

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN



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THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

FEBRUARY 1954

Navpers-O

NUMBER 444

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- **FRONT COVER: GET ON YOUR MARK'**—Plane captains and tractor drivers wait their turn to jockey 'Cougars' into launching position on flight deck of *USS Oriskany* (CVA 34).
- **AT LEFT: DESTROYER *USS Floyd B. Parks* (DD 884)** ties up alongside auxiliary vessel for transfer of stores.
- **CREDITS:** All photographs published in **ALL HANDS** are official Department of Defense photos unless otherwise designated.



NAVY CAMERAMAN shoots movies of progress of *USS Burton Island (AGB 1)* as vessel pushes through Antarctic icepack.

Navy Photogs Have All-Seeing Eyes

THREE-DIMENSIONAL photography, the latest rage of the motion picture world, is old stuff to Navy photographers. They've been using 3-D since the 1920's for aerial mapping and since before World War II for photo interpretation. It has played a highly important and valuable role both in wartime and peacetime.

But 3-D is only one phase of naval photography. Picture-taking in the Navy is as versatile as the men that do it. Sailor-photographers, armed with cameras of various sizes and shapes, fly in aircraft on reconnaissance missions, ride surface ships and even send their cameras below the surface to "shoot" through a submarine's periscope. Even the Navy's famed "frogmen" use underwater cameras.

Navy photographers, besides knowing the technical or "dark room" techniques, must know how to operate and maintain every type of Navy camera, from the simplest type of still camera to a huge, expensive aerial camera.

The job of the Navy photogra-

pher, from the highly trained petty officers to the warrant photographers and the specialist photographic officers, requires combining the knowledge and skill of a technician with the talents of an artist.

A Navy photographer has one of the most varied billets in the service. The PH, for example, may find himself a member of a Navy Combat Camera Unit, in the thick of the fighting; or he may specialize in the production of motion pictures; or as a member of a photo squadron specializing in aerial reconnaissance and hydrographic mapping photography; or as a public information photographer, filming canned TV shows or still pictures for your home town newspapers. The PH has got to keep up with a constantly developing and growing science of picture-taking.

The biggest field of photography in the Navy today is aerial reconnaissance.

Aerial cameras today are about as big a tactical weapon as jet fighter planes. The "shots" fired by a photographer with an aerial camera have

proved to be as deadly to an enemy as a hit from a 16-in. projectile. Aerial photo missions reveal such vital information as troop concentrations, supply dumps, air fields and gun emplacements.

From a small beginning, back in 1914, when the first aerial camera was only a graphic-type job with cigar box boards around the bellows to protect it against wind pressure, the Navy now has complex airborne cameras that are used for such highly technical work as aerial reconnaissance and hydrographic mapping.

As each new type camera comes along, the Navy photographer has to learn how to operate and maintain it. With the coming of the atomic age and of aircraft breaking the sound barrier the pace in aerial photography has stepped up also.

Today's aerial cameras have faster shutter speeds. The trend is also toward making the cameras more compact. They have to be smaller to fit into the limited space available in new jet aircraft.

Aerial reconnaissance photogra-

phy is highly important to any military operation. Field commanders in both World War II and in Korea estimated that 80 to 85 per cent of their intelligence information came from aerial reconnaissance photos.

An example of what aerial reconnaissance photography can do was the North Korean village of Chung-jour-ri. From the air, the place appeared to be a peaceful and apparently harmless town. Pilots failed to see anything different about it.

But after a special reconnaissance mission, photos revealed that the village was actually serving as a "cover," to house Communist vehicles. Photographs even revealed that the walls of several houses had been pulled down and a complete maintenance shop set up. Its disguise unveiled, the town was reduced to a smoky rubble by planes from the aircraft carrier *uss Kearsarge* (CVA 33).

The photographs that revealed this village's disguise were taken by the pilot, who operates the cameras by remote control from the cockpit. The photo pilot must be specially trained for his job and must have a thorough knowledge of his cameras and their capabilities.

But the PH, even though he didn't ride in the plane (there's no room in a modern jet), played a big part in this mission. It was his job to make sure all cameras were in good operating condition and were installed in the plane correctly. When the plane returned from the mission, he had to produce the finished film for the Intelligence Officer.

It was the photographer's job to process the film quickly with no errors—or else the mission would have been wasted and the enemy vehicles left to move against our troops.

Another example in Korea in which aerial photography played a big part was the big air strike at the hydro-electric power plants at Suiho on the Yalu River. Aerial photographs taken before the raid revealed all the different power stations maintained by the Communists along the Yalu.

More than 320 Navy planes from Carrier Task Force 77 and 100 Air Force Sabrejets combined to blast the power plants. Follow-up reconnaissance photos taken after the raid indicated that seven of the nine large plants had been destroyed, two others severely damaged, a total of 45 buildings demolished and nine

transformer stations damaged.

The photographic missions in both the above incidents were flown by high-speed jet aircraft. In order to take full advantage of the fast speeds of these jets and still get good photos, the speed of the cameras has had to be increased accordingly.

One answer to the photography-at-high-speed problem was provided by a Navyman right on the scene, Lieutenant H. D. Williams, USN, of Photo Squadron 61. While serving in *uss Philippine Sea* (CVA 47), the lieutenant developed a "gadget" called the "image motion compensator." The "IMC" allows jets to fly at their normal high speeds and still take good 'recon' photos at low altitudes.

Here, roughly, is how Williams' "IMC" operates. The camera is installed in the aircraft in such a manner that it can swing in a fore-and-aft motion. A motor drive and a gear arrangement are then secured to the camera in such a manner that the rate of movement from fore-to-aft coincides with the angular rate of image motion.

As the camera travels aft, it reaches a point where it is perpendicular to the surface of the earth. At this instant, the shutter snaps.

It takes much longer to describe this action than it does for the camera actually to go through this cycle. Controlled by gears, the camera can be speeded up to where this "recycling period" takes only six-tenths of a second.

This is but one of the many innovations dreamed up by Navy photographers in the field and developed



FROGMEN use underwater cameras for reconnaissance, salvage studies, and set up cameras to film explosions.

by the scientists. The Research and Development Branch of the Bureau of Aeronautics' photographic section is continually seeking ways of improving photo equipment.

All photo reconnaissance work, however, is not performed by the air arm of the Navy.

The Submarine Service, too, has provided many valuable photographs of locations where aircraft can't venture. This was especially true during the early part of World War II when the Japanese controlled most of the Western Pacific.

Because of the limited space in

COMBAT CAMERA CREWMEN set up shop by 105mm howitzer somewhere in Korea. Crews such as this one provided on-the-spot coverage of Korean conflict.





JET PHOTO 'Banshee' flies over Korea with escort. Right: Aerial camera is installed by photographer's mates.

submarines, photographer ratings are not normally assigned to the boats. Usually, the gunnery officer on the submarine handles the photo work.

Submarine photography represents a few more problems than its aerial counterpart. A periscope is essentially built for looking through with the eye and hence makes a poor camera lens. The light transmission through the periscope leaves a lot to be desired, so far as photography is concerned.

While a picture *can* be taken through any periscope in use today, the quality of the photographs is

far from excellent. (Periscope photography begins at a disadvantage because the size of the scope is necessarily limited.) Development to improve on capabilities in this field is in progress.

Cameras were first officially introduced into submarines in 1940 when a few of the boats carried them with special fixtures to fit on the periscope eyepiece. A year later, work began on the development of the Mark I, a 35-mm. camera, and the Mark II, a 16-mm. motion picture unit.

The first all-photo reconnaissance

patrol made by a submarine was in 1943 by the old *uss Nautilus* (SS 168). During that patrol, the submarine took 2700 still photographs of the then Japanese-held island of Tarawa.

Cameras in the Navy find many uses aboard surface ships, at shore stations and in medical and scientific fields.

In surface photography, the all-seeing eye of the camera can check the performance of many types of equipment, revealing the action of new mechanical operations, or aiding in discovering a new method for repairing damaged equipment.

Photographers in billets ashore perform such jobs as photographing the progress of construction, damage to buildings and equipment, athletic events, inspections and doing public information work.

In the Pacific, a Navy Combat Camera Group was formed to obtain documentary and historical coverage of the Korean war. This group was formed into several units.

The job of the eight photographers in each of the special photo units was to shoot motion pictures and still pictures at the scene of action. The movies and news photos they made, often under battle conditions, were rushed to the U. S. for use by newspapers and newsreels.

The Navy's combat photographers thus helped to bring home to the American people first-hand information on the Korean war and how it was being fought.



CAMERA PARTY awaits first salvo from firing ship. Special camera will photograph the salvos while men with stop watches clock and record exact time.



INTELLIGENCE officers study photos. Right: Aerial recon photos are prepared for a 'mosaic,' during World War II.

For the big amphibious landing on the west coast of Korea, the camera crewmen were spotted aboard various destroyers. While six destroyers operated as "sitting ducks" to draw fire from Communist shore batteries, the "fighting photogs" sprang into action. Without regard for their personal safety, they got excellent shots of the battle of Inchon.

On the destroyer *uss Collett* (DD 730), for example, the photographers stood on the bridge, exposed to gunfire from enemy shore guns, continuing to take photos of the battle while the ship was hit nine times. While the gallant destroyer slugged it out with the Red's guns, the cameramen stuck to their stations, photographing the battle.

In the same operation, other photographers were busy aboard the heavy cruiser *uss Toledo* (CA 133). The group obtained a pictorial history of the pre-invasion bombardment and carrier-based strikes. Photos were also taken of the first wave of Marines going ashore at Wolmi-do. Navy photo coverage in Korea turned out to be a blue ribbon classic.

Navy "shutter-bugs" must also be able to make good motion pictures for training films.

Films play a big role in instructing and training naval personnel. Short of actual experience, a motion picture has been found to be one of the most effective methods of instruction.

In medicine and scientific re-

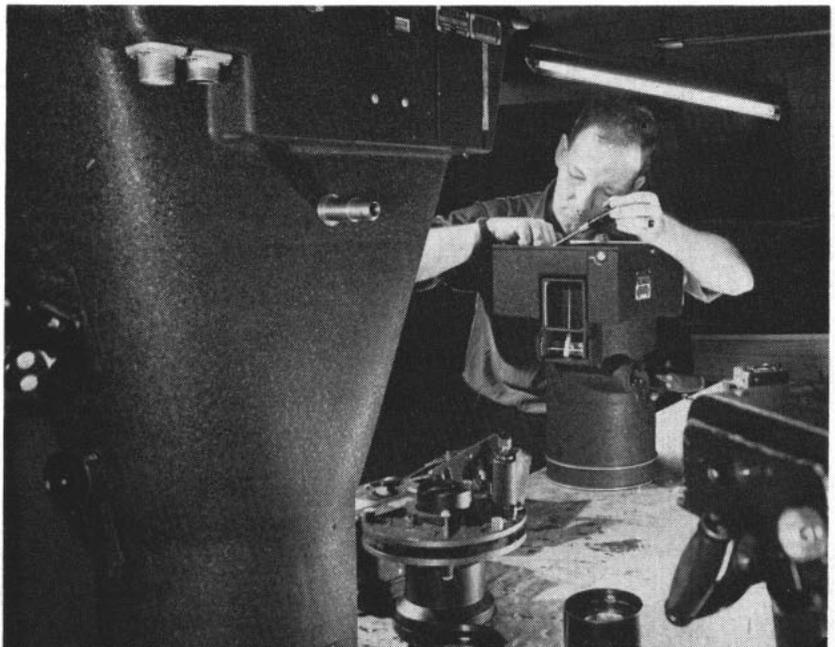
search, motion pictures (and still pictures too) are instrumental in the instruction of personnel and the development of new equipment and better techniques.

Photography has even aided doctors in diagnosing some diseases. All operations involving plastic surgery and bone and skin grafting are photographed so that the doctors will have a pictorial record of the patient before and after the operation.

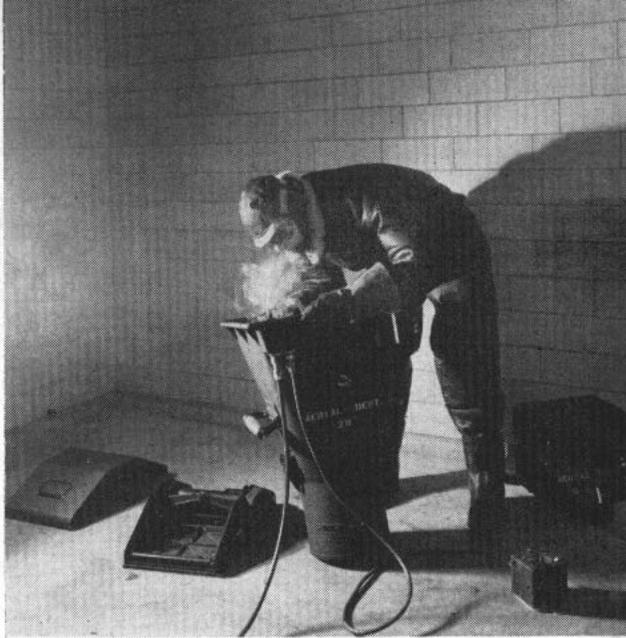
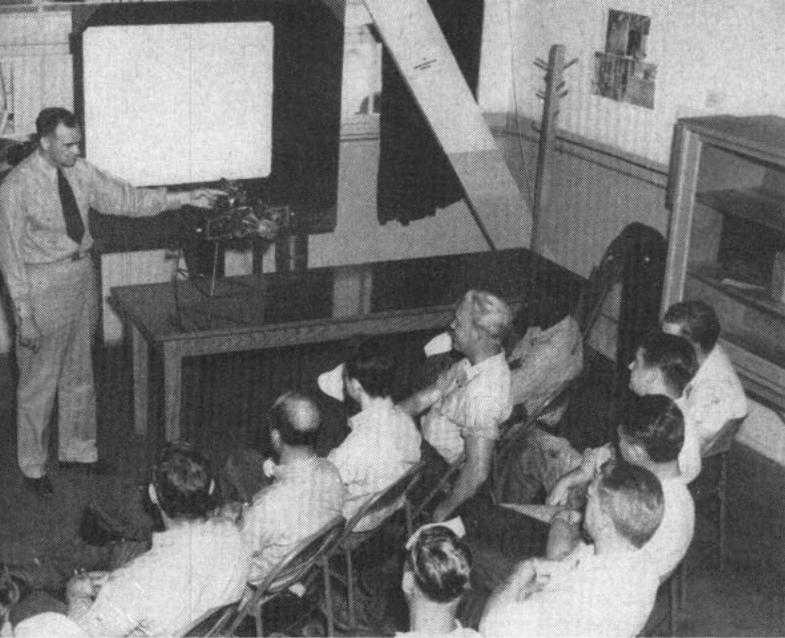
Motion picture cameras can be rigged to microscopes to photograph

slides. This allows the doctors to study their samples more closely at their convenience.

In scientific research, movies, as one phase of photography, have an important function. Take for example the filming of a speeding rocket or an exploding bomb. The completed film can be projected in slow motion and the action studied in detail. Simulated underwater explosions can also be filmed and used to show the effect of concussion on the hull of a ship.



TRAINED REPAIRMAN overhauls an aerial camera at Naval Photographic Center. These cameras have been used with black and white, color infra-red film.



FILMS have become valuable training aids. Right: 'Arctic testing room' simulates temperatures cameras must withstand.

Even television hasn't been overlooked by the Navy. Public information photographers in the Fleet are filming TV shows of Naval personnel for use in the Fleet Home Town News program.

At the A-Bomb test at Bikini in 1948, the Navy used underwater television to "see" previously unexplored underwater areas. From a military and commercial standpoint, underwater television is proving to be a useful electronic tool for salvage work, harbor and channel inspection and underwater examination of hulls at sea.

During the atomic tests at Bikini, television equipment was installed aboard the submarine rescue vessel *USS Coucal* (ASR 8). The television screen aboard the "Crazy Eight" re-

sembled a window in an aquarium as fish of all species swam past the monitor. Operating with only natural light that filtered down through 150 feet of sea water, the camera filmed scenes on the floor of the lagoon.

Underwater, remote-controlled television, as demonstrated at Bikini, has many possible uses in the Navy, especially in submarine salvage work. Television cameras, focused on the hull of a sunken ship, could, if properly lighted, project a picture of the damage to a screen topside, giving salvage experts all the time they needed to study the vessel.

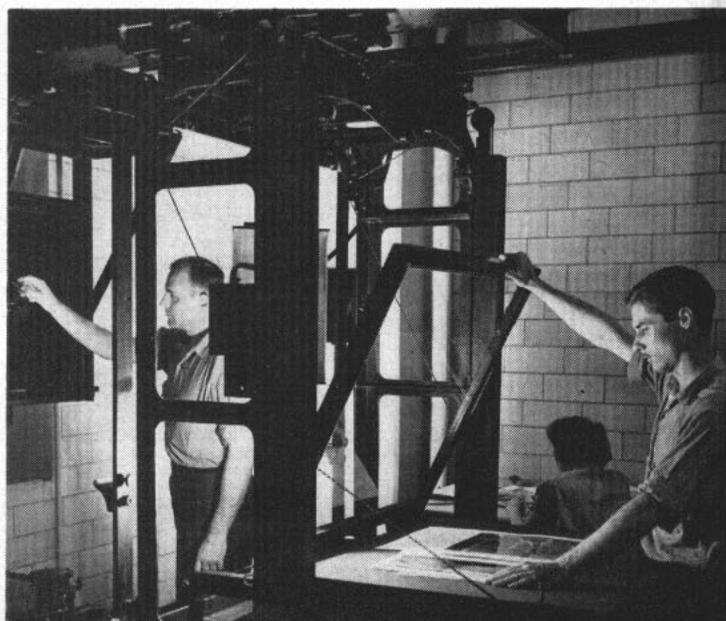
In submarine salvage work, where hours saved can be vital, underwater television could be most valuable. It would eliminate the time-consuming preliminary diving necessary

to determine the location and position of the sunken submarine prior to salvage operations or release of men trapped inside.

In these and many other ways, the Navy has been adapting the plain, ordinary camera to the needs of tomorrow. Photo equipment and techniques are being modernized every day to keep step with the Atomic Age. All this is enough to make the photographer burn the midnight oil, keeping abreast of all the changes.

But regardless of the "newfangled" equipment, results will still hinge on how good the person is who operates it. And Navy photographers have proved time and again that they not only have the best equipment but also know how to use it.—Rudy C. Garcia, JO1, usn.

PHOTOS are washed and dried in lab. Right: Copying camera, used for photo engraving, is a versatile instrument.



Nihoa: The Ferryboat that Went to War

THE ferryboat *uss Nihoa* (YFB 17), which did its heroic bit at Pearl Harbor on 7 Dec 1941, is still going strong.

When the Japanese attack came, *Nihoa* was without power steering. Although bouncing awkwardly in the harbor, she managed to maneuver well enough to rescue many sailors floating in the waters.

Nihoa also acted as a "hospital ship" during the attack, rushing ambulances from Pearl Harbor and Ford Island to areas where they were needed to evacuate the wounded.

As if steering difficulties weren't enough, *Nihoa's* work was further complicated by the burning *uss California* (BB 44) which partially blocked the ferry's entrance into the Ford Island slips. *uss Arizona* (BB 39) was afire and sinking nearby, but did not present a hazard to the ferryboat.

Today, *Nihoa*—in company with *uss Sheffield* (YFB 45)—daily plies the waters of Pearl Harbor, ferrying personnel, automobiles and equipment between Oahu and Ford Island.

These boats, which chug back and forth across the harbor on hourly schedules, form the means of transportation for Navy personnel and civilian workers from Oahu to the Pearl Harbor Naval Air Station.

Both ferries are "native Hawaiians," having been built in the Pearl Harbor Naval Shipyard. They



USS NIHOA (YFB 17), veteran of Pearl Harbor attack, carries autos, trucks and sailors from Ford Island to Oahu during one of ferry's hourly 'voyages.'

are among the largest craft ever to be constructed in the Islands.

Nihoa was built in October 1941. *Sheffield*, launched in 1944 at the peak of the war, helped ease the load on *Nihoa*. At that time, as many as 2000 sailors and civilian workers were carried by the ferries on one trip.

The boats have even been used as harbor-going "fire trucks." On one occasion, when a fire broke out under the King Docks at the Naval Supply

Center, it was impossible to fight the flames from shore. *Nihoa* took aboard fire trucks from Ford Island, steamed across the harbor in short order, and took up a position alongside the pier. The firemen then proceeded to put out the flames that were threatening the supporting timbers.

The forerunner of these flat-bottomed, barge-shaped ferries was the old ferry *Manuwai*, which means "Water Bird" in Hawaiian. Purchased by the Navy in 1940, *Manuwai* (YFB 16) has since been taken out of service and is in mothballs.

The crew of each of these Navy ferryboats consists of a pilot, an engineer, a marine oiler and two deckhands.

The ferries have carried everything from the Navy's largest bulldozer to the smallest aviation machine part. In one well-remembered instance, the crew had trouble getting a large, black limousine on board. It was so "low-slung" that alterations of the ramp were necessary to get it on the ferry without scraping the bottom of the car.

Navy men in the Pearl Harbor area often refer to *Nihoa* and *Sheffield* as "Cinderella Coaches." It seems that if you miss the last ferry from Ford Island—it leaves at 2345—you are in for a night away from home—or for a long swim.—J. A. Williams, JOSON, USN, Fleet Air Hawaii.



EVENTS which stand out in *Nihoa's* long history of steady service are her exploits during the Pearl Harbor attack and her 'doubling' as a 'firefighter.'

