.50*	234.38	273.44	312.50			
	18 Yrs. or More	146.25	170.63	195.00	over 20yrs. \$243.75	162.50	195.00	243.75	243.75	284.38	325.00				
	21 Yrs. or More	151.88	177.19	202.50	253.13	168.75	202.50	253.13	253.13*	295.31	337.50				
	24 Yrs. or More	157.50	183.75	210.00	262.50	175.00	210.00	262.50	306.25	306.25	350.00				
	27 Yrs. or More	163.13	190.31	217.50	271.88	181.25	217.50	271.88	317.19	317.19	362.50				
30 Yrs. or More	168.75	196.88	225.00	281.25	187.50	225.00	281.25	328.13	375.00	375.00					
RETIREMENT FOR SERVICE for 20 years or more active duty service, at least 10 of which shall have been commissioned service. Totals are based upon 2 1/2% of monthly pay plus longevity, multiplied by number of years of service for which entitled to credit for pay purposes. Total not to exceed 75%. Fractional periods of 6 months or more count as one year.	20 Yrs.	NOT ELIGIBLE	NOT ELIGIBLE	NOT ELIGIBLE	\$162.50	\$108.33	\$130.00	\$162.50	\$162.50	\$189.59	\$216.66	\$250.00	\$333.33		
	21 Yrs.				177.19	118.12	141.75	177.19	177.19	206.72	236.25	262.50	350.00		
	22 Yrs.				185.63	123.75	148.50	185.63	185.63	216.56	247.50	275.00	366.67		
	23 Yrs.				194.06	129.37	155.25	194.06	194.06	226.41	258.75	287.50	383.33		
	24 Yrs.				210.00	140.00	168.00	210.00	210.00	245.00	280.00	300.00	400.00		
	25 Yrs.				218.75	145.83	175.00	218.75	218.75	255.21	291.67	312.50	416.67		
	26 Yrs.				227.50	151.66	182.00	227.50	227.50	265.41	303.34	325.00	433.33		
	27 Yrs.				244.69	163.13	195.75	244.69	244.69	285.47	326.25	337.50	450.00		
	28 Yrs.				253.75	169.17	203.00	253.75	253.75	296.04	338.33	350.00	466.67		
	29 Yrs.				262.81	175.21	210.25	262.81	262.81	306.62	350.41	362.50	483.33		
	30 Yrs. or More				\$168.75	\$196.88	\$225.00	281.25	187.50	225.00	281.25	328.13	375.00	375.00	500.00

* Ensign over 5 yrs.: \$131.81; Lt. (jg.) over 10 yrs.: \$172.50; Lieut. over 17 yrs.: \$234.30; Lt. Comdr. over 23 yrs.: \$295.31.

their rating at sea, with due allowance for age and length of service.

• Class B-1—Physically qualified for mobilization ashore only (including foreign shore).

• Class B-2—Physically qualified for mobilization ashore only, limited to duty within the continental limits of U. S.

Fleet Reservists, Class F-5, who are physically examined and found unfit for any duty will be transferred to the retired list of the regular Navy upon receipt of authority from BuPers.

All men being physically examined for transfer to this class of fleet reserve must be physically qualified to perform duty in time of war. Those men physically examined for transfer to this class and found not qualified to perform duty in time of war normally will be discharged from the naval service. All cases of this nature will be referred to BuPers for final decision. If discharge is ordered by BuPers individuals shall be informed of their privilege to apply either for disability pension from the Navy or pension from the Veterans Administration.

Discharge from Fleet Reserve

If a man elects to be discharged from the Fleet Reserve, thereby forfeiting the benefits of the classification, there is no provision of law whereby he may claim or receive such benefits at a later date, unless he meets the requirements for reenlistment and is reenlisted in the regular Navy and later transferred to the Fleet Reserve or retired lists.

(Transfer to Retired List Via Fleet Reserve)

Members of Class F-4 and F-5 of the Fleet Reserve and members of F.M.C.R., upon completion of 30 years' service, active and inactive, are transferred, without application, to the retired list of the regular Navy. (In wartime, any such personnel on active duty at the time would normally be immediately recalled to active duty on the retired list.) They will also be placed on the retired list prior to completion of 30 years' service if they are found not physically qualified for duty at sea or on foreign service. The retirement pay upon such transfer is the same for Class F-4 members as they were receiving as Fleet Reservists. Class F-5 members, on completion of 30 years' service, are entitled to full credit for longevity pay (that is, the 50 percent of their base pay is increased by 5 percent of base pay for each three years of service).

FOR DISABILITY

(Retirement)

As explained above, Fleet Reservists found incapacitated for duty are transferred to the retired list, regardless of whether they have completed 30 years' service. Disabled enlisted personnel eligible for the Fleet Reserve, under current procedure, usually are transferred to the Fleet Reserve and thence to the retired list at the rates of pay outlined under retirement for service, provided they so request.

Regular Navy enlisted personnel whose service does not put them within reach of transfer to the Fleet Reserve are, if disabled in line of duty, discharged from the service and turned over to the Veterans Administration for compensation.

Any enlisted man who has served in the Navy or Marine Corps, or both, for a total of not less than 20 years active duty, and who has not been discharged for misconduct, may, in lieu of being provided with a home in the Naval Home at Philadelphia, apply for relief under Section 4756, Revised Statutes. If granted, relief is a sum equal to one-half the pay of the applicant's rating at the time of discharge. This pension will not be awarded to any person who is in receipt of a pension from the Veterans Administration. In any case where a naval pension is awarded under Section 4756, Revised Statutes, and the pensioner subsequently applies for a regular pension from the Veterans Administration, the Veterans Administration will permit the individual concerned to elect which pension he desires to receive.

An enlisted man who has served in the Navy or Marine Corps, or both, for not less than 10 years active duty, and who has not been discharged for misconduct, may, if not receiving a pension from the Veterans Administration, apply for relief under Section 4757, Revised Statutes. Upon application, SecNav is authorized to con-

vene a board of not less than three naval officers, one of whom is to be a surgeon, to conduct an examination and to recommend a suitable amount of relief and for a specified period of time.

Retired Enlisted Personnel on Active Duty

Enlisted personnel retired after 30 years' active service upon return to inactive duty on the retired list retain the highest enlisted rating attained while on active duty, with the retired pay thereof.

Ex-Fleet Reservists on the retired list when subsequently released to inactive duty revert to the rating and classification held at the time of original transfer to the Fleet Reserve, with longevity pay credit for additional active duty.

For additional information on enlisted personnel on the retired list who held temporary commissions or warrant status, see paragraph under Temporary Officers.

Fleet Reserve Personnel on Active Duty

This class of personnel returns to inactive status in the Fleet Reserve in the ratings held upon original transfer to the Fleet Reserve, plus longevity pay credit for additional active duty performed since original transfer to the Fleet Reserve, unless retired in the temporary rank held on active duty because of physical disability.

Legislation designed to make permanent the temporary higher wartime enlisted ratings of Fleet Reservists on active duty is now pending in Congress (S. 1438).

For additional information on enlisted personnel of the Fleet Reserve who held Temporary Commissioned or Warrant States see par. under Temporary Officers.

INSULAR FORCE PERSONNEL

(Transfer Via Fleet Reserve or Retired List)

In addition to the above classes of naval

personnel, the men of the insular force of the U. S. Navy, who are natives of the Philippines and Guam, also are eligible for the Fleet Reserve or the retired list if they meet the service requirements. Their pay, base and longevity, is one-half that of regular Navy personnel, and their Fleet Reserve and retired pay is correspondingly one-half that of regular personnel.

The insular force was established by an Executive Order of 5 April 1901 and has been a part of the naval service ever since.

RESERVE PERSONNEL RETIREMENT FOR SERVICE

Unless they are eligible for retirement otherwise, enlisted men of the Naval Reserve and Marine Corps Reserve are placed on the honorary retired list without pay or allowance upon reaching the age of 64 or upon their own request after completion of 20 or more years' active or inactive service in the reserve. Under the terms of the Naval Reserve Act, service in the Naval Reserve includes service in the Army, Navy, Marine Corps, Coast Guard, Naval Auxiliary Service, Naval Reserve Force, Naval Militia, National Naval Volunteers, Naval Reserve, Marine Corps Reserve Force, and Marine Corps Reserve.

Enlisted men of the honorary retired list who have performed a total of not less than 30 years' active service in the reserve as that term is defined above, or who have had not less than 20 years' active duty service, the last 10 years of which was performed during the 11 years immediately preceding their transfer to the honorary retired list, are, except while on active duty, entitled to pay at the rate of 50 percent of their active duty base pay and 50 percent of their longevity pay.

FOR DISABILITY

There is no Navy retirement pay for physical disability for enlisted reservists who are not eligible for retirement for service. Such personnel, however, are fully protected by the Veterans Administration. The procedure is to discharge them from the Navy (but only after full hospitalization and observation) so that they may apply to the Veterans Administration for disability pensions.

Reservists who are entitled to retirement with retirement pay have the same privilege of election of either accepting discharge and applying to the Veterans Administration or accepting retired disability pay under the same provisions outlined for personnel of the regular Navy.

CIVIL SERVICE

The question has been asked whether Civil Service with a Federal Government agency may be counted for transfer to the Fleet Reserve, the Fleet Marine Corps Reserve, the retired list of the regular Navy or regular Marine Corps, or the honorary retired lists of the Reserves. The answer is definitely NO.