THE WORD

Frank, Authentic Advance Information On Policy—Straight From Headquarters

• **EXPLOSIVE HAZARD** — Buships warns that a serious explosive hazard can exist under certain conditions in pressure gauges, pneumatic systems and hydraulic systems due to auto ignition (diesel action). The *uss Leyte* (CVA 32) experience has increased observations and reports of this in hydraulic catapults.

Such explosions are especially likely to occur wherever there is a pocket or dead end in a high pressure system. If such a pocket or dead end contains air, or even more so if it contains more nearly pure oxygen, suddenly increasing its pressure can be expected to ignite and perhaps explode any fuel it contains. A wide variety of materials can act as fuels in this case and the quantity required is extremely small.

The limits of safety are being investigated but are not exactly known at this time. Therefore, as a general precaution, suddenly opening dead ended portions of hydraulic, pneumatic, or oxygen systems to much higher pressures should be avoided.

• **HOUSEHOLD EFFECTS** — In the future, Navymen heading for overseas stations will have to pay for any excess weight of household goods shipped by a Government vessel, according to a change in Joint Travel Regulations which became effective on 1 Jan 1954.

Previously, weight in excess of the prescribed weight allowance was authorized to accompany household goods on Government vessels without charge to the owner for the trans-

portation. However, excess costs were checked against the owner's pay account for packing, crating and transportation to and from the ports. Under the new ruling, the shipper will be checked for excess weight on the entire distance involved.

To avoid being checked for excess weight, particular attention should be paid to the weight allowances as prescribed in Joint Travel Regulations prior to arranging shipment of household goods to or from overseas duty stations.

• **CRUISE BOOKS WANTED**—Op-Nav Inst. 5070.1 requests all ships and stations and Marine Corps units that publish cruise books or unit histories to send one or two copies of their book to the Navy History Division of the Navy Department. A comprehensive reference source of all such books will be promulgated in the near future.

Books should be sent to the Office of the Chief of Naval Operations, (Director of Naval History, Op-29), Washington 25, D. C. If published volumes cannot be furnished gratis, it is desired that information concerning the publication and price be sent to the above address.

Other activities that desire a copy for reference use are: ALL HANDS, Bureau of Naval Personnel, Washington 25, D. C.; Naval War College, Newport, R. I.; Naval Academy Library, Annapolis, Md.; and Headquarters, U. S. Marine Corps, Historical Branch G-3, Washington 25, D. C.

• **ACTING CPOs** — The removal of the "T" after the rate abbreviation of CPOs will be announced in the near future. As a result, all chiefs who have made their rate since 31 Dec 1950 will become simply "Acting Appointment."

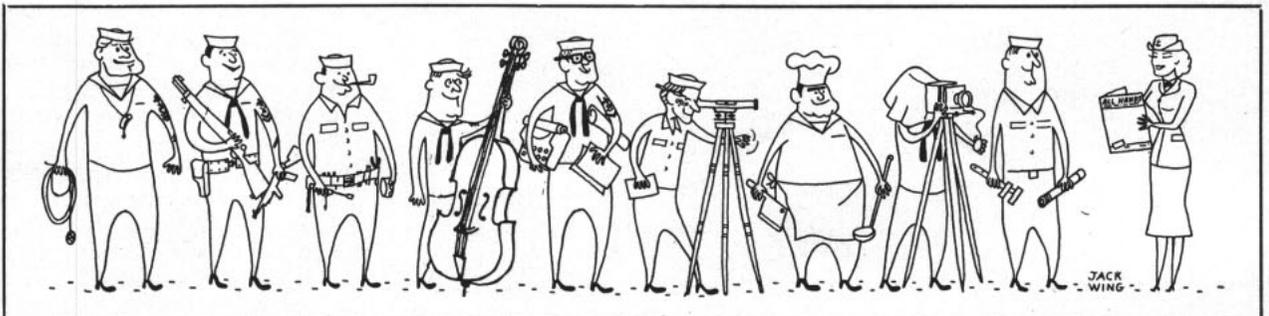
Actually, the removal of the "T" will have no immediate effect. CPOs who were appointed after 31 Dec 1950 will still be subject to reversion as before.

At the present time it is not considered sound policy to change the status of CPOs appointed since 1 Jan 1951 to CPO, permanent appointment. However, that does not mean such chiefs will be reverted to first class. That would happen only if there were a severe budget cut or a drastic cut in personnel.

Personnel appointed to pay grade E-7 prior to 1 Jan 1951 may be recommended for permanent appointment if they are still acting appointment. This is accomplished by following the procedure set forth in Article C-7209 BuPers Manual. Service requirements in such cases are prescribed in Article C-7204(3), BuPers Manual.

• **PERSONAL AFFAIRS HANDBOOK** — The publication, *Personal Affairs of Naval Personnel* (NavPers 15014), which was made available last fall, is designed for Navy division officers and Marine Corps company commanders. It is not intended for general distribution to other personnel for their individual use and retention.

The purpose of the handbook is to enable division officers and company commanders to carry out their responsibility to inform, guide and assist all personnel under their supervision in matters relating to the rights, benefits and privileges to which they and their dependents may be entitled. The handbook is



PASS THIS COPY ALONG—Whatever you do, wherever you are, remember nine others are waiting to read ALL HANDS.

also an aid in giving constructive advice and suggestions on many personal problems of naval personnel.

Additional copies of the handbook, for the use of division officers and company commanders, should be requisitioned from the District Publications and Printing Offices in accordance with *BuPers Manual*, Article B-3202 or from Marine Corps normal source of supply.

Requisitioned forms for additional copies should contain a notation as to the intended distribution. For example, the notation might read—"15 copies for distribution to division officers."

• **PERSONAL MESSAGES** — Many Navy men and their dependents are unaware of the existence of the class "E" message privilege, enabling them to send messages free of charge over naval circuits.

Class "E" messages are personal, unofficial messages to or from specifically authorized personnel. They are primarily for the purpose of morale in affording naval personnel at sea and at overseas bases a means of rapid communications for important personal matters without incurring prohibitive expense.

The privilege of sending and receiving these messages is extended to all active U. S. military personnel and their dependents, members of Congress and other important U. S. Government (Federal, State and Municipal) officials and their dependents, and to retired U. S. military personnel and their dependents, when the personnel involved are either afloat in naval ships or are stationed at isolated overseas activities served by naval communications where commercial facilities are inadequate or unreliable.

Class "E" messages normally are limited in subject matter to such things as death, serious illness, birth announcements in the immediate family, and matters of important personal business not of a recurrent nature. Trivial or frivolous messages, holiday or anniversary greetings and ordinary congratulatory messages normally are not acceptable.

Within the continental limits of the U. S., where commercial facilities are readily available, class "E" messages are not permitted.

Messages originating in the United States are sent to one of three refil points. They are:

1. U. S. Naval Communication

Station, San Francisco, for personnel in the Pacific Ocean Areas, including the Far East.

2. U. S. Naval Communication Station, Washington, D. C., for personnel in the Atlantic, Mediterranean and Caribbean Areas, including the Middle East.

3. U. S. Naval Communication Station, Seattle, Washington, for personnel in the Alaskan Area.

Dependents desiring to send a class "E" message to personnel not in the continental U. S. should send their message to the appropriate refil point as listed above. This must be done by commercial means (mail, telephone or telegraph). An example of a properly addressed personal message from a dependent to a Navyman aboard ship in the Mediterranean would be as follows:

Joe William Snow, 12345 67,
RMI, USN

uss *Newport News* (CA 148)

U. S. Naval Communication Station
Washington, D. C.

Cost of getting the message from point of origin to the appropriate refil point must be borne by the sender. The naval communication station will then effect delivery to the addressee, via naval communications, at no charge.

The rules are similar for messages being sent from ships or overseas bases to persons within the U. S. The message is transmitted by naval communications from point or origin to one of the authorized refil points for inbound class "E" traffic. The charges, which must be prepaid by the sender, will amount to the cost of the telegram from the receiving station in the U. S. to the addressee.

• **NEW NSLI DIVIDEND** — The Veterans Administration will soon begin mailing out dividend checks to National Service Life Insurance policyholders.

To meet the requirements for the new dividend, an individual's policy must have been in force for at least three months between the anniversary date of his policy in 1953 and the same date in 1954.

Navymen who "waived" their premium payments will not be eligible unless they have paid at least one month's premium between the anniversary dates.

It is estimated that the checks will be mailed about 60 days after the anniversary date of the policy.

QUIZ AWEIGH

This month's Quiz Aweigh tests your knowledge of submarines, breast insignia, and special flags and pennants of the U. S. Navy.



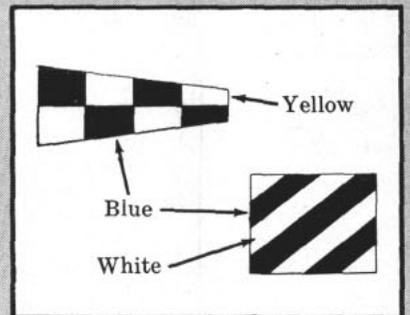
1. A modern submarine like the one above can fully submerge in approximately (a) 30 to 60 seconds, (b) 90 to 120 seconds, (c) 150 to 210 seconds.

2. During World War II, the average war patrol for submarines lasted (a) 15 to 30 days, (b) 45 to 60 days, (c) 75 to 90 days.



3. The illustration of the breast insignia, shown above, designates the (a) naval aviation observer, (b) naval aviator, (c) flight nurse.

4. The insignia for this special designation first appeared in U. S. Navy Uniform Regulations in (a) 1951, (b) 1941, (c) 1922.



5. The pennant, at left, indicates (a) turn, (b) emergency, (c) negat.

6. The numeral flag, at right, indicates (a) six, (b) five, (c) eight.

ANSWERS TO QUIZ ON
PAGE 53



NEW MINE SWEEPERS—first wooden ships to be built at Bremerton in 25 years—are shown at launching ceremony.

New Wooden Ships Join 'Sweep Fleet'

THE amphibious force was under way. Its big ships were loaded with Marine troops who were keyed up for the invasion ahead. Escort vessels darted through the plodding ranks of the heavy transports keeping a watchful eye out for possible enemy submarines. Overhead an umbrella of planes was prepared to fight off anything coming at the fat transports through the air. The invasion point was approached under cover of darkness. All was ready for dawn which was to signal D-Day.

But D-Day slipped by unheralded by the shouts of landing Marines as the armada of ships circled impotently outside Wonsan harbor, and North Koreans by the thousands escaped the trap set for them.

Why?

Wonsan harbor had been converted into a giant trap by the enemy. Its bottom and shallow water was one deadly mine field.

The amphibious ships were to continue to circle for a week until a small group of insignificant looking

minesweepers were able to sweep clear a narrow channel and let the steel-hulled vessels enter the harbor and finally disembark the invasion force.

But not without price. The steel-hulled mine sweepers *uss Pledge* (AM 277) and *uss Pirate* (AM 275) were sunk.

Both sweeps were clearing a path for bigger men-o'-war when mines cut by their trailing cables started popping to the surface like corks. Hemmed in and unable to turn away, *Pledge* was the first to go. A giant cone of debris and water marked her passing.

Pirate, steaming cautiously behind, stopped to pick up survivors, her task complicated by shellfire from Communist shore batteries that had detected and opened up on the audacious mine sweepers. She was not to fulfill her task of mercy, for at the very moment of lowering away life boats she herself struck a mine and followed *Pledge* to the bottom of the harbor.

It was this incident that force-

fully brought home the need for the Navy's present wooden-hull mine sweeper building program.

Presently the Navy is building several hundred wooden-hull mine sweepers in three separate classes.

The AM-421 class, is the largest class. These ships are 165-foot long and displace 750 tons. The AMS-60 is the middleweight class. These are 144 feet long and displace 375 tons.

The MSB is the baby of the trio, 57 feet long, and will operate in a group from a "mother ship" which will be used to transport them to desired areas. From there MSBs will move about under their own power.

The AMs have certain unique structural differences from other types of wooden-hull craft. Their hulls are sheathed with two layers of diagonally placed planks which are in turn covered by a skin of fore-and-aft laid planking.

The outer planking is treated for preservation and the inner diagonal layers are cemented and caulked with compounds which seal off water leakage and help prevent decay.

The MSBs are built with an eye to the lifting capacity of shipboard cranes which can raise them from the water to upper decks. Hence they have a single outer skin. Whenever possible in their construction compromises have been made to reduce weight.

The superstructure on all three classes is bonded with waterproof adhesives and preservatively treated for longer plywood life. Plywood gives strength needed in topside cabins, etc., with a minimum of weight.

Although they have wooden hulls and wood is otherwise used to the maximum extent in their construction, the new mine sweepers are not completely of wooden construction. Non-magnetic metals—brass, bronze and monel—are used wherever possible, although some steel, cast iron and other ferrous metals are also used, principally in the machinery installed aboard.

These magnetic metals will be demagnetized by degaussing gear to prevent the mine sweeper from becoming a target for the very mines it is bent on sweeping.

The MSBs will be used to bolster the activities of the larger AMs and AMSs almost exclusively. These small craft will be manned by a chief petty officer as "skipper" and up to six other enlisted ratings. They will operate close inshore where their lighter draft will permit them to stream sweeping gear in shallow-water depths close to beaches where larger draft sweepers cannot go.

The personnel of these small boats will be armed with automatics, sub-machine guns and M-1 rifles. Actual sweeping is conducted by four boats of a five-boat team. The fifth, designated a "destructor boat," carries explosive ordnance personnel. The moored mines are cut and subsequently pop to the surface. Destructor boat personnel sink these floaters with their small-arms fire.

The largest of the trio, the AMs, will carry a crew of five officers and about 70 men. The next-smaller AMSs follow the AMs closely in design and construction details and will be manned by about 35 men and four officers.

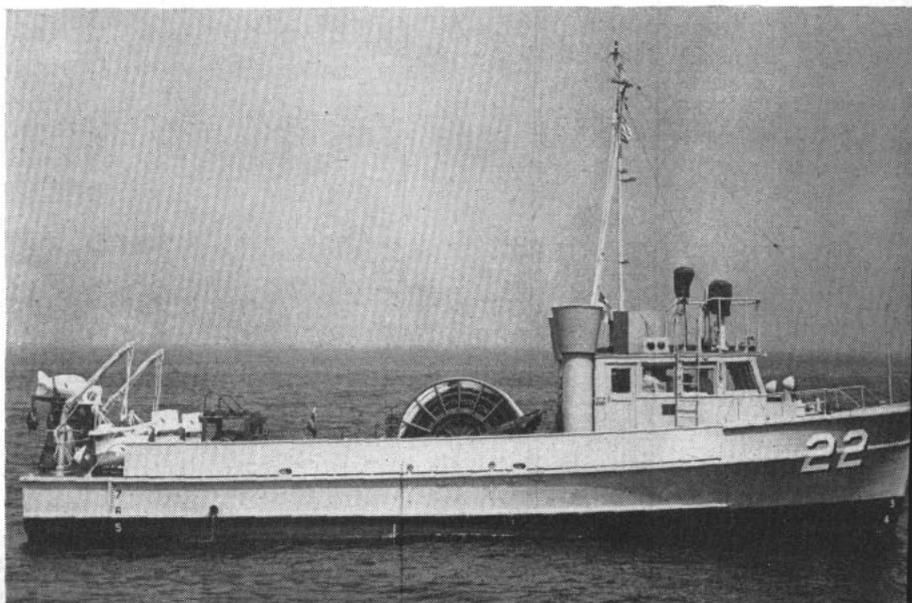
Both types will carry mine hunting gear as well as the means to sweep mines from a channel. Sonar gear, although generally associated with submarine hunting, works as

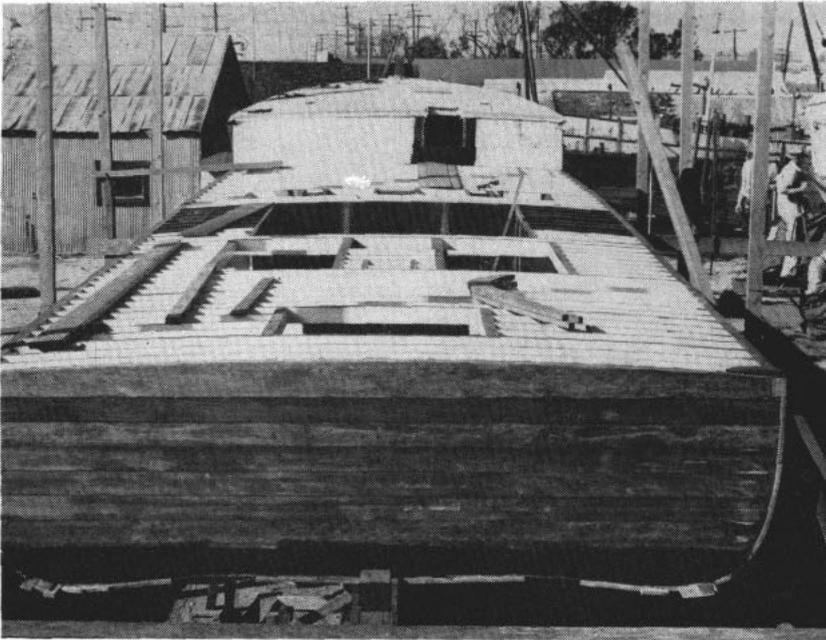


USS DYNAMIC (AM 432), one of new wooden mine sweepers designed to resist magnetic mines, is member of largest sweeper class. It's 165-ft. long.



TYPICAL of AMS-660-class of 'middleweight' mine sweepers is AMS-73. Below: Among baby sweepers, which operate with 'mother ship,' is MSB-22.





DECK AND TRANSOM construction of MSB-22 is shown. MSBs have only single outer 'skin.' Construction compromises were made to reduce weight.

well for ferreting out mines hidden beneath the surface of the water. It is an invaluable assistance to the mine sweepers threading their way through a "cabbage patch" mine field or attempting to determine the best place to clear a channel through a widely laid mine field. This is particularly true when there isn't time to clear the whole area.

Aside from their operational functions which make them a highly specialized vessel that stands out from other combatant vessels like a port running light on a dark night, the new wooden mine sweepers are different in many other ways, ranging from construction to housekeeping functions. Some of these differences are explained below, along with new problems involving the wooden sweeps. For example, there are many headaches connected with their construction. One of these has been the shortage in timbers of desired length and species.

The course of history, which has led the U. S. to naval supremacy, has in our times left its battle scars on our forests. In 1944 the Navy required 9,000,000 tons of steel. During the same period, 3,000,000 tons of wood were used in all types of naval military construction, afloat and ashore. It is becoming increasingly difficult to meet the requirements for shipbuilding timbers from our domestic old-growth trees. De-

spite promising recent developments in structural aluminum and molded plastic boat hulls, wood continues to be better than other materials for many important shipbuilding needs.

The new wooden-hull mine sweepers are framed as are most wooden-hull marine craft, of white oak.

White oak is used because of its structural superiority and durability and is an important component of many types of wooden-hull naval vessels. These include many designs of patrol, landing, district craft, auxiliary transports, salvage and rescue



USS OSPREY (AMS 28), one of Navy's older wooden mine sweepers, had good record in Korean conflict.

vessels ranging from 70 to 183 feet in length, as well as the new mine sweepers.

The white oak required in the building of one AM sweeper is equal to the growth of 100 years on one acre of forest land. The AM has 110 wooden frames. To build 100 AMs the frames alone would consume a year's growth of choice white oak lumber which would normally be found on about 1700 square miles of forest land, or an area 1 and 1/3 times that of the state of Rhode Island.

What does this all mean to the Navy? Simply this. Virgin old growth stands of white oak have been exhausted (except for a few isolated cases). Second-growth stands are the source of most of our present day timber. The Navy is becoming increasingly concerned with the depletion of stands of choice timber and is urging careful and rigid discrimination in the use of high quality white oak.

One way the Navy plans to help make our forests last longer is to make our wooden-hull ships last longer. In the hurry and urgency of World War II, wooden-hull vessels were necessarily built without regard to proper seasoning and treating of timbers. Consequently, many of these hulls are beginning to rot after a mere 10 years of service. The Navy is now working toward a minimum of 30 years' service from future wooden ships.

Preservation, therefore, is going to mean much more to the wooden ship sailor than it ever has before. How this preservation is practiced on wooden hulls is unique and very different from the way it is done on steel ships. For a few of its answers to the questions of longer life for wooden hulls the Navy has gone back to the conservation practices of sailing vessel days. In addition many modern preservation precautions have been added. What causes decay and why is the type of preservation required for wooden ships distinct from that which is normally given their steel brethren?

Decay of wooden hull frames and planking is caused by fungi—plant growths which are entirely distinct from marine borers. Fungi need moisture; wood that is continuously dry (below 20 per cent moisture) does not rot. But fungi also need air; wood completely water logged does not rot. Contradictory? Not at all.

The problem is to keep the moisture content of wood below a certain level or above a certain level. It is especially important to seal rain-water or other free water out by painting or other coating of the wood.

Parts of ships especially subject to decay include the stem, transom and frameheads. In salt water service, hull members below the weather deck and above the water line are more liable to decay than those below the water line. This is because to a certain extent underwater members become soaked with salt water, which inhibits decay somewhat. Hence keels, garboards and other members near usual bilge water levels are rarely decayed in boats continuously in the water.

There is another way of reducing decay—with ventilation. Ventilation hinders decay by its drying effect. While the new mine sweepers have better ventilation than the old ones, proper ventilation is still a problem. Maximum ventilation is the ideal in wooden-hull marine construction.

Maintaining bilges free of oil and as clean as possible is necessary on wooden mine sweepers. The topside seaman will be more concerned with putty and putty-knife when preparing surfaces for painting than he will be with scraper and wire brush. Surfaces should be sealed wherever cracks exist, before painting, to keep moisture from seeping into the heart of the plank and creating an ideal condition for fungi propagation. Layers of paint cannot be piled on top of each other as this prevents spotting decay in progress and creates a fire hazard which is much more dangerous on wooden-hull vessels, for obvious reasons, than it is on steel-hull ships.