TEMPORARY OFFICERS

When enlisted men temporarily promoted to commissioned or warrant status revert to enlisted status, upon completion of required service and at own request are transferred to the Fleet Reserve upon completion of a total of 30 years service, or should they be found unfit for service during interim of transfer to the Fleet Reserve and on completion of 30 years service, they are placed on the retired list in their enlisted status, at which time SecNav reviews their record as an officer and they are advanced on the retired list to the highest rank held by them under a temporary appointment in which SecNav determines they served satisfactorily. In event determination is made that they did not serve satisfactorily in the highest rank held they will be placed on the retired list in the next lower rank in which they served satisfactorily, but not lower than the permanent rating, with pay based accordingly.

Personnel serving in a commissioned or warrant status who have 20 years total active service, 10 of which are in a commissioned status, may retire on application and immediately receive retirement benefits as shown in officers' retirement table (see p. 75).

Enlisted men, serving in a temporary commissioned or warrant status, who in-

INDOOR GUN RANGES

Small bore pistol and rifle ranges for recreation at Navy shore activities are recommended in BuPers Circ. Ltr. 52-46 (NDB, 15 March). The ranges would be a part of station welfare and recreation programs, and not official Navy qualification ranges.

The size of the range would depend upon facilities available. Firing distances for indoor small bore rifle ranges are usually 50 ft., and outdoor ranges from 50 to 200 yds. A typical range area at the University of Maryland consists of one large room 57 x 82 feet (the actual range), and two smaller rooms 10 x 28 feet each (stowage, shops, lockers, etc.). The back-stop, vital part of any range, is a continuous sheet of 3/16-inch steel plate set at an angle of 45 degrees from the horizontal and extending clear across the target end of the range.

Further details on how the University of Maryland range is set up may be found in Encl. 1 of Circ. Ltr. 52-46, and construction details on ranges and back-stops may be obtained from the National Rifle Assn. 1600 Rhode Island Ave., N.W., Washington, D. C.

Small arms ammunition allowances may be obtained from various NADs by following the procedure in Nav-Ord OCL AV 26-45.

Small bore pistols and rifles may be acquired by a request directed to BuOrd via BuPers, referencing Circ. Ltr. 52-46. Such requests should be confined to the Rifle, Caliber .22 Mossberg, Mod. 44, and the Pistol, Caliber .22 Hi Standard, Mod. HD.

cur physical disability while serving in their temporary commissioned or warrant status, will be retired as commissioned or warrant officers of the regular Navy, or in the case of enlisted personnel retired for other than physical reasons, will be placed on the retired list or advanced thereon to the rank in which serving when the disability was incurred, or the highest rank in which satisfactorily served, under all provisions applicable to officers of the regular Navy.

COAST GUARD REGULAR PERSONNEL

For Service

Regular Coast Guard enlisted men may be retired upon their own application after 30 years of active service, or automatically upon reaching age 64, at 75 percent of their base pay plus longevity, in the permanent rating held at time of retirement. They are eligible for retirement at higher grade or rating, or pay, if they meet any of the conditions listed in exceptions (3), (4) and (5) under retirement of regular officers for service.

Enlisted men of the Coast Guard also may be retired upon their own application after 20 years of active service at 2½ percent of the total of their base pay and longevity, multiplied by the number of years of active service.

For Disability

Enlisted men serving under regular enlistments in the regular Coast Guard are eligible for retirement for service-connected disability at 75 percent of base pay plus longevity, unless eligible for retirement in higher rating or grade, or pay, unless exceptions (3), (4) and (5) listed under retirement of regular officers for service.

RESERVE PERSONNEL

SPECIAL TEMPORARY ENLISTMENTS

There are no provisions for retirement for service for these classes. In cases of disability in line of duty, personnel in these classes are discharged from the Coast Guard for action of the Veterans Administration.

COAST GUARD SERVICE AS NAVAL SERVICE

Service in the Coast Guard counts as naval service ONLY IN TIME OF WAR. Current wartime service of the Coast Guard began 1 Nov. 1941 by authority of Executive Order 8929.

Wartime service in the Coast Guard qualifies as armed-forces service for purposes of retirement of Navy or Marine Corps enlisted personnel, that is, for transfer to the retired list after 30 years or more active service.

Coast Guard service, wartime or peacetime, may NOT be counted by regular Navy or Marine Corps enlisted personnel toward transfer to the Fleet Reserve of Fleet Marine Corps Reserve, although it may be counted toward transfer to the honorary retired list of the Naval Reserve.

Coast Guard service, whether or not under the Navy, may be counted in computing time for retirement when "service" only as distinguished from "naval service" is involved.

QUIZ ANSWERS

ANSWERS TO QUIZ ON PAGE 53.

1. Main battery guns—16"/50, secondary battery—5"/38.
2. 45,000 tons.
3. Upper left—airship insignia, upper right—gun pointer, lower left—bombing mechanic, lower right—rifle sharpshooter.
4. Airship insignia and rifle sharpshooter.
5. 1—chock. 2—cleat. 3—bollard. 4—bits.
6. False. Bits are used aboard ship for securing mooring and towing lines.
7. Presidential unit citation pennant.
8. Star is added for each additional citation—up to 5 stars may be added.