During drydocking, which will come more frequently for wooden sweepers, the hull must be examined for marine borers or ship worms.

Anti-corrosive paint is not applied to wooden hulls but anti-fouling will still be used in liberal quantities.

All in all, life will be interestingly different on the wooden-hull sweeps. You may not have to raise sail and depend on the vagaries of wind to push you through the water, as in clipper ship days, but many of the other problems of wooden-hull sailing ships will be faced by the "iron men" of our new wooden sweepers.

—Howard S. Dewey, ENC(SS), USN.



Norfolk Feeds 'Em Well

Sailors who have passed through the serving line at Naval Receiving Station, Norfolk, Va., know they will get good, well-prepared food.

There's no shortage of meat and potatoes for hearty eaters because a choice of two "entrees" is the general rule. Waist-line watchers find the salad bar well-stocked with cold cuts and salad fixin's.

Take a look: Frank Siler, CS1, USN, shows T-bone cuts to Ken Barkman, CSSN, USN, who has been slicing bologna for cold cuts (top). Martha Allen, PNSN, USN, samples thousand island dressing at the salad bar (right). Sampson Dupre, CS3, USN, and Beecher Hyde, CSSN, USN, prepare batter in 80-quart electric mixer bowl.



The Best Passenger a Car Ever Had

Just about every Navyman knows the "Rules of the Road" when it comes to the sea, but how much do you know about driving on land? Being in the Navy you are apt to find yourself driving a motor vehicle in many strange places—do you know what to do?

The following material includes many safety habits which may differ from what you are in the habit of doing. These safe practices are based on the experience of persons who have made a special study of how to drive safely and efficiently. Take a good look at the following section. Be honest with yourself—If you don't use the practices outlined here, your driving needs to be improved:

Entering a "thru street" or highway—As you start out on any trip you usually enter a thru street or highway from a driveway or minor side

road. At such locations you can avoid trouble by slowing down enough to look for approaching cars from *both* directions. If there is a stop sign, the best habit for you is to stop completely *before* looking for approaching cars.

It's up to you to give the right-of-way to all traffic on a thru street or highway.

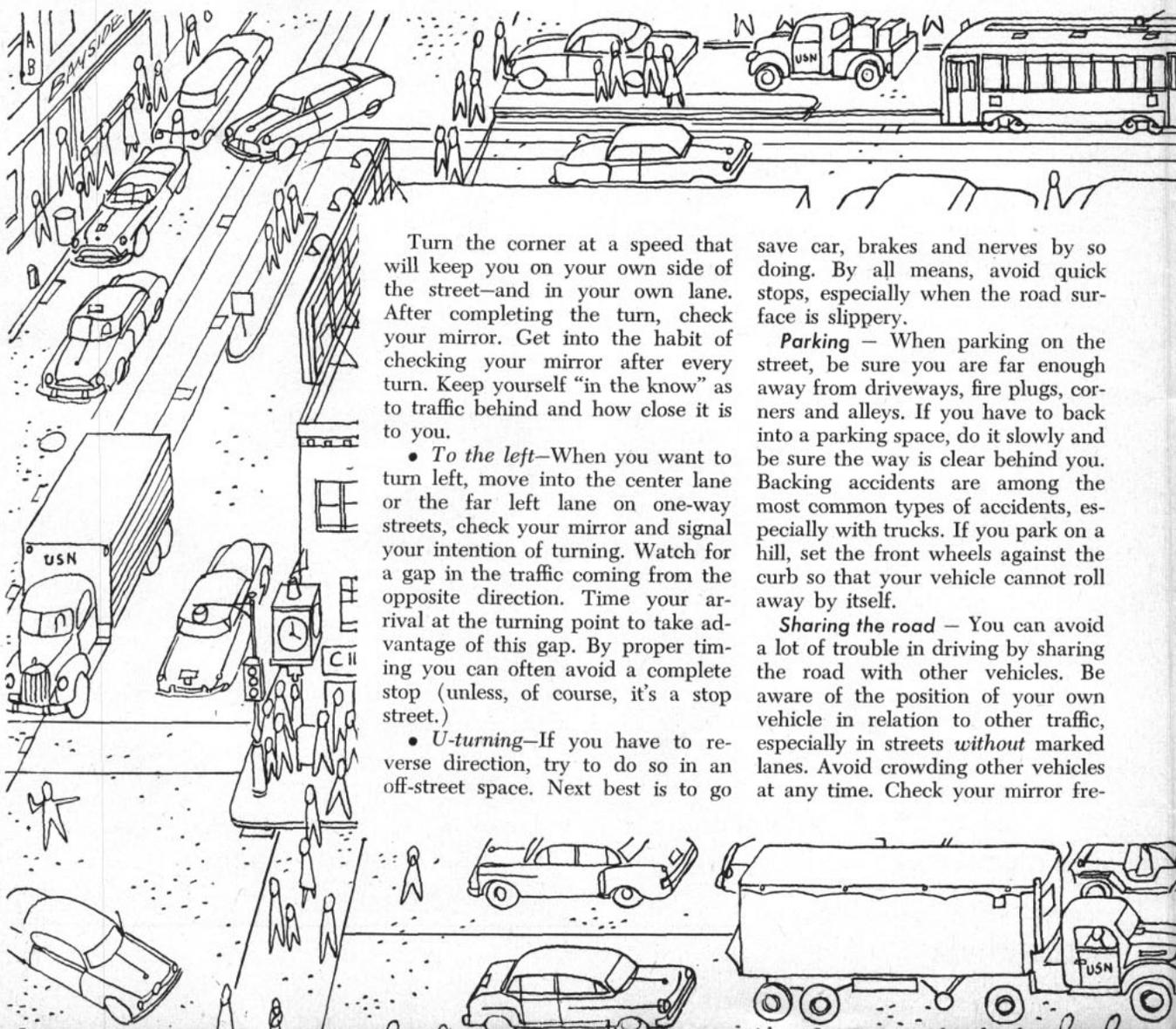
Turning corners — How do you make a turn? It's more than just shifting the wheel.

- **To the right**—Before you turn to the right, move into the right-hand lane, check your mirror for traffic behind, and signal your intention of making a right turn, making sure that other drivers see and know what you're going to do. Slow down *before* making the turn. Just before turning, check traffic coming from your *left*.

around the block. If you make a U-turn, stop first near the right-hand curb and look carefully in all directions for gaps in traffic. If the street is too narrow to permit a U-turn, stop and back into a driveway on the right-hand side of the street. It's always better to back off the street and head out into traffic than to head into a driveway and back out into traffic.

Stopping — When driving in high gear, use your brakes first. After slowing down to about 10 miles per hour, press down the clutch pedal. Leave the gear shift lever alone until your car has stopped.

By "playing" the traffic lights and watching what's happening ahead, you can avoid many stops every day. Keep your attention on developments ahead, and plan your speed so that you will not have to stop often. You'll



Turn the corner at a speed that will keep you on your own side of the street—and in your own lane. After completing the turn, check your mirror. Get into the habit of checking your mirror after every turn. Keep yourself "in the know" as to traffic behind and how close it is to you.

- **To the left**—When you want to turn left, move into the center lane or the far left lane on one-way streets, check your mirror and signal your intention of turning. Watch for a gap in the traffic coming from the opposite direction. Time your arrival at the turning point to take advantage of this gap. By proper timing you can often avoid a complete stop (unless, of course, it's a stop street.)

- **U-turning**—If you have to reverse direction, try to do so in an off-street space. Next best is to go

save car, brakes and nerves by so doing. By all means, avoid quick stops, especially when the road surface is slippery.

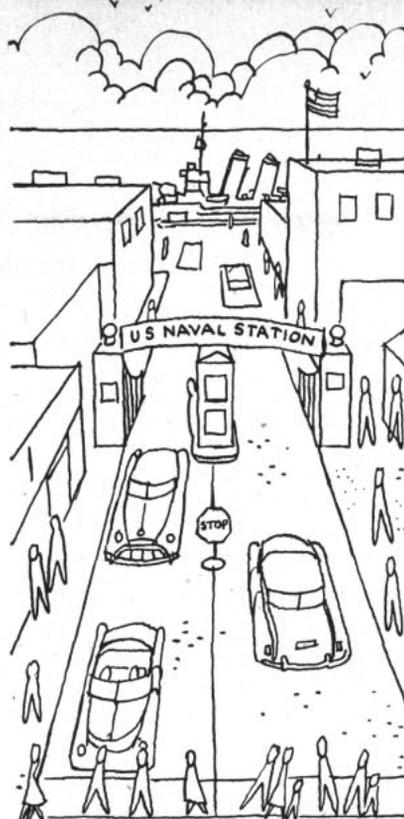
Parking — When parking on the street, be sure you are far enough away from driveways, fire plugs, corners and alleys. If you have to back into a parking space, do it slowly and be sure the way is clear behind you. Backing accidents are among the most common types of accidents, especially with trucks. If you park on a hill, set the front wheels against the curb so that your vehicle cannot roll away by itself.

Sharing the road — You can avoid a lot of trouble in driving by sharing the road with other vehicles. Be aware of the position of your own vehicle in relation to other traffic, especially in streets *without* marked lanes. Avoid crowding other vehicles at any time. Check your mirror fre-

quently so that you know when a car behind you is about to do something which will affect you.

The vehicle you drive may be marked USN—if not, then because of your uniform other drivers know whom you represent even if they don't know you personally. Share the road with others—avoid trouble—and help maintain the Navy's reputation for courtesy and fair play.

Overtaking and passing—The common practice is to overtake and pass other vehicles on the left. Before you pass another vehicle, make sure you have enough room to complete the pass without interference from oncoming traffic. If there is enough time to pass, check behind to see whether someone else is about to pass you. After you have passed the vehicle, check your mirror before pulling over to the right-hand lane. You should be far enough ahead of the vehicle to see the corner of it in your mirror before returning to your



low—to avoid collisions at intersections.

Keeping far enough behind other vehicles—The frequency of rear-end “chain-type” collisions where each of several vehicles in line plows into the rear of the one ahead, shows that many drivers follow too closely. Regardless of what the driver ahead may do, it's your job to be able to stop without crashing into the rear end of his vehicle.

The best way to avoid rear-enders is to stay behind the vehicle ahead a distance equal in feet to twice your speedometer reading in miles per hour. For example, at 20 miles per hour, follow no closer than 40 feet; at 30 miles per hour, the following distance should not be less than 60 feet.

Night Driving—Lack of clear visibility makes your job more difficult at night—just as it does for all drivers. You can compensate for this condition by regulating your speed and adjusting your following distances to what you can actually see.

Modern sealed-beam headlights do a good job of illuminating roadway conditions ahead for approximately 200 feet. Traveling at 50 miles per hour, you need more than 200 feet to bring your car to a complete stop. Exceeding 50 miles per hour at night means “over-driving” your headlights.

When meeting other cars at night, depress your headlight beam until you have passed by the other vehicles. If the other driver does not depress his headlights for you, don't smash him in the eyes with your upper beam because in effect you've got two blind men driving toward each other. Take care of yourself by realizing that you will not see conditions ahead quite as clearly for several seconds afterward—until you are over the effects of glare from his headlights. Also, depress your headlights when following another vehicle. It will reduce the reflection the driver ahead gets from his mirrors.

Headlights have still other uses—Professional drivers use them to signal each other as they meet on roads—one blink is a friendly greeting; two means trouble ahead, such as a minor accident, a detour, etc.;

proper lane. Remember, there's a penalty for “clipping.”

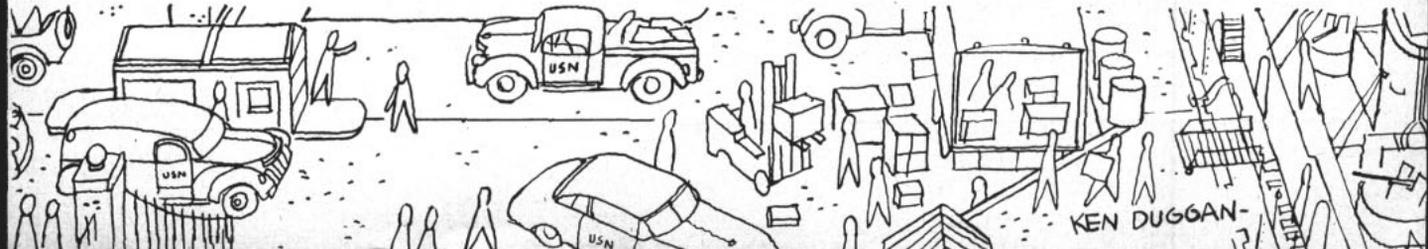
In the daytime, sound your horn as you pull out to pass. At night, flick your headlights twice as additional warning to the driver ahead that you intend to pass him. If you're the one that's being passed, you should depress your headlight beam to signal the driver passing you that he has cleared and can safely return to the right lane—and of course to reduce the glare in his rear view mirror.

In many cities it's customary to pass other vehicles on the right if they are slowing down or are stopped to turn left at an intersection. On one-way streets, pass other vehicles on either the right or left side, after first making sure no one from behind wants to pass you and that the driver ahead knows you're intending to pass him.

Right-of-way at intersections—You have heard numerous rules about who has the right-of-way of vehicles at intersections. Regardless of where you drive, your job is to drive so that you neither hit a vehicle nor get hit by one at any intersection.

Even though the law says that you should yield the right-of-way to vehicles approaching from your right, don't forget that the best practice in checking an intersection for cross traffic is to *look first to the left and then to the right* and then give the right-of-way to any fool who wants it!

Collisions are not avoided by drivers who try to apply the fine points of the right-of-way rules after entering an intersection. If you can't stop in time, the other fellow may not be able to stop either. Depend on yourself, not the other fel-



three or more blinks of the headlights means serious trouble ahead, such as a major accident, children or animals on the road, a bridge out, etc. The driver so warned regulates his speed and alertness accordingly. If a Navy driver began using these signals to help his buddies as they meet on the road, many accidents could be averted.

Hazardous driving conditions — When unusual conditions arise, follow sound practices and avoid trouble:

- If you have to park along the highway for an emergency, pull off the pavement if at all possible. Other-

wise, use flags or flares to warn other drivers that your vehicle is parked on the road. Carry a couple of empty milk cartons in your trunk (the waxed type)—they make excellent temporary flares.

- To avoid skids in starting, turning or stopping on slippery road surfaces, make easy starts and stops and slow down before turning.

- When fog or smoke cuts down visibility, reduce your speed and keep it reduced until you are in the clear again.

- If your right wheels slip off the pavement, ride the shoulder until

you can slow down. Then pick a spot where the shoulder level is even with the pavement level to swing back onto the paved surface.

- Rough roads and gravel roads call for slower speeds. Your tires have less traction on such roads, which means you have to start, turn and stop more slowly.

Pedestrians and bike riders — Take it easy when you see people walking along the road, and when you see children riding bicycles. They can get in your way unexpectedly, but often they cannot move out of your way fast enough. You have to judge each situation for yourself—but be sure to allow an extra margin for the mistakes of pedestrians and bike riders.

Competent Driving — When you drive like a real expert, people can see the difference. Among the ways they spot you as an expert driver are the following:

- You have a business-like and alert posture at the wheel.

- You handle the car controls easily and smoothly.

- You use the brakes infrequently because you “play” the traffic lights, keep a safe distance from the vehicle ahead, and act in advance on all the clues that show you what others are likely to do.

- You are constantly aware of the position of your own car in relation to other traffic, especially on streets without marked lanes. You check your mirrors frequently so that you know how things are going behind.

- You time your arrival at intersections and other locations where you cross or merge with other traffic, so as to fit in where the traffic gaps occur. This makes it easy and smooth for you and others to keep moving.

- You position your vehicle in the correct lane in advance of all right and left turns. Doing this along with signaling for your turns keeps everyone informed as to what you intend to do.

- You never make emergency stops (an emergency stop is the next thing to a collision and indicates you were not on the ball).

- You practice courtesy on the highway, giving other drivers and pedestrians the same breaks you would like if you were in their shoes.

When you follow these simple, basic rules, your vehicle—month in and month out—continues to look like one that is driven by an expert.—T. J. Biddle, Safety Division, OIR.

This Navy Ship Has to Cope with Downtown Traffic, Too

Every ship in the Navy has problems. But perhaps one of the strangest problems is that faced by the all-enlisted crew of YOG 90. The thorn in their side is traffic, automobile traffic.

It seems that each day as the men pilot their small 174-foot vessel up and down the St. John's River to NAS Jacksonville, the ship must pass under the numerous draw bridges leading into downtown Jacksonville.

Tricky cross currents and a tight schedule which call for the 90 to pass under these bridges at off-hours demand some fancy navigation by her skipper, Chief Quartermaster Horace J. Mackey, USN.

Mackey and his crew must maintain a tight schedule. Let the ship

be only a few minutes late in a run, and local traffic is tied up.

One other chief, Winfred A. Hodges, ENC, USN, shares the responsibility of running the ship with Mackey. The remainder of the crew consists of six petty officers and seven non-rated men.

The ever-present threat of fire or explosion also faces the crew on their regular run from the Trout River fuel depot to NAS Jax., where the ship off-loads its 275,000 gallons of aviation gasoline for the many planes at the air station as well as the aircraft aboard carriers.

Despite the traffic problem, YOG 90 keeps shuttling back and forth, one of many small ships in today's Navy doing her job without fanfare.



ALL-ENLISTED crew of YOG-90 prepares to maneuver vessel through a draw bridge and under a lift bridge leading into downtown Jacksonville.



Hong Kong Holiday

HONG KONG, long known as the "Pearl of the Orient," holds many attractions for visiting sailors.

Situated at the mouth of the Pearl River, the island is popular with sightseers—with its ancient homes, picturesque buildings, quaint souvenir shops and its streets jammed with people of all nationalities.

Here, sailors will see late model American and British autos sharing the roads with rickshas, and ancient Chinese junks standing out in contrast to modern warships.

Upper left: Sailor gazes at Chinese junks in the harbor. *Upper right:* Tiger Balm Gardens, with its bizarre scenery, attracts group of sailors. *Right center:* Navymen from *uss Bairoko* (CVE 115) stop to talk with children and vendors. *Lower right:* Two sailors from *uss New Jersey* (BB 62) photograph parts of Tiger Balm. *Lower left:* Visitors from Hong Kong crowd around battleship during "open house."—L. Gaylord, JO3, USN, and David Strickler, JO3, USN.





RADAR ANTENNA on shipboard gun mount is just one example of electronics equipment being used in today's Navy.

NEL Puts Electrons to Work for Navy

HISTORIANS may differ as to whether World War II was the last war of the old order, or a new type of war. One thing is certain. That war could not have been won without the aid of electronic equipments and systems. And electronics today plays an even more vital role in our national defense.

During the past decade electronic equipment has continued to grow more important each day. Modern-day navies would be at a loss without such gear as radar, sonar and complete fire control installations.

That's why the Navy Electronics Laboratory (NEL) has such an important part in the job of keeping the Navy supplied with the latest and best equipment in the field of electronics.

Nearly all of NEL's work is classified. The general public and even a large segment of the Navy hears little about its accomplishments. But products of the laboratory are continually making a difference in battle tactics and helping in the long-range

developments which alter grand strategy.

During World War II the lab convinced skeptics that this new-fangled equipment they were testing was of real value when they installed FM sonar for the first time on the *uss Tunny* (SS 282).

On one experimental voyage *Tunny* penetrated a Japanese minefield and brought back the location of 220 mines.

This was unheard of prior to that time and sonar has since proved a lifesaver for the submarine service men.

This example could be duplicated in many different fields of naval activity, for NEL's research reaches out in many directions — delicate mechanisms that are essential to much of the electrical equipment you use in your ship or naval aircraft, guided missiles, guns, communications, and so on.

You'll find NEL's expert touch has had something to do with your work on the ship's bridge, in CIC, in the

radio shack, in the engineering and ordnance departments.

Scientific activity at NEL's birthplace, Pt. Loma, Calif. goes back to 1906 when the Navy established a tiny radio station near the tip of a promontory in sight of San Diego. It wasn't until 1 Jan 1940, however, that the Navy Radio and Sound Laboratory was established on the point.

The first NRSL building was occupied on 21 August of that year, and on 6 Jun 1941 the Bureau of Ships directed the Laboratory to provide space and facilities for the University of California Division of War Research, a facility of the National Defense Research Council.

Early in 1945 BuShips established its plan for postwar operation of the lab, and in November 1945 the establishment began taking over work which had been assigned to the University group.

Everything at NEL is devoted to one main objective — making electronics useful to the fleet. It's a big

What Is Electronics?

One of the most overworked and least understood words in use today is "electronics." Test the man next to you and see if he can give you a workable definition which checks with the one stated below.

Electronics includes in a broad sense all electrical phenomena, for all electric conduction involves electronics. The common interpretation of the term at present, however, includes only the process of conduction of electricity through vacuum by electrons alone, or through a gas by electrons and ions.

Electronics is defined in a dic-

tionary of electrical terms as "that branch of science and technology which relates to the conduction of electricity through gases or in vacuo" and by a standard dictionary as "that branch of physics which treats of the emission, behavior and the effects of electrons, particularly in vacuum tubes, photoelectric cells and the like."

Very briefly, then, electronics is the science of freeing electrons from their native habitat, the atom, of harnessing them and applying them to the many uses which manifest themselves in television, radio, radar, and sonar, among others.

job, and getting bigger all the time.

You may have passed by the Navy Electronics Laboratory grounds a dozen times without really seeing it. Most of its larger buildings are atop outer Pt. Loma, a few hundred yards above warships passing in and out of San Diego harbor. Oceanographic research laboratories, barracks for the Navy men attached to NEL, and docks for the lab's small ocean-going flotilla are clustered there too.

Not all of NEL's activities are on Pt. Loma. Some of the lab's work is done on lonely desert stations in Arizona and on San Clemente Island, Calif. Still others of its experiments are carried on in the forest-shaded seclusion of Lake Pend Oreille, Idaho. NEL scientists have penetrated the Arctic and Antarctic oceans, shared in atomic bomb developments and ranged the globe in quest of knowledge relating to electronics.

Seapower has always been global, but the battles of Nelson's time (and even of World War II) were fought within relatively limited areas. Now task force commanders must be prepared for weapon ranges of hundreds or even thousands of miles, with far greater elements of speed, surprise and destructiveness than those which caused so much damage at Pearl Harbor.

Electronics came into its own in an era of expanding battle fields.

At sea electronics is used to detect and locate enemies, to communicate within a ship and between ships, planes and shore stations. Technicians use electronic equipment to gather, present, and analyze information at lightning speeds. Elec-

tronic gear controls machinery, helps new men to learn their battle station assignments, and by means of complicated "nerve and motor" networks, a commander-in-chief can coordinate large numbers of vessels and planes moving at high speeds over vast areas.

NEL ELECTRONICS TECHNICIAN shows BMC the proper way to adjust receiver sensitivity of QBH sonar console. At left is the 'A-scan' indicator.



Inputs at NEL are raw materials, money, services, experience and knowledge. From these flow out data, interpretations and predictions, specifications, methods, techniques, equipment, systems and training devices.

Navy personnel also fit into the NEL story, but not in masses. There are only 23 officers and 77 enlisted men within the establishment. These hand-picked few work in close cooperation with the scientists. Altogether the staff—civilians and Navy men—numbers about 1400.

Most of the enlisted men are electronic technicians, sonarmen, communication technicians, boatsman's mates, gunner's mates and engineers.

A few take care of NEL's smaller craft, but the majority are scattered among the many divergent scientific projects now under way.

If there is one thing characteristic of everybody's attitude at NEL it is team-work. Work patterns fall into certain basic fields, so the various divisions are organized to permit most efficient attack upon those areas.



NAVYMEN take part in electronics drill on board USS PC 592, pointing up importance of NEL's work in developing, improving electronics devices.

Each individual profession or trade has its pride of workmanship, its vital portion of common responsibility.

Ashore or afloat, laboratory tasks are grouped in common-sense divisions: Research, Development, Systems and Human Factors.

- *Research* has a two-fold duty. Researchers conduct theoretical and experimental investigations involving physical laws and principles in the broad fields applicable to the assigned problems of the laboratory. They also furnish consulting services as authorized by the Bureau of Ships, to which NEL is directly responsible for all it does.

Research specialists are assigned to oceanography, atmospheric studies, special studies, and marine noises. (Sound in the sea is much

more important than most laymen realize, and it is one of the toughest problems a scientist has to solve.)

- Making "hardware" out of theories is the job of those in *Development*. From plans and ideas they must assemble the necessary information to put out a working model.

- Once developed, equipments and systems still must be fitted into complete systems aboard ships. Integrating this new equipment is the job of those assigned to *Systems*.

- Since all of the gear requires a human hand somewhere in the picture, NEL's *Human Factors* division is busy untangling problems created by the clash of human personality with the mechanical inflexibility of the machines.

NEL's achievements include one

MODELS of fleet-type ships are used at NEL to check antenna system. NEL has one of the finest model ranges for antenna and communication studies.



of the finest model ranges in existence for antenna and communication studies. During World War II, specialists found that failures in reception and transmission on many Navy ships was caused largely by radio "traffic jams" in the atmosphere above the ships. Interference grew so bad that sometimes ships within sight of each other could not establish radio communications.

Experiments at several universities had previously shown that miniature radio waves could be sent and received with scale models ashore under certain test conditions. This knowledge, and the Navy's urgent need led to the construction on Pt. Loma of the model range with scaled ships and scaled frequencies.

Soon there was a growing fleet of model vessels cruising on a circular "ocean" of lead and chicken wire.

The data obtained by use of these model ships and antennas eliminated the need for tying up real fleet units and their crews, thus saving thousands of dollars and countless man hours.

The range has twice been improved and NEL scientists can now meet the needs not only of operational ships, but can plan ahead for warships still on the drawing boards.

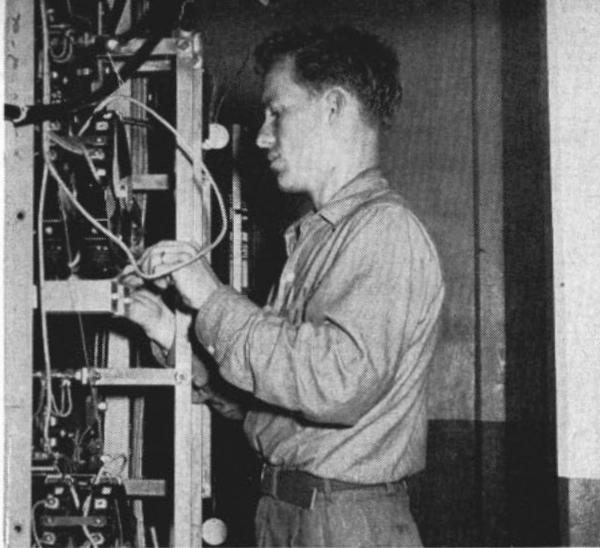
Among other studies at NEL are those utilizing the laboratory's 22,000,000 electron-volt betatron. The betatron enables researchers to study photographs made through materials such as steel up to 24 inches in thickness. With this instrument are grouped equipment for high pressure tests, radiographic and spectrographic research and even the study of sea ice growth in Arctic and Antarctic waters.

The Navy has been doing its share with guided missiles, particularly those to be launched from seagoing platforms.

NEL has helped to devise the electronic controls and systems needed to make this guided ordnance equipment efficient at great distances.

The laboratory also has on hand a full program of anti-submarine and pro-submarine warfare problems. It is considering new aspects of mine warfare and late developments in nuclear experimentation.

NEL's is a never-ending program, one which goes on quietly and efficiently. Like many other jobs being done in the Navy, it's 4.0.



Seabees Do It Again

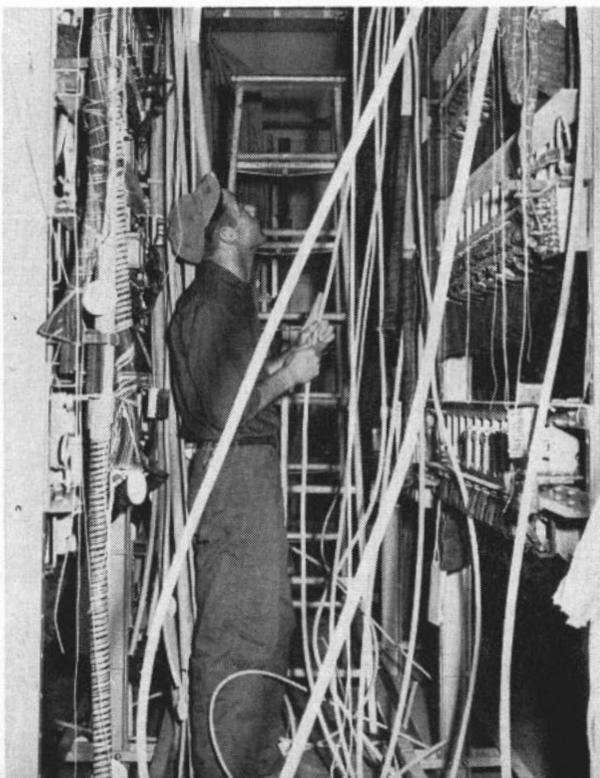
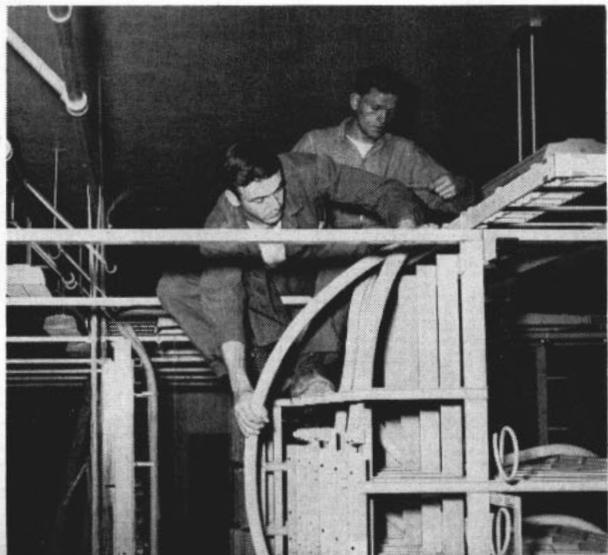
TAKE 116 large-size cases containing a few thousand miles of wire, hundreds of tubes, assorted electrical gear. Mix thoroughly, add six Seabee construction electricians—and you have a telephone exchange.

The exchange in question was installed at U. S. Naval Air Facility, Port Lyautey, French Morocco. It has a capacity of 600 lines and includes special equipment for crash and interference circuits, fire reporting, testing and information service.

The six Seabees who suddenly found themselves thrust into the highly specialized job were without any previous training. But they did the job in eight weeks. After three weeks of trouble-shooting, they cleared up the inevitable "bugs"—shorts, opens, grounds, reversals, crosses, split pairs and a variety of other troubles which appeared to be electrical but actually were mechanical.

Now in full operation, the telephone exchange is quite ready to give rapid communication service with the best of them.

Seabees work on telephone exchange: *Upper left:* C. J. McAnnally, CE3, USN, wires multiple connecting block. *Upper right:* P. C. Whitney, CE3, USN, makes electrical connections at main power panel. *Right center:* R. M. Allen, CE3, USN, and R. J. Bergeron, CE2, USN, assemble main distribution frame. *Lower right:* Let's see now, where does this one go? *Lower left:* McAnnally, Allen and G. E. Burns, CE3, USN, install cables.—By Hubert H. Wheeler, CEC, USN; photos by Leonard Fisher, CELC, USNR.



NEWS OF OTHER NAVIES

In this section ALL HANDS continues its report of news items of interest concerning navies of other nations.

★ ★ ★

GREAT BRITAIN—An old ship with a new job, HMS *Ladybird* has returned to Hong Kong after nearly three years' service in the Korean theater.

United Nations sailors entering Sasebo harbor for the first time have gazed in disbelief at the ship which resembles a 19th Century Mississippi River showboat, minus the paddle wheels.

Despite her appearance and antiquated facilities, this matron of the China coast, HMS *Lady-bird*, served as floating headquarters for the Royal Navy Flag Officer, Second in Command, Far East Station. Aboard her, staff officers planned and executed Korean west coast naval surface and air operations as part of the United Nations Blockading and Escort Force.

The 22-year-old ship has had a colorful career. Once she fought off Chinese pirates while sailing the Yangtze as a trading ship in the early 1930's. Again, the 295-foot wooden ship was set afire by rebelling Malayan crewmen. On several occasions during World War II, while serving as a floating evacuation hospital, *Lady-bird* was attacked by Japanese bombers and machine-gunned by enemy fighter planes.

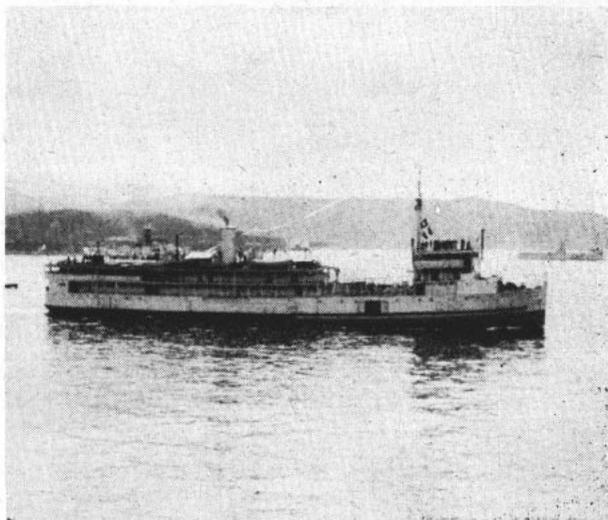
Relieving *Ladybird* in Sasebo is HMS *Tyne*, a modern headquarters ship with spacious offices for the British staff and the latest repair facilities for Royal Navy and Commonwealth combatant ships.

★ ★ ★

AUSTRALIA—A light fleet aircraft carrier capable of carrying and operating jet aircraft is scheduled to join the Royal Australian Navy the latter part of 1954.

The carrier, HMAS *Melbourne*, presently being built in Great Britain, is of the *Hercules*-class. Owing to modifications in design and construction, delivery of *Melbourne* to the R.A.N. has been delayed until next year.

The aircraft that will be operated from the carrier



BRITISH vessel, HMS *Ladybird*, with colorful 22-year record, recently completed long tour of duty in Korea.

will be *Sea Venom* turbo-jet fighter planes and *Gannet* turbo-propeller anti-submarine planes.

The *Sea Venom* is a two-seater day-and-night all-weather aircraft of high speed and with a fast rate of climb.

The new *Gannet* has a double Mamba turbine engine which drives two propellers. This plane has a wide cruising range which can be increased by cutting off one engine. It is fitted with modern radio and radar equipment and weapons necessary to enable it to hunt and destroy submarines.

Unlike present R.A.N. anti-submarine aircraft, it will carry three men instead of two—a pilot, an observer and a crewman who will act as "telegraphist" and also operate some of the equipment. Forty *Gannets* have been ordered from Great Britain; 30 of these will arrive in Australia in 1955.



PLOTTING ALONG—C. W. Algood, RD3, USN, and Cho Sung Dall, second class radarman, ROKN, study schematic diagram. Right: Turkish Navymen employ skills in plotting room of *Gemlik* during Mediterranean maneuvers.

• CANADA—Although HMCS *Athabaskan*, Canadian destroyer serving in the Far East may not be adding to her collection of battle honors right now, she's earning a substantial poundage of U.S. Navy ice cream.

Rescuing water-logged flyers and swapping them for ice cream started last February when *Athabaskan* returned a jet pilot to the aircraft carrier USS *Philippine Sea* (CVA 47) after he had crashed off the Korean east coast. The carrier offered the Canadian warship 185 pounds of ice cream, an amount equal to the weight of the pilot. However *Athabaskan* had to leave immediately and was unable to collect the reward.

Then again last August *Athabaskan* was acting as plane guard for USS *Point Cruz* (CVE 119) when a helicopter from the carrier crashed dumping three men into the sea.

Athabaskan went immediately to the rescue and fished the three flyers out of the water. On board the Canadian destroyer, amateur weight-guessers estimated the weight of the three rescued men (not counting flying clothing and salt water) at 515 pounds. But before the Canadians could collect, *Athabaskan* again had to leave.

However, her crewmen aren't worried—they have been promised by U. S. Navymen that the account will be paid in full—with accrued interest.

★ ★ ★

PERU—A swift new attack submarine, *Tiburón* ("Shark"), has joined the Navy of the Republic of Peru. *Tiburón* is one of two modern attack submarines built at Groton, Conn., for the South American republic. A sister sub, *Lobo* ("Sea Wolf"), is scheduled to be launched in January.

A picked crew of Peruvian submariners manned the new sub as it slid down the ways. They had previously taken courses at the New London Submarine School to brush up on the latest techniques of undersea warfare, and put in several months becoming familiar with their new vessels—inside and out.

The vessels themselves incorporate streamlining and the snorkel plus other modern features developed in the submarine during and after World War II.

In charge of the final construction phases in the U.S. was the Peruvian Navy's veteran submariner, Commander Federico Salmon, acting as Inspector-in-Charge. Three years ago, Commander Salmon led a contingent of four submarines which sailed to the yard for overhaul. The 10,000-mile round-trip from Callao to Groton was made without incident—pointing up the technical skill, maintenance ability and seamanship of the Peruvian submariners.

★ ★ ★

TURKEY—The Turkish Navy has commissioned a new naval base at Iskenderun. Built with U. S. funds and the technical assistance of BuDocks engineers, the base, located on the Turkish southern coast, is complete with repair shops, a new 800-foot timber pier, 1400-foot concrete pier and a floating drydock capable of handling mine sweepers, mine layers and other small craft.

The new base is built along the lines of the advance bases constructed by the U. S. during World War II at Guam, Saipan and elsewhere in the Pacific.

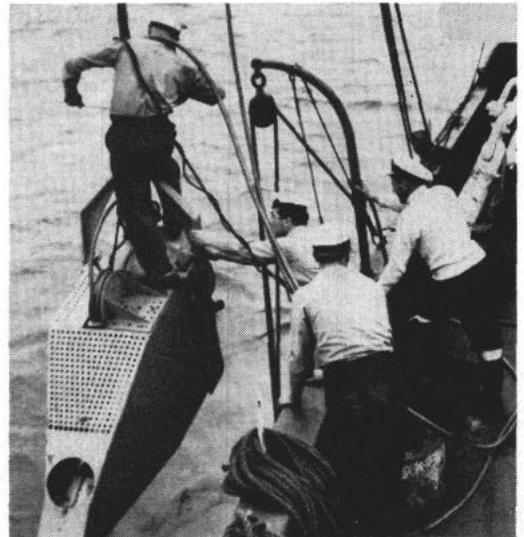
A Turkish "boot camp" capable of handling 5000 men is also part of the training facilities.

Iskenderun has an excellent natural harbor and is surrounded by high mountains thus forming an ideal "redoubt." It is linked with other strategic Turkish bases by railroads and roads.

★ ★ ★

THE ROYAL NAVY has launched HMS *Salisbury*, the first in a new class of frigates, at the Royal Naval Dockyard, Devonport, England.

Classed as an "aircraft direction frigate" the new ship has an over-all length of 340 feet and a 40-ft. beam. Powerful radar equipment will enable her to fulfill her prime mission of giving early warning of the approach of hostile aircraft and directing fighters to their targets.



GOING DOWN—Appetites are good aboard Thailand frigate HMTS *Prasae*, element of UN fleet in Korea. Right: Tests by HMS *Reclaim* show operation of underwater television camera developed by the British Navy.

LETTERS TO THE EDITOR

Report and Proceed Time

SIR: I have a question which office debate can not clarify. Article C-5318 (5) *BuPers Manual* states that an enlisted man traveling under permanent change of duty orders with leave, travel and proceed time authorized en route, has until midnight of the reporting date in which to report and that the individual is not reporting from leave but is reporting for duty after being granted a delay to count as leave.

Is the day of reporting, regardless of the arrival time, charged as a day of travel in order to compute the total number of days leave, travel and proceed time taken, or should it be considered a day of duty?—B. B. W., PNSN, USN.

• The example given in Article C-5318(4) *BuPers Manual* may be broken down as follows:

1 August Detached (day of duty)
2 through 16 August ... Leave, 15 days
17 through 20 August
Proceed time, 4 days
21 through 23 August
Travel time, 3 days

Thus, the 23rd day of August, regardless of the arrival time, is a day of travel.—Ed.

Draftsman Duty and Training

SIR: There are two questions I would like to get answered. (1) Is there a Navy training course for the draftsman rating? (2) Does a draftsman have to request a ship for sea duty or can he request that he be ordered to a Seabee unit at CBC Davisville, R. I., or CBC Port Hueneme, Calif.?—J. C. H., DM2, USN.

• Here's the straight dope: (1) Draftsman 3 (Navy Training Course) is nearly completed and will soon go to the printers. It will probably be available about next July. As for Draftsman 2, it is half completed and will be available in about 18 months according to the present schedule.

(2) Yes, a draftsman may request sea duty with a Seabee unit at Davisville, R. I., or Port Hueneme, Calif. Upon completion of a normal tour of shore duty, draftsmen, like all other ratings, are reported "available" to BuPers. Each is then given the opportunity to express his preference for his next duty station. BuPers transmits this duty preference to the Fleet Commander when assigning the man to sea.—Ed.

This section 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. Sign full name and address. Address letter to: Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D. C.

Advancement of Waves

SIR: I have taken the exam for YN3 twice and have passed both times, but I have not been advanced because of quota limitations. I would like to know if Wave personnel compete with enlisted men for advancement in rate.—G. K., YNSN, USN.

• For advancement in rating, Waves compete on a service-wide basis with the enlisted men in the Navy. Advancements are determined by the final multiple standing of all personnel in each rating who competed for advancement.—Ed.

Info on NPDI

SIR: I would like some information on NPDI (non-performance of duty because of imprisonment). There seems to be some confusion at the retraining commands.

I have received a number of men from retraining commands and in computing their longevity, I have always deducted their time at the retraining command in computation of time for pay purposes. But on the leave page of the individual's record the retraining command states all time spent there as "NPDI."

I understand that NPDI is only time lost while in custody of civil authorities or confined under general court-martial sentence. In other words, I don't think time spent in a retaining command, other than by a general court-martial order, is lost time for computing longevity.—A. F. F., PN3, USN.

• You are correct in regard to computing time spent in a retraining command for longevity purposes.

Non-performance of duty (confinement) is defined as absence in excess of 24 consecutive hours while in confinement awaiting trial (and during trial) which results in conviction and sentence by GCM to confinement and to a total loss of pay and allowances.

A period of absence in excess of 24 consecutive hours while in the custody of civil authorities is also considered NPDI unless the member is acquitted or released without trial and without making restitution or reparation.—Ed.

Registering with Draft Boards

SIR: I will be getting out of the Navy next summer and have heard I will have to register with the draft board when I get out. Is this true and if so, what ages are affected. I am 24 years old.—G. B., SO2, USNR.