5,000 Warrants To Revert To Permanent Status Soon

Five thousand temporary chief warrants and warrant officers will revert to permanent enlisted status before 1 September, BuPers announced late last month. Budget limitations for fiscal 1947 will necessitate terminating these temporary appointments, it was announced in Alnav 253-46 (NDB, 31 May).

Not affected by the Alnav were radio electricians, aerographers and photographers, who will retain warrant grades. There is no excess of personnel in these specialties.

Officers whose appointments will be terminated will be selected first from those who have completed 20 years or

more of service, and second from those who were appointed to warrant grade on or about 1 Sept 1944. This date may vary several months, depending upon the specialty.

Any officer whose temporary appointment is terminated will be issued BuPers orders detaching him from his present duty station, granted accrued leave, and directed to report to the commandant of the naval district nearest his home, wearing the uniform of his permanent rating.

All officers whose appointments are terminated because of budget limitations will be issued certificates of satisfactory service.

INFORMATION FOR VOTERS

Elections will be held during July, August and September in the states listed below. Unless otherwise indicated, members of the armed forces, merchant marine, American Red Cross, USO and the Society of Friends may vote and may use the post card (USWBC Form No. 1, or Standard Form No. 76, when available) as an application for an absentee ballot.

Except as noted below, information as

to voting by all civilians overseas attached to and serving with the armed forces has not been furnished to the Navy. Except as noted, all elections are primary elections for the nomination of candidates for Congress and state offices. In some states, county and township officers are also to be nominated. Post card applications for ballots may be obtained from the CO or the voting officer.

State	ELECTION DAY	EARLIEST DATE BALLOT WILL BE MAILED	LAST DAY BALLOT WILL BE RECEIVED TO BE COUNTED
Arizona	16 July (a)	16 May	16 July
Arkansas	30 July (b) (c)	After 1 May	30 July
	13 August (d) (c)	....	13 August
	16 July (e) (c)	After 17 April	16 July
	6 August (f) (c)	....	6 August
Colorado	10 September	19 August	7 September
Georgia	17 July (g)	....	17 July
Kansas	6 August	(h)	(h)
Louisiana	10 September	....	10 September
	15 October (i)	....	15 October
Maine	9 September (j)	....	....
Minnesota	8 July	8 May	8 July
Mississippi	2 July	2 May	2 July
	27 August (i)	....	27 August
Missouri	6 August (k)	30 May	7 August
Nevada	3 September (j)	....	....
Oklahoma	2 July (l)	1 June (m)	2 July
	23 July (l)	12 July (m)	20 August
Tennessee	1 August	1 June	1 August
Texas	27 July (n)	....	23 July (o)
	24 August (i) (n)	....	20 August (o)
Utah	9 July	15 June	9 July
Vermont	13 August (p)	25 June	13 August
Virginia	6 August (q) (k)	3 June	5 August
Washington	9 July	26 May	3 August
West Virginia	6 August	18 May (m)	6 August
Wisconsin	13 August	29 June	13 August
Wyoming	16 July (r)	....	16 July

(a) Law does not apply to American Red Cross, USO or Society of Friends.

(b) Democratic preferential primary for state and county offices.

(c) Letter from qualified voter in armed forces to county clerk designating voter's choice for or against any proposal or measure, of his choice—first, second, third, etc.—for all candidates to be voted on for all offices will be counted the same as a ballot in the preferential primary and the run-off primary if acknowledged before a commissioned officer and sent within 60 days prior to the election.

(d) Democratic run-off primary for state and county offices.

(e) Federal preferential primary for members of Congress.

(f) Federal run-off primary for members of Congress.

(g) Democratic primary.

(h) War ballot law applies only to general elections. Regular absent voting law permits registered persons to vote but application for a ballot must be made on special form filed by applicant, relative or friend.

(i) Run-off primary elections (if necessary).

(j) No information concerning absentee voting received.

(k) Only members of armed forces may vote absentee.

(l) Constitutional amendments or initiative or referendum measures are also to be voted on.

(m) Approximate.

(n) Members of armed forces or merchant marine may vote without payment of poll tax or holding of poll tax receipts. "Attached civilians" must pay poll tax. Members of regular Army, Navy or Marine Corps may not vote.

(o) Must not be received by county clerk prior to 20 days before date of election.

(p) Members of any organization in the field for aid and assistance to members of armed forces may use post card and vote by absentee ballot.

(q) Candidates for Congressional offices only.

(r) Mail card to county clerk.

ALNAVS, NAVACTS IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs and NavActs, not as a basis for action. Personnel interested in specific directives should consult Alnav or NavAct files directly for complete details before taking any action.