• If you have not reached the age of 26 on or before 30 Aug 1948 you will be required to report to your local Selective Service Board, for registration, within 30 days from the date of your separation. If you were registered with the Selective Service System but were called to active duty because you were a member of a Reserve organization or the National Guard, you will likewise be required to notify your local Board of your release or discharge from active duty. In either case you should get in touch with your Board promptly in order that you may receive a revised Selective Service classification.

For example, if you are honorably discharged and still of draft age (under 26) you may be placed in Class 1-C (Discharged). If you are transferred from active duty to membership in a civilian reserve component you may be placed in Class 1-C (Reserves). But if you were in service before 24 Jun 1948 and have completed the military service required of such persons (that is, at least 90 days of active duty between 7 Dec 1941 and 2 Sep 45; or at least 12 months of active duty between 16 Sep 40 and 24 Jun 48; or three full years of active duty since 24 Jun 48) you would be placed in Class 4-A (Exempt).—Ed.

Allotments and BAQ

SIR: Some of us have heard that there is a possibility of suspending the allotments of married seamen and third class POs as was done in 1949. This suspension gave these men a choice of either receiving a dependency discharge or remaining in the service. Could you give us the scoop?—C.G.D., YNSN, USN.

• The Dependents Assistance Act of 1950 has been extended so as to continue in effect until 1 Jul 1955. At that time the provisions and conditions as to pay and allowances will revert to the basic principles of the Career Compensation Act of 1949 unless, of course, Congress makes further changes in the basic act.

The Career Compensation Act does not provide allowances for dependents of members in pay grades E-1, E-2, or E-3 (or E-4 with less than 7 years' service). Also, a dependent parent must reside with the member of the Navy in order for the Navyman to receive a BAQ for a parent.—Ed.



Draftsman

Retirement in Highest Grade

SIR: According to my figuring I will have completed the time required for transfer to the retired list about 11 Mar 1954. (This time includes 26 years of active duty and four years in the Fleet Reserve). If my figures are right I should then be eligible to be advanced to the highest grade in which I served satisfactorily under a temporary appointment prior to 30 Jun 1946. Am I correct? If so, is there any action required on my part in connection with such retirement?—M. T. McM., HMC, USN-FR.

• Your record indicates you will complete 30 years' active and inactive service for retirement purposes on 8 Mar 1954. Therefore you will be retired automatically on 1 Apr 1954. Subsequent to retirement a determination will be made by the Secretary of the Navy as to the highest rank in which you served satisfactorily and you will be advanced on the retired list to this rank effective from date of retirement. No action is necessary on your part in accomplishing this advancement on the retired list.—Ed.

Hoisting and Lowering the Colors

SIR: Can you help me settle an argument? I am presently attached to a shore station and have noticed the morning colors ceremony several times. It appears to me as though the ceremony is not being performed correctly, but perhaps I am in error.

It has always been my impression that colors when hoisted, are done so in a spritful sort of a way to denote something cheerful and pleasing. When they are lowered, they are done so more slowly. I don't know where I picked up the idea but (now don't laff), I look upon morning colors as something happy, another day, another good ol' American day. It's a joyful event and the colors are hoisted spritfully. However, lowering colors seems to me to be a sad event. The day is over. The events that took place that day are past and colors will not be seen again until the following day — therefore, the colors are lowered slowly. Are there any reasons for my thinking this way, or am I entirely wrong? I have checked *Navy Regs* and *BuPers Manual*, but cannot seem to find any information that would help settle the argument.—F. S. T., YN1, USN.

• You've got the spirit of the ceremony. Public Law 829 of the 77th Congress (the *Flag Code*) states, "The flag should be hoisted briskly and lowered ceremoniously."

Here are the basic regulations on the ceremonies observed at colors at shore activities and on board ships in commission: The guard of the day and the band are present, if available. At morning colors, "Attention" is sounded on the bugle. This is followed by the

playing of the National Anthem by the band, at the beginning of which the ensign is started up and hoisted smartly to the peak or truck. All personnel face the ensign and render the salute required. The salute terminates with the sounding of "Carry On." The same ceremonies are observed at sunset, the ensign being started from the peak or truck at the beginning of the National Anthem and the lowering so regulated as to be completed at the sounding of the last note.—Ed.

EMs Applying for OCS

SIR: In a previous issue of ALL HANDS you printed information to the effect that USAFI would not continue the 2CX test after 1 Jan 1954. Can you tell me how this will affect the present OCS program as regards enlisted men on active duty in the Regular Navy who do not meet the educational requirements to apply for this program?—R. P., RMI, USN.

• An enlisted man on active duty in the Regular Navy applying for appointment to the grade of ensign in the Regular Navy under the provisions of BuPers Inst. 1120.7, who has not completed four semesters (two years) of work toward a degree in an accredited college or university, or who has not satisfactorily completed the USAFI Educational Qualification Test 2CX prior to 1 Jan 1954, may still apply for appointment provided he is otherwise qualified, is a high school graduate and attains a GCT or ARI score of at least 60, in addition to passing an officer selection test. The above provisions will be included in BuPers Inst. 1120.7A which will be promulgated at a later date.—Ed.

Photographic Officer's School

SIR: What the requirements for admission to the Class "O" Photographic Officer's School. Are 1105 designators with prior naval photographic training and experience considered? If so, what is the procedure for submitting an application?—G. W. L., ENS, USNR.

• As indicated in NavPers 15795, "List of Navy Schools and Courses," the Class "O" Photographic Officer's School is primarily for the training of aviation personnel. Graduates of this school are assigned to aviation units for duty.

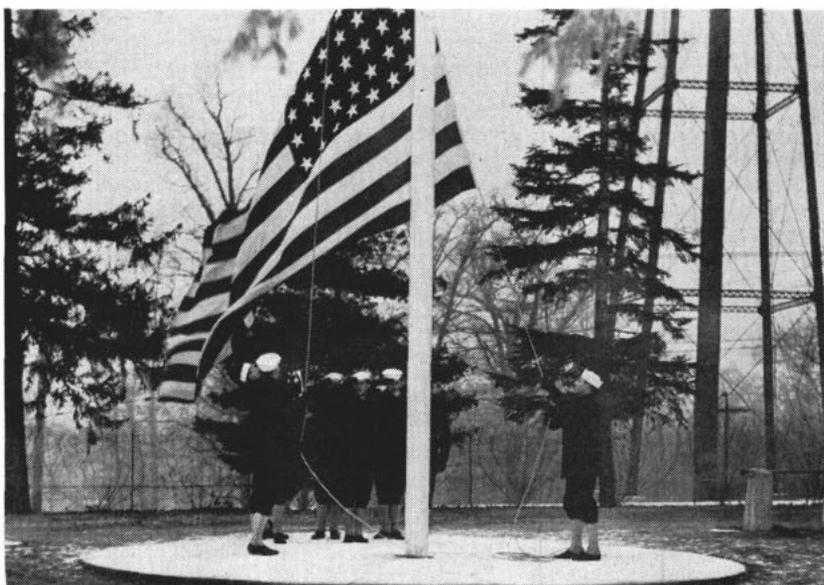
There are no billets for code 1100 officers (including 1105 designators) wherein the training offered at this school could be utilized. Consequently, officers of this category are not being assigned to a course of instruction in the Photographic Officer's School.

Your attention is invited to BuPers Inst 1520.24 which promulgates information concerning courses conducted at the U. S. Naval Photographic Interpretation Center, Naval Receiving Station, Washington, D. C., and the eligibility requirements for those courses.—Ed.

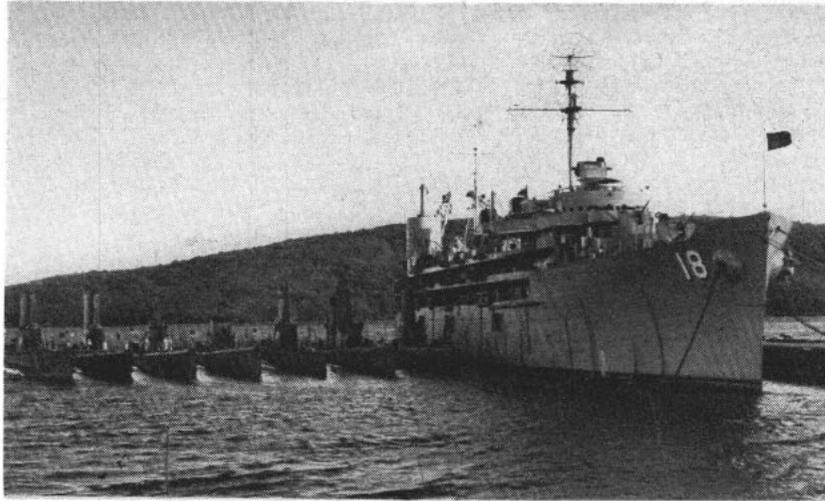
Silver Rating Badges

SIR: Are the blue rating badges with the eagle sewed in silver thread authorized for first, second and third class petty officers?—E. S., SK1, USN.

• Rating badges as you describe with eagle of silver thread are not authorized for first, second and third class petty officers. The only rating badges authorized are those shown in Table 1 of Article 1202 of Navy Uniform Regulations, 1951. Rating badges consisting of silver eagle and specialty mark and scarlet chevrons are authorized for CPOs only.—Ed.



MAKING COLORS—Navy men undergoing training take part in morning colors. 'Flag Code' tells how Ensign should be raised and lowered.



SUB TENDER—USS Orion (AS 18) and nest of submarines take a brief rest in Virgin Island alongside docking facilities made available by local residents.

Waiver of Navy School Requirements

SIR: Would you please enlighten me on the Navy's position in regard to sending a man to school if his GCT/ARI score is slightly below average?

I enlisted in the Navy at the age of 19 and on the first day was given the battery of tests with no advance notice. As luck would have it I definitely was not at my best and consequently scored below par.

I would like to attend JO school but according to all I can find out I cannot retake the tests unless special circumstances can be proved.

What would I have to do either to take the tests over or to go to school with a slightly lower GCT/ARI than is required?—F. L. S., SN, USNR.

• *Journalist school requirements do not call for GCT/ARI tests, as you stated, but rather call for a combined GCT and Clerical Test score of 110. As for retesting, in some instances the Chief of Naval Personnel will consider retesting personnel who fail to meet test score selection criteria; but the lack of qualification alone is not considered an adequate reason. Such items as (a) language handicap, (b) extremely limited educational background or (c) abnormal test pattern, are considered sufficient to warrant a retest, provided there has been an opportunity for improvement of a deficiency.*

It is sometimes possible to attend the school of your choice even though your scores don't meet the minimum requirements. However, in your particular case, the quotas for the Journalist school are very limited, and your chances of being accepted would be extremely small.

Waiver of test score requirements would necessitate approval by the appropriate administrative commander or the Chief of Naval Personnel. If there are only a few points difference between

your score and the minimum requirements and if your commanding officer feels there are other factors sufficient to warrant consideration of you for a specific school, he can recommend you.

A request for waiver should be addressed to the appropriate administrative commander or the Chief of Naval Personnel (Pers B212) and should be supported by a statement of the other qualifications weighted in favor of the candidate. When a waiver is authorized, appropriate entry must be made in the service record prior to transfer.

More information on this subject is contained in BuPers Inst. 1510.7.—ED.

Obligation Under UMT & SA

SIR: Under the provisions of the Universal Military Training and Service Act, a reserve obligation is incurred. That is to say, when a man receives an honorable discharge from the Navy, he will be transferred to the Naval Reserve. His time in the Reserves, when added to the period of active duty already completed, will total a period of eight years.

Does this UMT Act include all men serving in the Navy (who have less than eight years' service) no matter when they enlisted or does it affect only those men who enlisted after 19 Jun 1951?—F. R., YN3, USN.

• *The provisions of the Universal Military Training and Service Act, as amended (eight years' military obligation), apply only to initial enlistments entered into after 19 Jun 1951 by male personnel who were under 26 years of age at the time of enlistment. If your initial enlistment was before 19 Jun 1951, or if you were 26 years of age or over at the time of such enlistment, you did not assume the eight year military obligation and will be eligible for discharge upon completion of your present enlistment.—ED.*

G.I. Benefits in Fleet Reserve?

SIR: I am a veteran of World War II and Korea with 28 years' service. I intend to go into the Fleet Reserve shortly, which brings up a question:

All the material I have read pertaining to the G.I. Bill of Rights omits any mention of men going into the Fleet Reserve. They make provisions for discharge, release from active duty, etc. What I would like to know is this: will I have to wait until my 30 is up and I get a discharge before becoming eligible for VA benefits or could I take advantage of schooling or "on the job" training while in the Fleet Reserve?—R. L. S., RMC, USN.

• *The term "eligible veteran" means any person who is not in the active service of the armed forces and, (a) has served in the active services of the armed forces at any time during the period of 16 Sep 1940 and 25 Jul 1947 and/or during the period 27 Jun 1950 and ending on a date yet to be determined by the President or the Congress, (b) has been discharged or released from such service under conditions other than dishonorable and, (c) has served on active duty for 90 days unless discharged sooner for a service-connected disability.*

Membership in the Fleet Reserve does not, in itself, disqualify an individual from receiving the benefits available to veterans through current legislation. Persons transferred to the Fleet Reserve are veterans, as such, and entitled to the many benefits made available by veterans' legislation the same as any other veteran.

Persons transferred to the Fleet Reserve are released to inactive duty on the date of such transfer unless an order to the contrary has been received. When released to inactive duty you will receive a "Report of Separation from the Armed Forces of the United States" (DD Form 214) which document, in itself, is evidence of "Discharge or Release" and does constitute the separation requirement for entitlement to veterans' benefits. Your inactive Fleet Reserve status does not prohibit you from taking advantage of the benefits afforded by current veterans' legislation. However, in event you receive orders retaining you on active duty when you are transferred to the Fleet Reserve, you will have to wait until your release or retirement before you may take advantage of the benefits of veterans' legislation.

Persons now being released to inactive duty and transferred to the Fleet Reserve may be eligible for the benefits of both World War II and the Korean G.I. Bills. The important thing to remember is the deadline for making application for initiating these veterans' benefits.

Since you may be eligible for on-job-training under both the Servicemen's

Readjustment Act of 1944, as amended (World War II G.I. Bill) and the Veterans' Readjustment Assistance Act of 1952 (Korean G.I. Bill), you should contact your local Veterans Administration office at the time of your transfer to the Fleet Reserve and talk over your dual eligibility with them before making any educational plans for the future.—Ed. magazine.—Ed.

Education under Korean G.I. Bill

SIR: I intend to go to college (full-time) upon discharge and feel that the \$110.00 a month I would receive under the Korean G.I. Bill would not completely meet my expenses. Can you tell me if it would be possible to work part time without having the earned amount deducted from the \$110.00 a month?—A. J. B., PN3, USN.

• *The \$110.00 is paid to veterans without dependents by the Veterans Administration to cover the expenses of tuition, books and others costs. You may make as much money as you can in outside employment. Your VA allowance is not affected by such additional income.—Ed.*

Peacoats, Navy and Civilian

SIR: Uniform Regulations states "Retired Personnel, not on active duty are prohibited from wearing the uniform with non-military activities." Also, it states in part, the peacoat "... shall have a row of four 50-line black foul anchor buttons down each forefront."

The conclusion is made then that the peacoat is part of the Navy uniform and that the uniform cannot be worn by a civilian.

Yet, here in Salt Lake City a coat outwardly looking exactly like the Navy peacoat, including the black foul anchor buttons, is being sold by one of the better known stores for civilian wear.

We wonder, here, if we are interpreting the Regulations correctly. If we are wrong in our conclusions then the black foul anchor button is not a distinctive part of the uniform.

We would appreciate your comments to clarify the matter. E. W., YNS1, USNR.

• *You are correct—according to the interpretation of the Judge Advocate General, unless the distinctive Navy black foul anchor buttons are replaced with non-distinctive buttons, the peacoat is a distinctive article of uniform and not authorized for sale or wear by civilians.*

It is suggested you bring the matter to the attention of your commanding officer, or other local military authority, who can probably get the matter rectified easily on the spot, either by informing the merchant of the violation (which presumably is done in ignorance) or by taking it up with civilian authorities.—Ed.

'Real' and 'Personal' Property Taxes

SIR: My temporary residence is in the state of Massachusetts, and I own property there. However, my permanent residence is in New York State. My question is: Can I be taxed for the property I own in Massachusetts while being an official resident of New York State?—E. R., MEC, USN.

• *First of all, you must distinguish between types of 'property' that is, 'real' property and 'personal' property. Real property is real estate such as a house, farm, or a piece of land. Personal property is either 'tangible' or 'intangible.' Tangible personal property includes such items as furniture or household effects, jewelry, an automobile, etc., while intangible personal property includes bonds, notes or other evidence of debt, demands and claims, or money.*

Let's take real property first. State and local taxes on real property are due and must be paid to the jurisdiction where that property is located. So, if you have a home or other real estate in one State but have legal domicile in another you will still have to pay the tax on that property to the State in which it is located.

Now for personal property. Under the provisions of section 514 of the Soldiers' and Sailors' Civil Relief Act of 1940, as amended, a member of the armed forces who is legally resident, or domiciled, in one State and living in any other State solely by reason of duty orders, is not liable to the State in which he is so living, nor to its counties and cities for personal property taxes, either tangible or intangible.

Your automobile is tangible personal property and if you have New York license tags on it, you will not be required to pay Massachusetts personal property tax on it or for Massachusetts license tags. However, if you do not have New York State license tags, Massachusetts may require that you procure Massachusetts license tags and pay such State and local charges that may be imposed in connection with the procurement of them. You will, of course, be liable to the State of New York in accordance with its laws and regulations pertaining to persons legally resident or domiciled in the State even though you may be physically located outside the State.—Ed.

Computing Retired Pay

SIR: BuPers Inst. 1823.1, para 5b (2), states, in part, "a fractional year of 6 months or more may be counted as a full year for the purpose of computing years of active Federal Service for transfer and basic pay." Does this mean that a CPO with 21 years, six months service would be placed on the Fleet Reserve rolls with the retainer pay of \$159.76?—C. F. McC., SKC, USN.

• *A fractional year of six months or more counts as a full year only in computing the number of years to determine the 2½ per cent multiple and does not count as a full year toward the commencement of a new longevity period. On the basis of the information given in your letter, entitlement to retainer pay would be computed as 2½ times 22 years \$275.18 (basic pay for over 18 years but less than 22 years service), or \$151.35 per month retainer pay.—Ed.*

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying The Editor, All Hands Magazine, Room 1809, Bureau of Personnel, Navy Department, Washington 25, D. C., four or more months in advance.

• **uss Barton (DD 722)**—The fifth reunion of the World War II crew of this ship is scheduled for May 1954 in Washington, D. C. All hands who have served in Barton are urged to attend. Inquiries may be directed to F. M. Shore, Jr., 9915 Dickens Ave., Bethesda 14, Md.

• **uss South Dakota Veterans' Assn. of WW I**—The 33rd annual reunion of the World War I crew will be held April 3 in the Monte Cristo Hotel, Everett, Washington. For details, contact Carl Hagglund, 2519 N.E. 59th Ave., Portland 13, Ore.

• **Firefighters of the Navy, Coast Guard and Marine Corps**—The 8th annual meeting of this association will be held July 15, 16 and 17, in the

American Legion hall, Third and E Streets, N.W., Washington, D. C. For further information, address W. E. Garges, 10 Blackhawk Drive, Forest Heights, Md., or Wm. J. Mignery, 2353 N. College St., Indianapolis, Ind.

• **Commanding Officers, Destroyer Escorts**—The fifth annual dinner for DE commanding officers will be held at the New York Yacht Club, New York, N. Y., on 8 Apr 1954. Contact Frank M. Donohue, 41 East 51st St., New York 22, N. Y., for details.

• **NAS Bermuda**—All personnel stationed at NAS Bermuda, from time of commissioning until end of war who are interested in a reunion, the time and place to be decided, contact R. F. J. Williams, Jr., 819 West Noble, Oklahoma City, Okla.

• **uss Holt (DE 706)**—Any former member who served in this ship from commissioning to de-commissioning and is interested in holding a reunion at a time and place to be announced, please contact W. J. Morgan, Route 4, Box 116, Greensboro, N. C.



TANKS A LOT AND SO LONG—USS Douglas A. Munro (DDE 422) pulls briskly away from USS Agawam (AOG 6) as fueling at sea exercises are completed.

Dolphin Designation

SIR: A question has come up which we would like you to clear up for us. If a man has qualified in submarines and carries the designation of (SS) behind his rate and is transferred to BuPers shore duty and was not physically or temperamentally disqualified, how long is he eligible to wear the dolphins and carry the designation of (SS) behind his rate? If he enlists in another branch of the armed forces is he still eligible to wear the submarine dolphins? How about divers and flight crew insignia?—G. R. D., EN2 (SS), USN.

• In accordance with BuPers Manual, Article C-7404, a man who has qualified for submarine duty and is subsequently detached from duty in submarines is considered to retain his qualifications.

If he is subsequently found not qualified, his qualification is revoked and entry to that effect is made in his service record. He is entitled to wear the submarine insignia as long as he remains qualified.

Similar regulations apply in general to the other insignia you mention, that is, they may be worn by the individual while he is so qualified or until the right to wear the insignia has been specifically revoked. If a man enlisted in another branch of the Armed Forces, the wearing of naval insignia would be governed by the uniform regulations of that branch of service.—ED.

Saluting When Not in Uniform

SIR: What is the regulation on the captain of a ship saluting while uncovered in civilian clothes? I have noticed the Captain saluting while in civilian clothes. We were taught in re-

cruit training that a Navyman never saluted while uncovered.—L. L. N., MR2, USN.

• Seniors in civilian dress, when recognized by a junior, should be saluted on all occasions when a salute is in order. If covered, the senior returns the salute, and if uncovered, he will not return the salute unless failure to return it would cause embarrassment to all concerned. If uncovered, the senior usually acknowledges the salute with a nod of the head and a word of greeting. It is the senior's prerogative to decide whether any embarrassment would result from his not returning the salute.—ED.

Purpose of Porpoise in Sub Insignia

SIR: I have been asked on several occasions why the dolphin is used as the submarine insignia and I have never been able to come up with a "good" answer. Can you help me out?—W. A. R., HMC (SS), USN.

• Dolphins, or porpoises, are the traditional attendants to Poseidon, mythical Greek god of the sea (later called Neptune by the Romans) and patron deity of sailors. Dolphins are symbolic of the calm sea. They are sometimes called the "sailors' friend," probably because of their friendly, curious behavior when they play in formation alongside the bow of a ship.

Bureau files do not have historical data about how the submarine insignia was actually worked up, but the dolphins on the insignia are there to symbolize the mythical benevolence of Poseidon (or Neptune) toward ships and sailors.—ED.



Submarine Insignia

Merchant Marine Officers in Navy

SIR: Having read the latest schedule of release dates for officers (BuPers Inst. 1926.1 of 17 April), and also your article on the subject, I fail to find a category that suits me.

I am a merchant marine officer on active duty. My designator is 1108. I assume that I would fall under category "h," and be subject to release after 21 months' active duty. Please correct me if I am wrong.

Somewhere I have heard that merchant marine officers may be released after 18 months of active duty, at their request. Is there any truth to this?—E. G. C., ENS, USNR.

• Since your status is not described in any of the special categories listed in paragraph 5 of BuPers Inst. 1926.1A, the provisions of paragraph 5 apply and you may anticipate release from active duty upon completion of 24 months' continuous active service. This is computed from your date of reporting to first duty station in compliance with orders to active service, and in your case, is about 6 Apr 1955.

It is not the practice to release officers prior to the expiration of obligated service, except when circumstances warrant early release. A request for release predicated on a hardship situation is considered on the merit of the case and the needs of the service.—ED.

Trailer for a Sailor

SIR: I am wondering if it is possible for a veteran to make a loan under the G.I. Bill to purchase a trailer home. I am under the impression that this would be similar to a home loan. Am I right?—J. N., SO2, USN.

• The Veterans Administration does not generally guarantee a loan to purchase a trailer solely for purposes of housing. This is due to the fact that the VA cannot justify the low value cost of the trailer for living quarters to obtain a legal claim on such quarters for payment of the loan.

The VA may guarantee a loan for the purchase of a trailer if an applicant can justify it as a business loan. In order to obtain such a G.I. loan, a veteran would have to prove that the trailer is essential to his business.

In the event a veteran obtains such a loan, the amount and repayment time must be established between the applicant and the lending agency, such as a bank, etc.

In any case, Navy men should remember that it is not possible for them to obtain any G.I. loan, for home or for business, unless they can present to the Veterans Administration a discharge certificate or acceptable notice of separation from active service. In order words, you must have been discharged or on inactive duty some time after completing the active service qualifying you for G.I. home or business loan benefits.—ED.

No Third Fleet Ribbon

SIR: During World War II, I served with the 3rd Fleet and recall that we were presented with a special ribbon for duty between 1944-46. As I recall it looked something like the Navy Unit Commendation. However, since coming back into the Navy I've been unable to find anyone who knows anything about it at all. Can you give me the information on who is entitled to wear it and just what it is?—R. T., GMSN, USN.

• There was such a ribbon, known as the "Third Fleet Ribbon," but it was unofficially devised and issued to the men of the Third Fleet during World War II. It is not authorized or recognized by the Navy Department for issuance to personnel serving in the Third Fleet at any time. The activities of such personnel are recognized by the Asiatic-Pacific Campaign Medal and appropriate battle stars.—Ed.

Retirement for Temporary Officers

SIR: Can you clarify the situation concerning the retirement of temporary officers with less than 30 years' service? Everything I've been able to find makes specific reference only to U. S. Navy Regular officers.

I would also like to know what would happen to a LT (temporary) with 20 years' service, 11 years commissioned, who fails twice for selection to LCDR?—E. L., LT, USN.

• Temporary officers with permanent enlisted status may request reversion to permanent warrant or enlisted status or request termination of their appointment and transfer to the Fleet Reserve upon the completion of 20 years' active service.

A Navy LT with 20 years' active service and permanent enlisted status who fails twice for selection to LCDR, under the Officer Personnel Act of 1947, could

revert and request transfer to the Fleet Reserve or continue on active duty in his enlisted status.

At the present time, however, in view of the seriousness of the international situation, requests for reversion or termination and transfer to the Fleet Reserve are being held in abeyance unless there is a clear showing that such action is necessary to avoid dire personal hardship. This policy is also followed in retirements of regular commissioned permanent officers with less than 30 years' service. (See ANav 83-50)—Ed.

Standby While on Leave

SIR: I have always been under the impression that naval personnel were granted 30 days' leave a year and while on leave they were relieved of all duties. The regulations at the base where I am on duty require that a man on leave supply a standby for any duties he might have during the time he is on leave. Is this correct?—C. A. L., TE2, USN.

• There are no rules governing a standby for a Navyman on leave. However, a man going on leave should check the watch list and then consult with his Division Officer concerning a standby. Some commands revise the list and furnish a standby while others do not. It depends upon the command to which you are attached.—Ed.

Bluejacket Correspondence Course

SIR: Does the Navy put out a correspondence course on the Bluejackets Manual?—W. O. C., HM1, USN.

• Yes. To take the course, submit a request on form NavPers 977 via your Commanding Officer to the U. S. Naval Correspondence Course Center, Building RF, U. S. Naval Base, Brooklyn 1, N. Y. The NavPers number for the course is 91205.—Ed.

Fire Fighter Assistant

SIR: Can you tell me just who is entitled to wear the distinguishing mark of "Fire Fighter Assistant"?—H. R. S., ABAN, USN.

• Article C-7412, BuPers Manual outlines in full those enlisted personnel who qualify. Briefly it is this: any rate except damage controlman is eligible. To qualify, personnel are required to take a test covering subjects relating to fire fighting. Successful completion of the examination then qualifies a person to wear the distinguishing mark.—Ed.

Transfer from Line Supply

SIR: Are there any provisions currently in effect whereby an officer of the line of the Naval Reserve on active duty might transfer to the Supply Corps?—J. R., ENS, USNR.

• You may request a change of designator to 3105 by writing to the Chief of Naval Personnel. The request should set forth in some detail your educational background and civilian experience. The comparable qualifications of the applicant for duty in both present and proposed designator are considered, as well as the respective needs for officers in the two designators.

Minimum standards for transfer to the Supply Corps are a bachelor's degree in either economics, business administration or a similar field, and a total military and/or civilian experience in Supply Corps functions as follows: ENS, 2 years; LTJG, 4 years. Present BuSandA policy is that no changes will be effected for active duty reserve officers above the rank of LTJG. It is further desired that applicants have at least 30 months' obligated service remaining prior to consideration for a change.—Ed.

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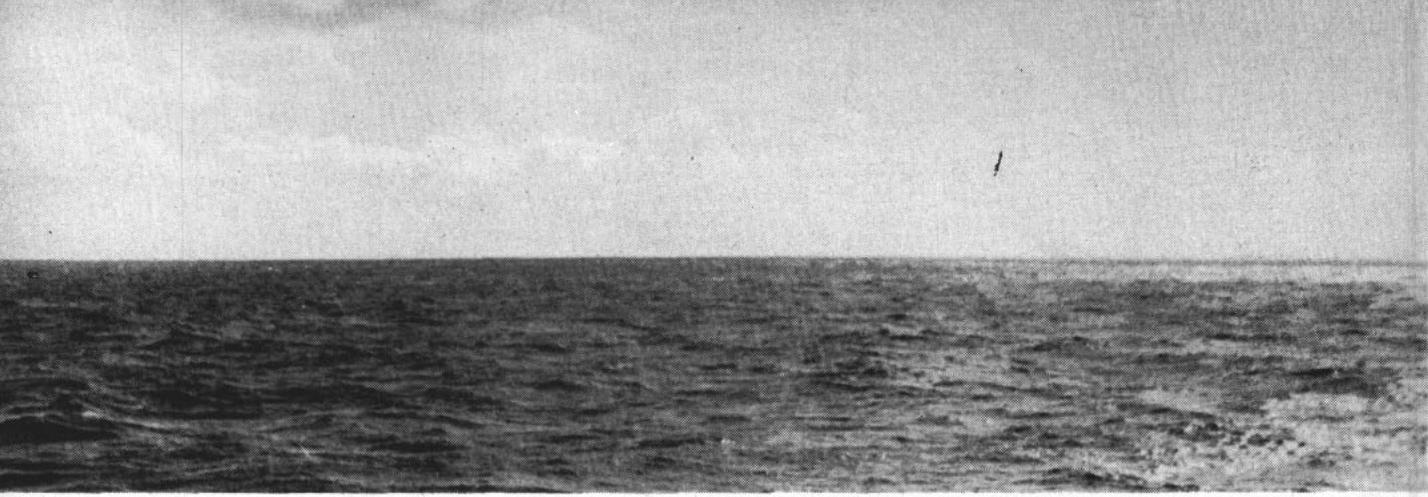
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Making 'Road Maps' for the High Seas

ONE day in October 1870, the supply ship *USS Saginaw*, one of several combination steam-sail ships in the Navy at that time, departed from Midway Island bound for the U. S. The captain of *Saginaw* planned to sail westward to within sighting distance of a small isle, Ocean Island, and then head around for San Francisco.

No sooner had the ship arrived in the vicinity of Ocean Island when she suddenly ran aground on an uncharted coral reef. It wasn't long before the jagged coral broke through the hull and ocean water flooded the engineroom. *Saginaw* was soon beyond all help.

Although there was no loss of life, *Saginaw* sailors found themselves stranded on the tiny Pacific island and with no means of communication.

Luckily, the *Saginaw* story had a happy ending. The crew fitted out the captain's gig with sails and four men were selected to attempt to reach the Sandwich (now known as Hawaiian) Islands. When the four men reached the islands, a ship was sent out to Ocean Island and rescued the shipwrecked sailors.

But all of this probably wouldn't have happened if the skipper of *Saginaw* had had one of today's accurate nautical charts. Marked on today's charts are symbols to tell the navigator where every coral reef is located, how deep the surrounding water is and how best to avoid these dangers.

The reef symbol is just one of more than 250 types of symbols now in use on U. S. nautical charts.

These charts are the "road maps" of the high seas. Every chart shows a whole variety of important "road signs," such as underwater and above water hazards, land masses and aids to navigation. For a look at some of the symbols and abbreviations now used on U. S. nautical charts (most of which are in general agreement with those used by other nations) turn the page.

The production of U. S. nautical charts—a chart is a vital item in any naval operation—is a very important function of two government agencies, the Navy's Hydrographic Office and the U. S. Coast and Geodetic Survey in the Department of Commerce. Working hand in hand, these two agencies provide our mariners with some of the finest and most accurate charts in the world.

The Coast and Geodetic Survey makes surveys and charts the coastal waters and inland seaways of the U. S., conducts tide and current studies and maintains inland geodetic "control data."

The Navy Hydrographic Office, located in Suitland,

Md., just outside the nation's capital, surveys and charts the navigable waters of the remainder of the world.

One or more of the eight surveying ships in the Navy is always at work charting seas and coasts where some day a Navy force might have to be sent.

Incidentally, there is yet another agency whose operation is a big help to the Navy mariner. This is the Coast Guard, one of whose functions is to maintain the extensive aid to navigation systems (light, radiobeacons, fog signals, buoys and daymarks) that dot this nation's coastlines and inland seaways.

Getting back to the charts, these cartographic masterpieces didn't just come into being overnight. Each is the result of extensive surveys, the compilation of vast amounts of information from many sources, checked and double checked for the ultimate in accuracy.

Once the material is collected and verified, much of it can then be put onto a chart in the form of symbols and abbreviations. These chart symbols weren't "invented." They came into use gradually as the need arose.

The symbols are the "shorthand" of the chart maker. Each symbol represents some nautical feature which would be difficult to represent graphically in a normal manner.

The main requirements of a symbol are that it should have a similarity in shape to the thing it represents, that it be large enough to be distinct and yet not so large as to replace or obscure other vital information.

Before a chart is prepared, extensive field work usually takes place. Here are some of the methods used in this "field work":

- *Topography*—This is the land survey, accomplished to determine shore forms and contours, elevations and depressions and the geographic positions of all landmarks—all vital piloting aids. The theodolite, plane table, level and transit are the usual instruments used in topographic surveying. Since the development of radar, charts must now show topographic features and other navigational aids which will appear on the radar scope.

- *Photogrammetry*—This is the art of obtaining reliable measurements by means of photography. It is quicker and cheaper than ordinary ground topography. The Navy's T-11 aerial cartographic camera is used for this type photography.

- *Hydrographic surveying*—This consists essentially of locating and measuring a sufficient number of water

depths to make possible an accurate delineation of the sea bottom. Vertical depths are measured with the fathometer, leadline and wire drag. Depth positions are determined by the Electronic Position Indicator, shoran, loran and the sextant.

After the field work is completed, pages and pages of paper work pass over the specialists' desks before the finished product is ready.

In addition to the constant flow of information coming into Hydro and Coast and Geodetic from teams at work in the field, other sources provide helpful facts too.

For example, nautical charts produced in foreign countries are good sources of information. They are used to supplement information already on hand. No one source is ever considered final. All charts made by Navy Hydro are checked against every possible nautical chart and publication to eliminate the chance of error.

Other good information comes from merchant ships and U. S. Navy vessels. For naval vessels, it is a duty to report information that might be helpful.

Article 0755 of *Navy Regulations* states that reports of this type should include any important hydrographic and aeronautic information not found in current hydrographic publications, any immediate danger to shipping or aircraft, a deficiency to an aid to navigation, or discovery of a shoal, or danger to navigation not marked on the chart.

If the Navy ship is in the vicinity of suspected shoals or other dangers to navigation, if duties and circumstances permit, it should make a careful survey and construct charts locating the shoals and dangers and supplementing the information available.

Another—and biggest—source of information is the "Notice to Mariners." This is a pamphlet published regularly by hydrographic offices of many nations.

When this new information reaches Navy Hydro, it is thoroughly checked. Once verified, the information is then sent out either in weekly U. S. "Notice to Mariners" published by Hydro, or, if the information is of immediate importance to navigators, it is broadcast by radio.

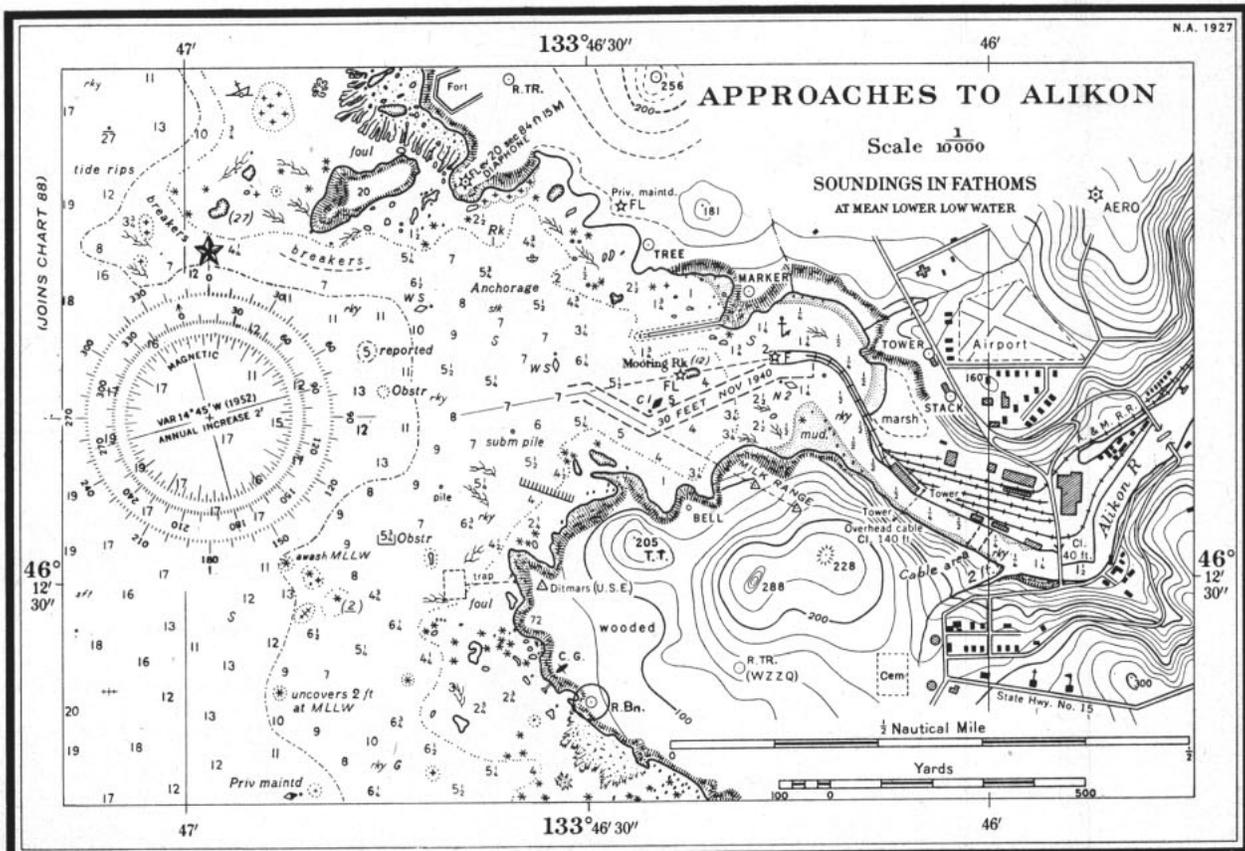
Most countries have a system of broadcasting urgent navigational information by radio. The messages are given various names by their originators. Those issued by Navy Hydro at Washington, covering Atlantic areas are known as *Hydrolants*. Those originating from the Branch Hydrographic Office at Honolulu, T. H., covering Pacific areas, are called *Hydropacs*.

The weekly "Notice to Mariners" published in Washington contains information on changes in buoys, markers and other chart designations that have taken place.

These changes—newly discovered hazards and new aids to navigation—are incorporated in new charts or in a change to charts presently in use.

The work of the Navy Hydrographic Office and the Coast and Geodetic Survey and Coast Guard is a continuous proposition. A chart, once completed, is not "good forever." Changes in hydrography, topography, tides, currents, the earth's magnetic force—all these factors mean more studies, more figures and more charts.

As long as there's an ocean, there will be charts. And men from Navy Hydrographic Office and the Coast and Geodetic Survey will still be on the job with new charts for merchant and naval mariners.



EXAMPLE OF SYMBOLS—Hypothetical chart (not an actual area) demonstrates use of standard symbols. See pp. 32-35.

SYMBOLS AND ABBREVIATIONS FOR NAUTICAL CHARTS

The standard symbols and abbreviations for nautical charts published by the United States Hydrographic Office

A. The Coastline

1 Shoreline unsurveyed

2 Rocky coastlines (Not rocky, high / Not rocky, low)

3 Cliffs coastline (Bluffs)

4 Sandhills or dunes

5 Stony or shingly shore

6 Sandy shore

7 Mangrove

8 Swamp or marsh

9 Coral, uncovers at datum of soundings

10 Breakers

11 Foreshores

12 Breakers along a shore

13 Limiting danger line

B. Coast Features

1	G.	Gulf
2	B.	Bay
(2a)	B.	Bayow
3	Fd.	Fjord
4	L.	Loch, Lough, Lake
5	Cr.	Creek
(5a)	C.	Cove
6	In.	Inlet
7	Str.	Strait
8	Sd.	Sound
9	Pass.	Passage, Pass
10	Chan.	Channel
11	Entr.	Entrance
13	Mth.	Mouth
14	Rds.	Roads, Roadstead
15	Anch.	Anchorage
16	Hbr.	Harbor
17	P.	Port
(17a)	P.	Pond
18	I.	Island
19	It.	Islet
20	Arch.	Archipelago
21	Pen.	Peninsula
22	C.	Cape
23	Prom.	Promontory
24	Hd.	Head
25	Pt.	Point
26	Mt.	Mountain, Mount
27	Rge.	Range
29	Pk.	Peak
30	Vol.	Volcano
32	Bld.	Boulder
(33)	Str.	Stream
(34)	R.	River
(35)	Slu.	Slough
(36)	Lag.	Lagoon
(37)	Thoro.	Thorolite

C. The Land

1 Contours

(a) Contours, approximate

(b) Form lines, no definite interval

2 Hachures

3 Glacier

4 Isolated trees

5 Elevation of top of trees

D. Control Points

1	Δ	Triangulation point (station)
2	○	Fixed point
3	• 256	Summit of height (Peak) (when not a landmark)
(a)	☉ 256	Peak, accentuated by contours
(b)	☼ 256	Peak, accentuated by hachures
(c)	☼	Peak, when elevation has not been determined
(d)	○ 256	Peak, when a landmark
4	⊕	Obs. Spot Observation spot
5	B.M.	Bench mark
6	◦	See View View point
(9)	Astro.	Astronomical
(10)	Tri.	Triangulation
(11)	C. of E.	Corps of Engineers
(12)		
(13)		

G. Harbors

1	⚓	Anch.	Anchorage, large vessels (see No. P-12)
2	⚓	Anch.	Anchorage, small vessels
3		Hbr.	Harbor
6	— — —	Bkw.	breakwater
8	— —		jetty (partly below M H W)
(8a)	— —		jetty (small scale)
9	— —	Pier	pier
11	— —		groin (partly below M H W)
12	⊘	Anch. prohib.	Anchorage prohibited
13	⊘		spoil ground
14	⊘		fish traps (actual shape charted)
(14a)	⊘	Fsh. stk.	fishing stakes when dangerous
16	— —	Ldg.	landing place
18	— —	Whf.	wharf
21	•	Dol.	dolphin
26	— —	Quar.	Quarantine
29	— —	Cus. Ho.	Customhouse
33	— —	B. Hbr.	Boat Harbor
35	— —		dock
36	— —		dry dock (actual shape shown on large scale charts)
37	— —		floating dock (actual shape shown on large scale charts)
39	— —		patent slip (marine railway)
(39a)	— —	Ramp	ramp
40	— —		lock (point upstream)
45	— —	Obsy.	Observatory
(46)			
(47)			

E. Units

1	hr.	hour	7	ft.
2	m. min.	minute	8	yd.
3	sec.	second	9	fm.
4	m.	meter	11	M.
5	km.	kilometer	12	kn.
6	in.	inch	13	lat.