Alnavs apply to all Navy, Marine Corps and Coast Guard ships and stations; NavActs apply to all Navy ships and stations.

Alnavs

No. 170—Directs conservation of lumber.

No. 171—Orders reduction of radio and teletype dispatch traffic.

No. 172—Directs conservation of remaining stocks of nainsook drawers and cotton undershirts and issuance only to permanent personnel in actual need.

No. 173—Corrects Alnav 160-46 (NDB, 15 April), adds DCNO (logistics) to list of offices for which Army Industrial College will prepare USN officers.

No. 174—Corrects Alnav 148-46 (NDB, 15 April), adding certain activities to list of those needing technically trained personnel (see ALL HANDS, May 1946, p. 76).

No. 175—Publishes first list of reserve and temporary MarCorps officers recommended for transfer to regular MarCorps.

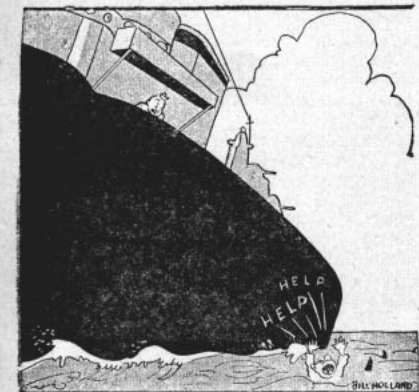
No. 176—Directs naval vessels or aircraft carrying civilians to radio report when communicable diseases are aboard prior to landing at any port under U. S. military or civilian jurisdiction.

No. 177—Notes American Defense, Area Campaign and Victory Medals probably not available until end of 1946 (see p. 70).

No. 178—Weekly report of USN enlisted strength.

No. 179—Directs inventory of entertainment motion picture programs on hand at 1800 GCT 30 April.

No. 180—Authorizes Reserve Special Commendation Ribbon (see p. 59).



The Hoist (NTC, San Diego)
"Say 'Please!'"

No. 181—Directs at least two checks after smallpox vaccination to differentiate immune reactions from failures to take.

No. 182—SecNav urges all hands to cooperate in the fight against inflation.

No. 183—Provides Navy nurses shall receive same pay and allowances as USN officers (see p. 71).

No. 184—Cancels Alnavs 161-45 (NDB, 31 July), 300-45 (NDB, 30 September) and 335-45 (NDB, 15 October), first two involving officer flight training, third involving officer aerial photography training.

No. 185—Directs compliance with safety precautions, published in Navy Motion Picture Service, NavPers 15072.

No. 186—Weekly report of USN enlisted strength.

No. 187—Allows dependents traveling to or from overseas areas by government transport 350 pounds of personal baggage for each person over 12, and 175 pounds for each child 5 to 12 (see p. 70).

No. 188—Modifies Alnav 282-45 (NDB, 30 September) and provides that nurses will be separated at certain Wave SepCens (see p. 71).

No. 189—Notes enactment of Public Law 347 authorizing personnel strength of Navy and MarCorps and allowing permanent appointment of regular officers (see ALL HANDS, May 1946, p. 41).

No. 190—Modifies Alnav 96-46 (NDB, 28 February) to extent that issue of air travel to dependents is limited to that necessary to make steamer connection for overseas or where otherwise determined by CO of issuing activity (see p. 70).

No. 191—Allows longevity credit for National Guard service performed prior to 18th birthday (see p. 72).

No. 192—Lists additional officers recommended for transfer to regular MarCorps.

No. 193—Gives instructions for adding to roster of officers the dates for which reserve and temporary officers have requested retention on active duty. Modifies Alnavs 276-45 (NDB, 30 September) and 403-45 (NDB, 30 November).

No. 194—Announces USNR and USN-1 EM volunteering for active duty until 1 Mar 1947 accordance Alnav 137-46 (NDB, 31 March) may be nominated for Naval Academy Preparatory School prior 17 May 1946.

No. 195—Directs excess narcotics and unfit narcotics be transferred to nearest medical supply activity.

No. 196—Announces issue of overcoats to separatees will be made only where CO decides ultimate destination of separatee justifies issue because of weather conditions. Modifies Alnavs 385-45 (NDB, 30 November) and 437-45 (NDB, 31 December).

Keelhauling

Times change and so do the meanings of words. Keelhauling, today, means a reprimand, being "called down" or "called on the carpet," but originally it was a form of punishment favored above

all others by the Mediterranean pirates of the 16th century. Later it was popular in the early English and Dutch navies for a certain class of offenses. It consisted of binding the offender hand



and foot, attaching weights—causing the body to sink—then drawing it under the ship's bottom from one fore yardarm to the other by means of whips. If the bottom was covered with sharp barnacles, and it frequently was, the torture proved extreme and ofttimes fatal. It was only late in the 19th century that this practice was finally banished from the seas.

No. 197—Requests reserve Dental Corps officers submit early applications for transfer to USN.

No. 198—Directs ships, stations and units submit by airmail to BuMed complete NavMed HC-3 card on all USN enlisted Hospital Corps personnel aboard, with copy by air to appropriate personnel distribution commands.

No. 199—Announces cancellation of Alnavs 114-45 (NDB, Jan-June), 163-45 (NDB, 31 July), and 113-46 (NDB, 15 March) by BuPers Circ. Ltr. 72-46 (NDB, 31 March) giving new service, sea duty and marks requirements for advancement in rating (see ALL HANDS, May, p. 68).

No. 200—Directs commands having surface targets advise BuShips by air mail serial number, type, condition and location of each. Cognizance of such target has been transferred from BuOrd to BuShips.

No. 201—Gives rules for travel of dependents to Okinawa, PhilSeaFron and Japan (see p. 70).

No. 202—Announces limitations of punishment in SecNav Ltr. 12 Oct 1945 (item 46-630; NDB, 31 Mar 1946) apply only to offenses committed prior 1 Jan 1946. Offenses committed after 31 Dec 1945 governed by Art. 457 Naval Courts and Boards.

No. 203—Orders colors at half mast 25 April to 22 May in respect to late Chief Justice Harlan F. Stone.

No. 204—Requests applications prior 6 May from officers desiring four-week indoctrination in conduct of Navy's athletic and special services programs.

No. 205—Weekly report of regular Navy enlisted strength.

No. 206—Lists additional USNR and USN(T) officers selected for transfer to USN.

No. 207—States amendment to Surplus Property Act, awaiting President's signature, orders no government agency may transfer property to

another without reimbursement or transfer of funds.

No. 208—States procedure for promotions of former enlisted POWs (see p. 68).

No. 209—Warns of dangers of inflation

No. 210—Allows USNR officers promoted in return for agreement to remain on active duty a specified period, to remain on duty for that period or until their services no longer are required, modifying Alnav 161-46 (NDB, 15 April).

No. 211—Modifies Uniform Regs to again permit officers to purchase khaki working uniforms (see p. 69).

No. 212—Provides, effective 1 July, that supplies, equipment and spares carried aboard ship in custody of the supply officer, shall be accounted for in terms of money value.

No. 213—Adds personnel transferred to, or recalled from, Fleet Reserve prior 15 Aug 1945, and retired enlisted men, to quotas assigned in Alnav 137-46 (NDB, 31 March) for voluntary retention on active duty.

No. 214—Weekly report of USN enlisted strength.

No. 215—Modifies Alnav 201-46 (NDB, 30 April) and states expectancy of continuation of duty in Japan shall be computed from date of submission of application for transportation of dependents instead of from date of arrival of dependents.

No. 216—Terminates authority for exchange of patent rights and information under lend-lease, contained in para. 3, Alnav 82-46 (NDB, 28 February).

No. 217—Announces 10 scholarships for Chinese culture study, available to servicemen who served in China. Application deadline was 31 May.

No. 218—Lists additional officers selected for transfer to regular Marine Corps.

No. 219—Announces board of officers to meet on or after 20 May to consider retirement of regular Marine Corps officers, ranks of captain through lieutenant colonel.

No. 220—Adds Sp(X)(NC) to list of ratings eligible for transfer to USN under Alnav 51-46 (NDB, 31 January).

No. 221—Announces President has signed Surplus Property Act amendment referred to in Alnav 207-46 (above).

No. 222—Requests applications from USNR and USN(T) officers to apply for transfer to Hospital Corps, USN.

No. 223—Clarifies Alnav 180-46 (NDB, 31 April), which created the Reserve Special Commendation Ribbon.

No. 224—Cancels Alnav 322-45 (NDB, 15 Oct), which requested applications from certain officers desiring instruction in electric tabulating equipment.

No. 225—Requests applications prior to 1 June from USNR officers with

degrees in civil engineering now serving in other than CEC classification, to request retention on active duty until 1 July 1947 under Alnav 126-46 (NDB, 15 March) and change of classification to CEC, USNR.

No. 226—Restricts rehabilitation leave to certain classes of personnel after 7 May (see p. 71).

Navacts

No. 43—Announces as of 16 April naval mail directory functions transferred from CNO to BuPers.

No. 44—Cancels NavAct 22-46 (NDB, 28 February) and restates conditions for application for duty in naval confinement activities.

No. 45—Requests applications prior 1 June from certain warrant radio electricians and temporary officers for a one-year course in electronics engineering at Naval Research Laboratory, Washington, D. C.