Symbols and abbreviations are numbered in accordance with the International Hydrographic Bureau of 1939. Vertical abbreviations are in accordance with the I. H. B. standard, from those of the I. H. B., or which do not appear on the charts. Figures in parentheses indicate that the symbol is in addition to those shown on the charts.

ABBREVIATIONS SYMBOLICAL CHARTS

which have been approved for use on nautical charts of America are reproduced on these pages.

H. Topography	
Roads in open country Roads on small scale charts 1 Roads (Rds.)	16 Swing bridge, that can be opened
2 Track, footpath, or trail	17 Pontoon bridge, that can be opened
3 Railway (single or double track) Railway (Ry.) Railroad (R.R.)	(17a) Lift bridge (b) Bascule bridge, that can be opened
4 Overhead cable (OVHD. CAB.)	19 Ferry (Fy.)
5 Power transmission line	21 Dam
8 River or Stream	(25) Levee
9 Intermittent stream	(26) Lava flow
10 Lake (L.)	(27) Log boom
12 Marsh (See No. A-8)	(28) Submerged piling, piling, stumps, and snags
13 Canal or ditch (point upstream)	(29) Tunnel (railroad or road)
14 Bridge (fixed) (BR.)	(30) Viaduct
15 Drawbridge, in general	

bot.	14	long.	longitude
ard	17	cor.	correction
athom	(18)	alt.	altitude
nautical mile	(19)	ht.	height
not	(20)		
itude	(21)		
	(22)		

with a standard form proposed by the symbols indicate that the symbol or symbols and abbreviations which differ from standard are indicated by slant figures. The symbol or abbreviation not in standard.

February 1954

I. Buildings	
<p>When the buildings are prominent, they may be shown by landmark symbol with descriptive note. (See L-63.) The landmark symbol is used to indicate positions of objects when accurately determined.</p>	
1 City or town (large scale)	35 O _{MON.} Monument 36 O _{CUP.} Cupola 37 elev. elevator elevated 40 Ruins Ruins 41 O _{TR.} Tower 42 O Windmill 44 O _{CHY} Chimney 46 Oil tank 47 Fcty. Factory (56) O _{GAB} Gable (57) Sch. School (58) H.S. High School (59) Univ. University (60) Inst. Institute (61) Co. Company (62) Corp. Corporation (63) Cap. Capitol (64) Courthouse (65) Cath. Cathedral (66) Bldg. Building (67) Pav. Pavilion (68) Ltd. Limited (69) Apt. Apartment (70) T. Telephone (71) (72)
(1a) City or town (small scale)	
3 Vil. Village	
4 Cas. Castle	
5 Ho. House	
8 Ch. Church	
10 Temple	
12 Mosque	
13 Minaret	
14 Pag. Pagoda	
16 Mony. Monastery	
18 Cem. Cem. Cemetery	
19 Ft. Fort (actual shape charted)	
23 Airplane landing field	
24 Airport (large scale)	
(24a) Small scale Airport (military)	
(24b) Small scale Airport (civil)	
26 First St. Street	
27 Tel. Telegraph	
29 P. O. Post Office	
30 Govt. Government	
32 Hosp. Hospital	
34 Magz. Magazine	

F. Adjectives

		and other abbreviations	
1	gt. great	(23)	estab. established
3	lrg. large	(24)	exper. experimental
4	sml. small	(25)	discontd. discontinued
7	mid. middle	(26)	fl. flood
9	anc. ancient	(27)	mod. moderate
12	conspic. conspicuous	(28)	maintd. maintained
16	dist. distant	(29)	elec. electric
17	abt. about	(30)	priv. private, privately
(19)	aband. abandoned	(31)	prom. prominent
(20)	extr. extreme	(32)	std. standard
(21)	concr. concrete	(33)	subm. submerged
(22)	bet. between	(34)	approx. approximate
		(35)	cor. corner
		(36)	CL. clearance
		(37)	No. number
		(38)	Ave. avenue
		(39)	Hy. highway
		(40)	explos. explosive
		(41)	Blvd. boulevard
		(42)	
		(43)	
		(44)	
		(45)	
		(46)	

Continued on pages 34 and 35

Legend

* Represents purple disc accentuating lighted aids

Lt. Blue (Solid)	Green	Lt. Blue (Diagonal lines)

J. Miscellaneous Stations

2	Sta.	Station	
3	C. G.	Coast Guard	(similar to, L.S.S.)
(3a)	C. G. WALLIS SANDS	When the building is a landmark	
6	L.S.S.	Lifesaving station	(See J-3)
7	Rkt. Sta.	Rocket station	
8	PIL. STA.	Pilot station	
9	Sig. Sta.	Signal station	
10	Sem.	Semaphore	
19	FS.	Flagstaff	
(20)	W B SIG STA	Weather Bureau signal station	
(21)	FP.	Flaggpole	
(22)	F. TR	Flag tower	
(23)	LOOK TR	Lookout tower	
(24)	S' PIPE	Standpipe	
(25)	BELL	On land	
(26)			
(27)			

SYMBOLS AND ABBREVIATIONS

L. Buoys and Beacons

On entering a channel from seaward, buoys on starboard side are red with even numbers, on port side black with odd numbers. Lights on buoys on starboard side of channel are red or white, on port side white or green. Mid-channel buoys have black and white vertical stripes. Obstruction buoys are green, or have red and black horizontal bands. This system does not always apply to foreign waters. The dot of the buoy symbol, and the small circle of the light vessel and mooring buoy symbols and the center of the beacon symbol indicate their positions.

1	.	Position of buoy	24	Q	Quar.	Quarantine buoy
2	*	Lighted buoy	(27)	QBW		Fish trap buoy (W. & B. H. B.)
3	BELL	Bell buoy	(28)	Q		Anchorage buoy
(3a)	GONG	Gong buoy	(29)	Q Priv. maintd.		Maintained by private interests; to be used with caution
4	WHIS	Whistle buoy	31	H. B.		Horizontal bands
5	C	Can buoy	32	V. S.		Vertical stripes
6	N	Nun buoy	33	Chec.		checkered
7	SP	Spherical buoy	41	W.		white
8	S	Spar buoy	42	B.		black
(8a)	Q	Checked buoy	43	R.		red
12	+	Lightship	44	Y.		yellow
14	QBW	Fairway buoy (B. & W. V. S.) (Mid-Channel)	45	G.		green
18	QRB QRB	Junction buoy (R. & B. H. B.)	(46)	Br.		brown
19	QRB QRB	Isolated danger buoy (R. & B. H. B.)	(47)	Gy.		gray
20	QRB QG	Wreck or obstruction buoy (R. & B. H. B.) or (G.)	(48)	T.B.		temporary buoy
22	+	Mooring buoy	52	QBW QW QRB QRB		Unlighted beacon (Daybeacon)
			(52a)	MARKER		Private aid to navigation Beacon (See L-52)
			63	o		Landmark
			(63a)	o		Landmark, position approx
			(64)	REF		Reflector
			(65)	QWB QW		Special purpose buoy

Note: Buoy and beacon symbols with topmarks may be shown on charts of foreign waters.

K. Lights

1	*	Position of light	31	Rot.	Rotating
2	Lt.	Light	(39)	m.; mln	minutes
3	LH.	Lighthouse	(40)	sec.	seconds
4	*	Aeronautical light	44		visible
	AERO	Aeronautical light	44a	M.	nautical mile
5	*	Lighted beacon	47	Gp.	group
6	+	Lightship	49	SEC	sector
7	*	Lighted buoy	61	Vi.	violet
10	REF	Reflector	63	Bu.	blue
		Private light	64	G.	green
(17)	* Priv maintd	(maintained by private interests; to-be used with caution)	65	Or.	orange
			66	R.	red
			67	W.	white
			(67a)	Am.	amber
			68	OBSC	obscured
21	F	Fixed	69	(U)	unwatched
22	Occ	Occulting	70	Occas	occasional
23	Fl	Flashing	71	Irreg.	irregular
24	Qk Fl	Quick flashing	73	Temp.	temporary
(24a)	1 Qk	Interrupted quick	80	Vert.	vertical
26	Alt	Alternating	81	Hor.	horizontal
27	Gp Occ	Group occulting	(82)	D.	destroyed
28	Gp Fl	Group flashing	(82a)	Exting.	extinguished
(28a)	S-L	Short-long	(83)	V. B.	vertical beam
29	F Fl	Fixed and flashing	(84)	Exper.	experimental
			(85)	RGE	range
30	F Gp Fl	Fixed and group flashing	(86)	AERO	aeronautical

M. Radio and Radar Stations

1	R. Sta.	Radio station	
2	R.T.	Radio telephone	
3	R. Bn.	Radiobeacon	
7	R. D. F.	Radio direction finder station	
9	R. TR.	Radio tower	
(9a)	R. MAST	Radio mast	
(10)	R. TR. (WEAF)	Commercial broadcast	
11	Ra.	Coast radar station	
12	Racon	Radar responder beacon	
(13)	Ra. Ref.	Radar reflector	
(14)	Ra. (conspic.)	Radar conspicuous object	
(15)	Ramk.	Ramark	

N. Fog Signals

1	Fog Sig.	Fog signal station
6	SUB-BELL	Submarine fog bell (mechanical)
7	SUB-OSC.	Submarine oscillator
8	NAUTO.	Nauphophone
9	DIA.	Diaphone
11	SIREN	Fog siren
12	HORN	Fog trumpet
13	HORN	Fog horn
14	BELL	Fog bell
15	WHIS.	Fog whistle
16	REED	Reed horn
17	GONG	Gong
(18)	D. F. S.	Distance finding station
(19)	GUN	Fog gun
(20)		

Q. Soundings

2	.	No bottom sounding	
	27		Dredged channels (controlling depth may be shown in separate note)
5	30 FEET MAY 1939		Swept areas (shown by green tint) (not yet covered by sufficient hydrographic surveys to show adequate soundings)
9			Areas swept by wire drag to depth indicated
(9a)			Soundings taken from older surveys or smaller scale charts
(12)	19		Stream
(16)			Soundings on reefs that uncover
(17)			
(18)			

R. Depth Contours & Tints

Feet	Fathoms	
0	0	
6	1	
12	2	
18	3	
24	4	
30	5	
36	6	
60	10	
120	20	
180	30	
240	40	
300	50	
600	100	
1,200	200	
1,800	300	
2,400	400	
3,000	500	
6,000	1,000	
12,000	2,000	
18,000	3,000	

Or 10 fathoms and greater
Or —100— (blue)

FOR NAUTICAL CHARTS (Continued)

Symbols and abbreviations are numbered in accordance with a standard form proposed by the International Hydrographic Bureau of 1939. Vertical figures indicate that the symbol or abbreviation is in accordance with the I. H. B. standard. Symbols or abbreviations which differ from those of the I. H. B., or do not appear on the standard are indicated by slant figures. Figures in parentheses indicate that the symbol or abbreviation is in addition to those shown on the standard.

O. Dangers

- 1 Rocks which do not cover, with their elevations above M.H.W.
 - * uncovers 2 ft
 - * (2)
- 2 Rocks that cover and uncover, with heights in feet above datum of soundings
 - (3a) When rock of 2 is considered a danger to navigation
 - (4a) Sunken rock
 - (4b) When rock of 4a is considered a danger to navigation
 - (4c) Shoal sounding on isolated rock replaces symbol
- 6a Sunken danger with depth cleared by wire drag (Feet or fathoms)
- 10 Coral or rocky reef (below datum of soundings) See A-11g
- 11 Stranded wreck (any portion of hull above datum of soundings)
- 12 Sunken wreck with only masts visible
- 14 Dangerous sunken wreck with less than 10 fathoms of water over it (See 6a)
- (14a) A number of sunken wrecks
- (14b) Obstruction of any kind

- 15 Wreck of known depth
- 16 Sunken wreck, not dangerous to surface navigation or over which the depth exceeds 10 fathoms
- 17 Foul ground
 - tidal rips
 - Symbol used only in small areas
- 18 Overfalls or tide rips
- 19 Eddies
 - kelp
 - Symbol used only in small areas
- 20 Kelp, any kind
- (20a)
 - 21 Bk. bank
 - 22 Shl. shoal
 - 23 Rf. reef
 - 24 Lc. ledge
 - 25 breakers (see A-12)
 - 27 Obslr. obstruction
 - 28 Wk. wreck
 - (28a) Wks. wreckage
 - 33 cov. covers
 - 34 uncov. uncovers
 - 35 Rep. reported
 - (35a) Shoal (rep 1945) shoal reported
 - 36 Discol. discolored
 - 41 P. A. position approximate
 - 42 P. D. position doubtful
 - 43 E. D. existence doubtful
 - 44 Pos. position
 - (46)
 - (47)

P. Various Limits

- 1 Leading line (Range line)
- 4 Limit of sector
- 5 Channel or course recommended
- (5a) Alternate course
- 7 Submarine cable
- 8 Submarine pipe line
- 9 Maritime limits in general
- 10 Limit of fishing zone (fish trap areas bounded by broken lines)
- 11 Limit of dumping ground (see Nos. P-9 & G-13)
- 12 Anchorage limit
- 13 Limit of airport
- 16 International boundary (also State boundary)
- 18 Ice limits
- (21) Bdy. Boundary
- (22) Bdy. Mon. Boundary monument
- (23) Reservation line

T. Tides and Currents

- 1 H.W. high water
- (1a) H.H.W. higher high water
- 2 L.W. low water
- (2a) L.L.W. lower low water
- 3 M.T.L. mean tide level
- 4 M.S.L. mean sea level
- 6 Sp. spring tide
- 7 Np. neap tide
- (8a) M.H.W. mean high water
- (8b) M.H.H.W. mean higher high water
- (9a) M.L.W. mean low water
- (9b) M.L.L.W. mean lower low water
- 10 I.S.L.W. Indian spring low water
- 17 Str. stream
- 18 current, general
- 19 flood stream
- 20 ebb stream
- 23 vel. velocity
- 24 kn. knots
- (25) Current Diagram, with explanatory note
- (26)

S. Quality of the Bottom

1 Grd. ground	19 T. tufa	44 sml. small
2 S. sand	20 Sc. scoriae	45 lrg. large
3 M. mud	21 Cn. cinders	46 stk. sticky
4 Oz. ooze	22 Mn. manganese	47 brk. broken
5 Ml. mail	23 Sh. shells	(47a) rky. rocky
6 Cl. clay	24 Oys. oysters	50 spk. speckled
7 G. gravel	25 Ms. mussels	51 gly. gritty
8 Sn. shingle	26 Spg. sponge	53 fly. flinty
9 P. pebbles	27 Grs. grass	54 glac. glacial
10 St. stones	28 Wd. weeds	56 wh. white
(10a) Sp. specks	32 Fr. foraminifera	57 bk. black
11 Rk. rock	33 Gl. globigerina	59 bu. blue
(11a) Bld. (s) boulder (s)	34 Di. diatom	60 gn. green
12 Ck. chalk	35 Rd. radiolaria	61 yl. yellow
13 Qz. quartz	36 Pt. pteropod	63 rd. red
14 Co. coral	37 Po. polyzoa	64 br. brown
(14a) Co. Hd. coral head	39 fne. fine	66 gy. grey
15 Md. madrepore	40 crs. coarse	67 lt. light
(16a) Vol. Ash. volcanic ash	41 sft. soft	68 dk. dark
17 La. lava	42 hrd. hard	(69) Ga. calcareous
18 Pm. pumice	43 stf. stiff	(70)

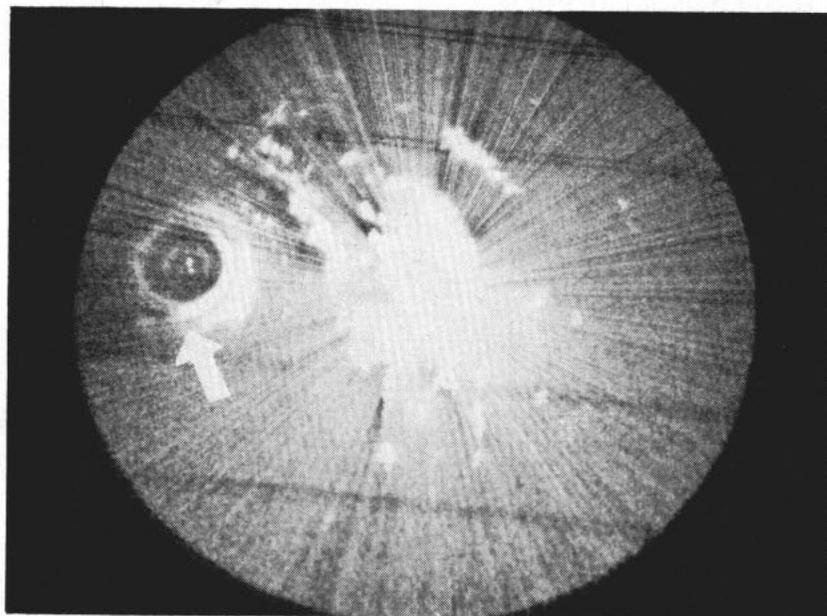
U. Compass

Compass Rose

The outer circle is in degrees with true north. The inner circles are in points and degrees with the arrow indicating magnetic north.

- 1 N. north
- 2 E. east
- 3 S. south
- 4 W. west
- 5 NE. northeast
- 6 SE. southeast
- 7 SW. southwest
- 8 NW. northwest
- 21 brg. bearing
- 23 mag. magnetic
- 24 var. variation
- (27) deg. degrees
- (28) dev. deviation

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



RADARMEN of USS *Kearsarge* (CVA 33) tracked 'Typhoon Susan' (arrow) and passed news of position, course, speed to weathermen in Hong Kong.

Flattop Turns Typhoon Hunter

Hurricane hunting by Navy aircraft has become routine but *uss Kearsarge* (CVA 33) inadvertently did the planes one better when it turned into an unwilling "Typhoon Hunter."

Kearsarge was on her way to Hong Kong when "Typhoon Susan" was reported in the area. Aircraft weather patrols sent out to trace the storm failed to report back to Hong Kong and the city was at a loss as to what course to follow.

As the carrier moved as quickly as possible out of the path of the raging gale, it traced the typhoon's center and direction by radar. *Kearsarge* maintained radio contact with

Hong Kong, supplying the city with the information that the typhoon would pass within 30 miles, giving them ample time to issue warnings to those in the area.

Her brush with the storm made *Kearsarge* late in reaching Hong Kong.

When she did arrive she was greeted with a royal welcome.

The director of the Royal Observatory, Hong Kong, spoke for the city in a letter of appreciation in which he thanked all concerned for the *Kearsarge* weather reports, stating that "radar fixes of the storm center were of great assistance to us in issuing warnings to the colony during the passage of the typhoon."

Life Saving Seaman

Life saving is getting to be pretty routine for Edward D. Corless, SN, USN, who is stationed on board the destroyer *uss English* (DD 696). Corless has participated in seven rescues at sea in the past two years.

The latest exploit of the young sailor occurred at night when a sailor in the radar picket destroyer *uss Eugene A. Greene* (DDR 711) was thrown into the water by a sudden roll of the ship.

Lookouts on *English* spotted the victim about 200 yards ahead of the ship. When efforts to reach the drowning man with life rings and buoys failed, Corless dived into the choppy sea. An expert swimmer, he reached the nearly exhausted man, took him in tow and held him until the ship could be maneuvered alongside.

Only 10 minutes elapsed from the time "Man overboard" was sounded until he was resting comfortably on board *English*. This made the fourth man whom Corless was credited with having saved personally from drowning, during the seven rescues in which he participated. For his actions Corless has received two Meritorious Masts.

Four New LSDs

Four new names were added to the Navy's roster of ships recently when names for a group of LSDs now under construction were approved.

Named for historical spots the new ships will be: *uss Thomaston* (LSD 28); *uss Plymouth Rock* (LSD 29); *uss Fort Snelling* (LSD 30) and *uss Point Defiance* (LSD 31).

Thomaston gets its name from the Maine home of General Henry Knox, first Secretary of War; *Plymouth Rock* is named after the famous New England landmark while *Fort Snelling* derives its name from the original Fort Snelling in Minnesota. *Point Defiance* is named after a region in Washington State, formerly a military reservation.

The new LSDs are of the same general design as earlier types but will be slightly larger and faster.