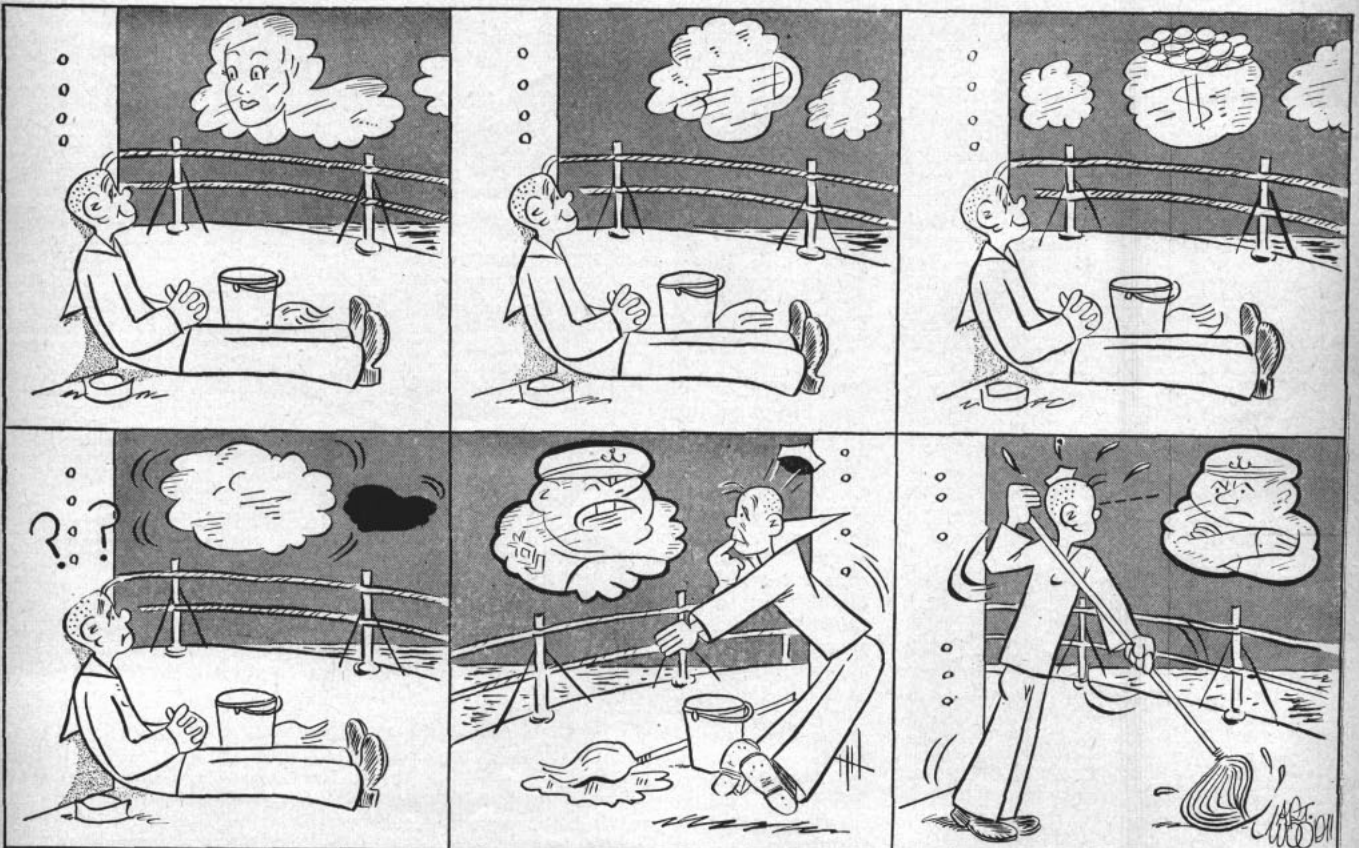
No. 46—Cancels NavAct 16-46 (NDB, 15 February), which requested USNR line ensigns and lieutenants (jg) to apply for supply duty ashore. All billets have been filled.

No. 47—States procedure for USNR officers in legal assignments to remain on active duty. Deadline for requests was 1 June.

No. 48—Refers to Alnav 157-45 (NDB, 15 July), and forbids extra compensation for postal duties (see p. 71).

ALL THUMBS

CLOUDY WEATHER



FANTAIL FORUM

QUESTION: Of all the places you have seen since you've been in the Navy, which would you prefer to return to for a visit?

(Interviews on the above question were conducted at NAS, Jacksonville, Fla.)

Richard E. Lightfoot, CPhoM, Kansas City, Mo.: The Island of Maui.



That's in the Hawaiian Islands. It's a photographer's paradise; I have stacks of pictures of its volcanoes, mountains, girls, sunsets, animals. The town had all modern conveniences . . . 5 and 10¢ stores and all. It is the friendliest

place I've ever seen. Everyone treats you like one of themselves, takes you home to dinner.

Harry Hammel, AMM1c, River Edge, N. J.: Chicago in the USA. I've

seen those far-away romantic places and those quaint little towns, but I'll take the place where there's something to do—sports, amusements, night clubs, where people aren't always trying to clip you, where the girls are good sports as well as good lookers, where there's cheap transportation, good food, plenty of bars. That place is Chicago.



Robert A. Goslen, Y3c, Philadelphia, Pa.: Los Angeles,



where I just spent seven days, but made friends in whose homes I'd be welcome any time again. That weather is just like the Chamber of Commerce says it is. The girls should all be in the movies, they're so beautiful. An ideal vacation spot—what

do I mean vacation spot? I'd be willing to sell apples on the corner just to stay there.

Wesley S. Bellamy, Y1c, Luthersville, Ga.: Three things about Glasgow and Edinburgh, Scotland, really impress me. The quaintness of the towns; the people were marvelous; and the towns were beautiful. If you climbed to the top of a hill on a clear day, the country is so colorful it takes your breath away.



It is really a very beautiful place.

William Sirgent, AOM1c, Des Moines, Iowa: Manila, any day. People there



don't bother themselves with hurry and worry. There was no 'Keeping up with the Jones'—no one cared what his neighbor did. And good times—every sport I ever heard of and a few more! There's every amusement you can find in the

States, and even a big luxurious summer resort at Baguio where you can spend your leave.

Cecil B. Wood, Jr., Y1c, Winter Haven, Fla.: I like the island life of Samoa and it's so

clean you can enjoy it without fear of so many of the usual diseases. The natives are well-built, outstanding looking people, and the women are beautiful. Yes, I'd like to go back on a pleasure cruise, eat baked octopus and raw fish, go lobster hunting on the reefs and spear-fishing again.



Donald E. Clark, Sp(1)2c, Hastings, Mich.: I'd like to see Honolulu when



it's settled back to normal and the service people have gone home. I liked the curious blend of the white man's customs practiced right along with the oriental ones, especially the colorful "presenting of the leis," with kisses from the local

belles. The whole atmosphere, the lazy, happy-go-lucky way of life got into my veins.

Harry H. Lattimore, SK3c, Savannah, Ga.: I fell in love with Chapel Hill, N. C. It has all

the romance and atmosphere of a college town. If I didn't plan to go to school there as soon as I get out of the Navy, I'd go back and visit anyway, just to enjoy the atmosphere of peace and beauty, good fellowship—and the sense it gives you that everyone is going somewhere, soon.



ALL HANDS

THE BuPERS INFORMATION BULLETIN

With approval of the Bureau of the Budget, this magazine is published monthly in Washington, D. C., by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired. Original articles of general interest may be forwarded to the Editor.

DATES used throughout are local time at scene of action unless otherwise indicated.

SECURITY: Since this magazine is not classified, it sometimes is limited in its reporting and publication of photographs. It therefore cannot always fully record achievements of units or individuals, and may be obliged to omit mention of accomplishments even more noteworthy than those included.

REFERENCES made to issues of ALL HANDS prior to the June 1945 issue apply to this magazine under its former name, The Bureau of Naval Personnel Information Bulletin. The letters "NDB," used as a reference, indicate the official Navy Department Bulletin.

DISTRIBUTION: By BuPers Circ. Ltr. 162-43 (NDB, cum. ed., 31 Dec., 43-1362) the Bureau directed that appropriate steps be taken to insure that all hands have quick and convenient access to this magazine, and indicated that distribution should be effected on the basis of one copy for each 10 officers and enlisted personnel to accomplish the directive.

In most instances, the circulation of the magazine has been established in accordance with complement and on-board count statistics in the Bureau, on the basis of one copy for each 10 officers and enlisted personnel. Because intra-activity shifts affect the Bureau's statistics, and because organization of some activities may require more copies than normally indicated to effect thorough distribution to all hands, the Bureau invites requests for additional copies as necessary to comply with the basic directive. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the numbers of copies required; requests received by the 20th of the month can be effected with the succeeding issue.

The Bureau should also be advised if the full number of copies is not received regularly.

Normally copies for Navy activities are distributed only to those on the Standard Navy Distribution List in the expectation that such activities will make further distribution as necessary; where special circumstances warrant sending direct to sub-activities, the Bureau should be informed.

Distribution to Marine Corps personnel is effected by the Commandant, U. S. Marine Corps. Requests from Marine Corps activities should be addressed to the Commandant.

PERSONAL COPIES: This magazine is for sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.: 20 cents per copy; subscription price \$2.00 a year, domestic (including FPO and APO addresses for overseas mail); \$2.75 foreign. Remittances should be made direct to the Superintendent of Documents. Subscriptions are accepted for one year only.

• AT RIGHT: The two halves of a giant Bikini clam are held by Lt. (jg) B. B. Pribble. Clams such as this one, found on the ocean floor inside the lagoon at Bikini atoll, often measure more than three feet across and weigh approximately 300 pounds. ➔

KING SIZE





SAVE FOOD

The Navy is pledged to conserve food and eliminate waste as its contribution to the relief of starving populations abroad.