YESTERDAY'S NAVY

An Act of Congress established Naval Hospitals on 26 Feb 1811. War of 1812 ended with Treaty of Ghent, ratified 17 Feb 1815. Marines and sailors stormed Quallah Battoo, D.E.I., 6 Feb 1832, in punitive expedition against Malaysians who had killed Americans in pepper trade. One of World War II's earliest clashes between Japanese aircraft and U. S. carrier-type planes occurred 21 Feb 1942, near Rabaul, New Britain. Six Marines and pharmacist mate John Bradley raised U.S. flag over Mt. Suribachi, Iwo Jima, February 1945 — creating theme for World War II military art.



Color Guard for Britain's Queen

The Queen of England reviewed for the first time U. S. military forces representing all branches of the U. S. Armed Services during her visit to the Panama Canal Zone.

A color guard and honor guard made up of American soldiers, sailors, marines and air force personnel were inspected by the queen shortly after her arrival in the Canal Zone.

Carl N. Eklund, DC3, and PFC Jack M. Meyers, USMC, represented the Navy and Marine Corps in the color guard while a 31-man platoon from Rodman Naval Station made up one fourth of the honor guard.

Mine Warfare Evaluation Unit

A Mine Warfare Evaluation Detachment has been put into commission at the Naval Base, Key West, Florida.

Designed to develop new mine warfare tactics, evaluate equipment as it comes into being and to determine methods of combating enemy mine warfare, the detachment is the first of its kind in the Navy.

The new outfit comes under Commander Operational Development Force, and represents a major step achieved in the program for improving the Navy's capability in the field of mine warfare.

To aid in the many new projects that will be put into operation by the detachment, Commander Mine Force, Atlantic, has supplied both trained personnel and mincraft to



QUEEN ELIZABETH II reviews honor guard composed of members of the four branches of U. S. armed forces during recent visit to Cristobal, Canal Zone.

assist in performing the assigned tasks and training of additional personnel.

At present, 15 officers and 46 enlisted personnel form the detachment which operates out of Key West.

Down Wind Take-offs?

Carriers of the future will soon be sporting the new steam catapult instead of the current hydraulic type.

Developed by the Royal Navy the steam catapult will have between five and six times as much power as the current hydraulic models, mak-

ing it possible to launch today's high powered jets when the carrier is in a dead calm or even headed downwind.

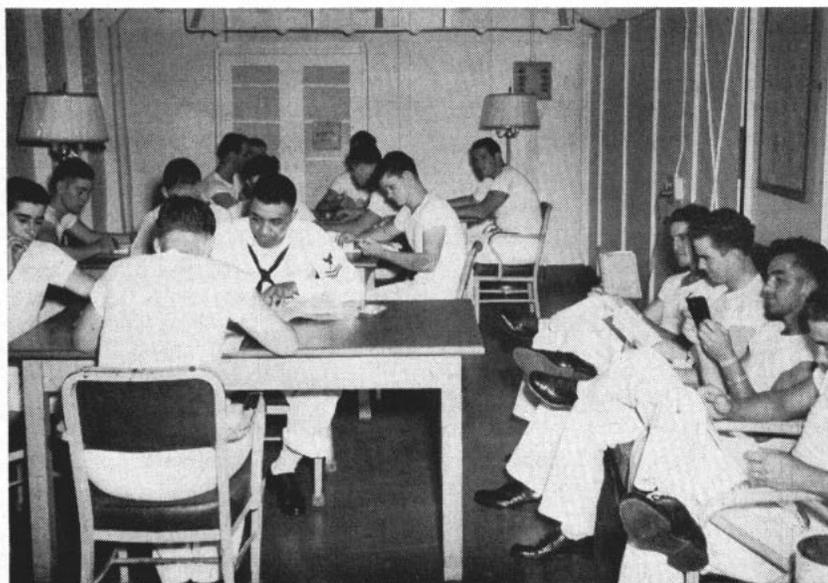
First of the Navy's carriers to have the steam catapult installed will be the *uss Hancock* (CVA 19). She is due to re-enter active service early this year and will have the new equipment at that time.

Eleven other carriers are slated to get the new catapult in the near future, including the three uncompleted carriers in the *Forrestal* class. The others are: *uss Intrepid* (CVA 11), *uss Ticonderoga* (CVA 14), *uss Lexington* (CVA 16), *uss Bon Homme Richard* (CVA 31), *uss Shangri-La* (CVA 38), *uss Franklin D. Roosevelt* (CVA 42), *uss Coral Sea* (CVA 43) and *uss Midway* (CVA 41).

Crew Builds Recreation Center

The aviation repair ship *uss Chourre* (ARV 1), boasts recreational facilities that have made her the envy of many larger ships serving in the Far East. *Chourre* has a complete library, hobby shop and recreation hall for use by the crew in their off-duty hours. All the facilities were built with salvaged material plus an expenditure of less than \$80 from the ship's Welfare and Recreation Fund.

The recreation hall, decorated by all hands, is equipped with rattan furniture, floor lamps, a magazine reading section and also has stationery for letter writing.



'SCAVENGER SQUAD' REAPS REWARD—Ingenuity and enterprise enable crewmembers of *USS Chourre* (ARV 1) to relax in comfort during off-duty hours.

Navymen Meet Member of Peary's Polar Expedition

A group of U. S. Navymen on duty in the Arctic had the unusual experience of meeting a colorful character out of history.

Crewmen of two U. S. Navy ships on a resupply expedition in the Arctic met an elderly Eskimo who had driven a dog sled for Rear Admiral Robert E. Peary, USN, when the explorer discovered the North Pole.

The unexpected meeting took place last fall when the Navy ice-breaker *uss Atka* (AGB 3) and the landing ship *uss Fort Mandan* (LSD 21) visited Kanak, Greenland, 70 miles north of Thule.

With *Atka's* helicopter scouting ahead, the two ships moved through the maze of icebergs from Thule to Kanak where they assisted the former residents of Thule in establishing a new village. The Greenlanders had moved north in search of the game that had been frightened away by the activity over the Thule air base.

Highlight of the Navy's visit at Kanak was the appearance of Ootah, an Eskimo in his 70s, who had taken part in the trek to the Pole. Ootah was one of the four Eskimos, who with Matthew Henson, took part in the expedition led by Peary when he discovered the Pole on 6 Apr 1909.

After introductions were ex-



OOTAH, Eskimo dog sled driver on Peary's 1909 trip to North Pole, poses for sailors visiting Kanak, Greenland.

changed, Ootah invited the Navy-men into his cottage and proudly displayed a medal he had received from the Danish government for his part in the historic expedition.

Then after a short visit with the Greenlanders, the cargo was off-loaded and the ships headed back through the forest of ice to Thule and more work.—LT T. H. Wilder, Jr., USN.

Learning from the House Fly

The Navy is sponsoring the development of a new vibratory gyroscope which uses the same principles of flight balance as does the common house fly.

Flies, it has been determined, keep their balance by means of tiny vibrating rodlike organs called halteres, located behind their wings.

The new gyro is a result of studies in which the house fly was observed and the action of the halteres studied in slow motion movies. Several models of the new vibratory gyro, which resembles a small tuning fork, have been built for evaluation. The conventional gyros have a spinning wheel which maintains balance in relation to the earth's movement and gravity pull.

These new gyros may eliminate the present rotating gyroscope in the fields of precise navigational flight

instruments. Its greatest advantage perhaps will be in the elimination of frictional heat in bearings and gim-bals of rotating gyros.

Navy's Top Reserve Units

Winners of the fifth annual national competition among Naval Reserve surface, submarine and construction battalion divisions have been announced. They are: Surface Division 4-105 of Lorain, Ohio; Submarine Division 13-7 of Portland, Ore.; and, for the second consecutive time, Seabee Division 9-30 of Colorado Springs, Colo.

The James Forrestal Trophy, was presented to the winning surface division, and the Fleet Admiral Chester W. Nimitz Trophy was awarded to the top submarine division. Construction Battalion 9-30 was presented the Vice Admiral J. J. Manning Trophy by Assistant Secre-

tary of Defense, Hon. Franklin G. Floete, in November.

The winning divisions will keep their trophies for the year until they are passed on to the winners of the 1954 competition. They are also given plaques to retain permanently.

In the Naval Air Reserve the top proficiency award, the Edwin Francis Conway Memorial Trophy, has been won for the third consecutive year by Naval Air Station Willow Grove (Philadelphia), Pa. The Chief of Naval Air Training Trophy was awarded to NARTU, NAS Lakehurst, N. J., as the unit showing most improvement during the year.

Radio Jim Creek

A high-powered very low frequency radio transmitter is now in operation by the Navy and will provide instantaneous and reliable broadcasts to Navy fleets throughout the world.

Nicknamed "Radio Jim Creek" because of its location in the Jim Creek Valley of the Cascade Mountains, the 6000-acre installation is 55 miles northeast of Seattle, Wash.

The Jim Creek transmitter has an output of 1,200,000 watts—more than twice that of any known military transmitter and 22 times more powerful than any commercial radio station in the U. S. Its operation requires as much electrical power as is needed for a city of 25,000.

Radio Jim Creek will be able to transmit messages without the aid of relay stations to ships on any of the seven seas. Signals from Jim Creek will also be able to reach under the surface of the sea to submarines cruising at depths that normal radio signals cannot penetrate.

Under development since 1947, the giant transmitter has twelve 200-foot antenna towers, six on the summit level of each of two ridges. Between these towers swoop the cables—the ten catenary spans of the antenna—each of which ranges in length from 5640 to 8700 feet. The copper cable antenna that interlaces the two mountains, if stretched out, would reach 10 miles.

Besides the 12 antenna towers on the mountain tops, there are 23 other towers, some 145 feet high, on the valley floor. These towers support the down leads, feed bus, and the counter-weights that keep the down leads in tension.

Because of the intense electro-

magnetic field around "Big Jim," an elaborate grounding system for the entire structure has been installed. This ground includes copper shielding and a ground screen around the building. Some 220 miles of copper wire went into this pattern.

Admiral Robert B. Carney, USN, Chief of Naval Operations, in his speech at dedication ceremonies for the big transmitter station, noted that "with the constantly increasing tempo of naval operations and tactics and the increasing rapidity with which military things happen in these modern times, the radio and electronics become the very heart and soul of the execution of strategic and tactical plans."

The Washington State site was chosen for the mammoth transmitter after an extensive search for an area which would meet special requirements. Two mountains, at least 2500 feet high, of nearly equal height, with even crests 2 miles apart which run parallel for a distance of one mile were required for the project.

Wheeler and Blue Mountains, which bound Jim Creek Valley are both about 3000 feet in height and meet these conditions almost perfectly.

To prepare the way for the construction of the transmitter, Navy personnel had to clear a mountainous canyon area of 725 acres of heavily

wooded wilderness which included many towering Douglas firs. The Navy also had to carve a road through the Cascade Mountains to bring all the electronic equipment into Jim Creek for assembly.

Twenty-seven railroad freight cars were needed to transport the equipment for the \$14-million transmitter from Camden, N. J., to the Pacific Northwest site.

The first message, tapped out in wireless code, was sent to naval units at sea—on, over and under the surface.

Within six minutes after transmission, the battleship *uss Wisconsin* (BB 64), in Japanese waters, sent an acknowledgment.

In quick succession, word bounced back from the carrier *uss Yorktown* (CVA 10), the destroyer *uss Floyd B. Parks* (DD 884), and the submarine *uss Bluegill* (SSK 242), all in the Western Pacific.

Largest piece of electronic equipment ever built, the transmitter contains a huge power amplifier tube, which is 10 inches in diameter and more than three feet high, and weighs 135 pounds.

Buildings at Radio Jim Creek include barracks, mess hall, family quarters, carpenter shop and electrical and plumbing shops. For maintenance purposes, there is also an antenna rigging loft to care for the

more than 150,000 feet of steel and copperweld cable used in the antenna.

Radio Jim Creek will have an operating complement of four officers, 70 enlisted men and 35 civilians. Living facilities will include two married officers' quarters and 12 married enlisted men's quarters and one-36-man barracks.

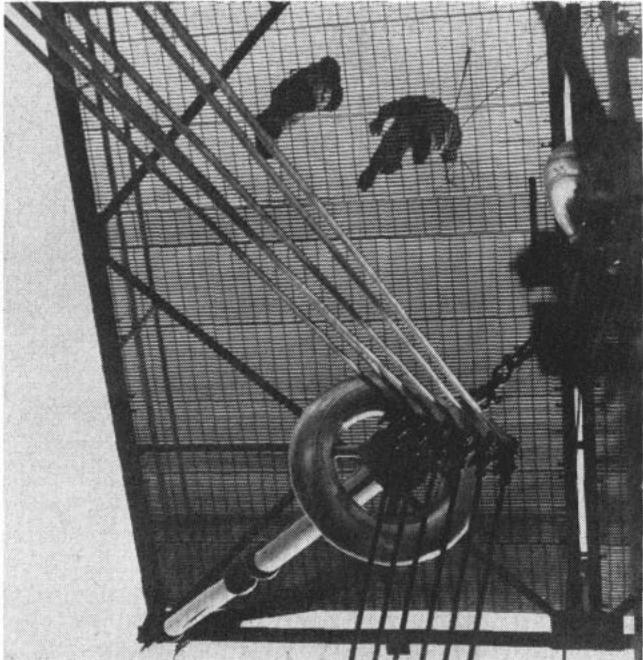
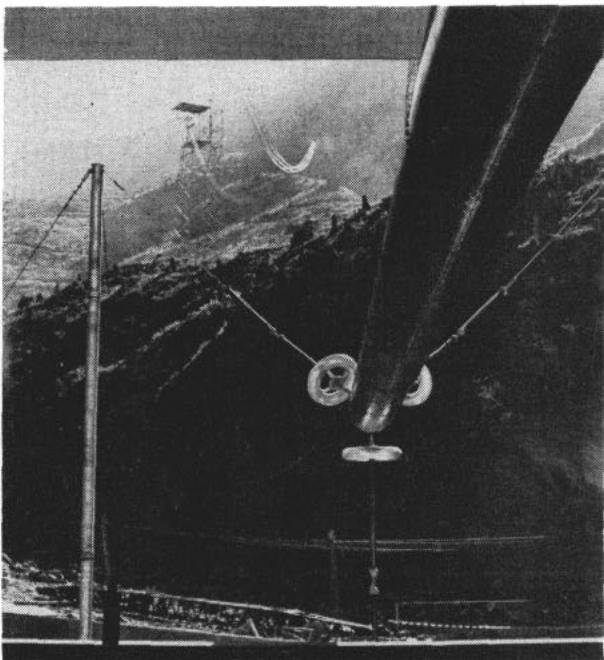
Jets for FAWTULant

The Fleet All Weather Training Unit, Atlantic, at NAS Key West, Fla., has completed its conversion from propeller-driven aircraft to a jet training squadron.

Modern F2H-4 *Banshee* jet fighters have replaced the last of the famous F6F *Hellcats* of FAWTU which have been seen in and around the skies of Key West for the past five years.

When Fleet All Weather Training Unit was formed in 1948, the *Hellcat* equipped with radar was the plane to train pilots in all-weather techniques and night fighter tactics. In 1950, FAWTU began using TV-2 jets as instrument trainers, but since these jets were not radar equipped the F6F continued as the night fighter trainer.

The first radar-equipped *Banshee* jets arrived at FAWTU last October. The training unit is now an all jet squadron.



VIEW from 'Big Jim' radio transmitter shows 145-foot 'bus tower' halfway up mountain. At right: Unusual photo from tower platform shows men at work on one of the 13 'bus towers' which support the station's transmission line.



SUPER SERVICE—USS *McGowan* (DD 678) gets the works—including clean 'windshield'—when refueled by its favorite gas station USS *F. D. Roosevelt*.

Tactics Trainer

The Navy has a new airplane simulator for training the pilots, copilots and crew who fly the latest-model long-range *Neptune*, the P2V-5.

The new simulator provides a tremendous advantage for training airmen in that it is now possible to couple the simulator with a P2V-5 tactics trainer, thus making the new set-up the first device whereby the whole combat team of a large military airplane can perform operation and tactics training together.

To insure maximum field utilization, the flight trainer is self-contained in a 42-foot, air-conditioned mobile trailer, making it available for training independent of weather, aircraft availability or runway conditions.

The tactics trainer is housed in a separate mobile trailer with its own instructor. He has controls for operating the training equipment independently of the pilot trainer if desired.

In the flight simulator the pilot hears the usual engine and propeller noises, feels the airplane bouncing under him when flying through rough air, feels the slipstream reacting on his controls, listens to radio beacons, talks to the "tower" by radio and hears static on his radio as artificial lightning flashes outside the window.

Structural vibration, realistically varying in frequency and amplitude,

makes the simulator feel "alive." Even the characteristic propeller "chirp" at idle speed has been included in the trainer to add to the psychological impact.

If the student makes an error which would result in a crash of a real airplane, the simulator also "crashes," but leaves the pilot blushing instead of bleeding.

After a pilot has made satisfactory progress on routine "flights," the instructor can cause a number of fail-



FLIGHT SIMULATOR, designed to give Navy pilots the 'feel' of flight conditions, gets once over from ADC.

ures to teach emergency procedure. For example, one switch on the instructor's console may cause an engine to fail, another can cause loss of hydraulic pressure and consequent loss of control over the landing gear, flaps and brakes, while still another switch may leave the pilot without communications.

The manner and speed with which a pilot acts to overcome the dangerous effects of a failure often determine whether he can save the plane and its crew. If a pilot first encounters a failure in the air after only verbal or test book instruction it is possible that under the stress of circumstances he will make a fatal error. But if he has been subjected to the failure in a flight simulator, the training and experience make it far more probable that he will follow emergency procedure correctly when he encounters the failure in actual flight.

With the new flight simulator, the pilot can be given instruction in all phases of instrument flight, including taxiing, take-off and landing. In this way he will learn the full capabilities and limitations of the airplane before he actually flies it.

Eight-Day Rescue Job

A tiny cargo ship won an eight-day battle against the fierce elements of the far north recently, thanks to the combined efforts of nine ships.

The liberty ship *ss Atlantic Water*, a cargo vessel under charter to MSTS, went aground in a blinding snowstorm while en route to Labrador with 800 tons of cargo. At the time the ship was approximately 100 miles from her destination.

Navy LSTs and Army tugs hurried to the scene in a 40-knot wind, blinding snow and lashing waves. *uss Recovery* (ARS 43) took charge of the operations until the *uss Oberon* (AKA 14) arrived.

It was decided that lightening ship would be necessary before the stranded vessel could be refloated. Army longshoremen worked for two days transferring the 800 tons of cargo to *Oberon*.

Once lightened the ship became buoyant and towing lines which had been attached to the ship during cargo-transferring operations lifted her from the shoals.

After being refloated, she was escorted to anchorage by *uss Fort Mandan* (LSD 21).



PAR-BUSTERS and hackers from NAAS Miramar, Calif., tee-off to open golf driving range built on the station.

Navy Golf Round-Up

It wasn't just football that occupied the Navy sports picture during the past few months. Golf tournaments have turned out par-busters (and duffers) in droves. Even the men on board ships have been able to get in a few swings whenever their ships hit port.

Here are some of the tournament results that have reached ALL HANDS:

- *uss Albany* (CA 123) edged the shotmakers from *uss Pittsburgh* (CA 72) by four strokes to win the BatCruLant Golf Tournament held in Norfolk. *Albany's* Ed Conklin, SKSN, USN, was the individual winner, with a 72-hole score of 302. Runner-up for individual honors was Lieutenant (junior grade) Foster Nichols, of *uss Pittsburgh*, with a 315 total.

Albany's golf team finished the tournament with a 1347 total, followed by *Pittsburgh* with 1351, *uss Roanoke* (CA 145), with 1453, *uss Mississippi* (EAG 128) with 1454, and *uss Missouri* (BB 63) with 1460.

- NTC Bainbridge successfully defended its Fifth Naval District title in a 36-hole tournament held at Camp Lejeune, N. C. The Commodore golfers finished with a 615 team total followed by Camp Lejeune with 626. Other teams in the tourney and their scores, were: Cherry Point, 704; Norfolk Mine Depot, 712; and USNS Norfolk, 744.

The Maryland sailors also copped the winner and runner-up spots for individual honors, but not until a 20-hole playoff. At the end of 36 holes, Commodore golfers Gene Coulter and Bill Shields and Marine Sgt. Gordon Carlson were tied with scores of 149. The three teed off and at the end of the 18-hole eliminations, Coulter and Shields were again tied. Coulter finally won on the second extra hole of a "sudden death" elimination.

- In the ComAirLant tournament at NAS Jacksonville, Fla., ComFair

Norfolk topped the golfers from ComFairs Jacksonville and Quonset Point to win the 72-hole medal play tourney. Norfolk finished with a four-man total of 1231, followed by Quonset at 1244 with the Jax entry finishing third at 1268.

L. E. Sherrill, AOAN, USN, stationed on board *uss Midway* (CVA 41) and playing for Norfolk, won the individual honors with a low score of 304. One stroke behind, in runner-up spot, was Dick Diversi of Quonset Point.

- In the 1953 Hawaiian Open, Navy CPO Al Kollmyer, representing the Pearl Harbor Navy-Marine Golf course, won the Hawaiian Amateur Championship. Kollmyer, 14th Naval District champion, fashioned rounds of 70-77-73-72 over the par-72 layout, to edge out such outstanding amateurs as Frank Stranahan and Fred Wright. His score was also good enough for second place among the entire field of pros and amateurs. Other Navy golfers who showed well in the tournament were Jerry Berles, SN, USN, who tied for sixth with a 300, and Gil Mantoani, CSC, USN, who came in ninth with a 305. Both Berles and Mantaoni are stationed at NAS Barber's Point.

- Linksmen of *uss Franklin D. Roosevelt* (CVA 42) claim the golf championship of the Sixth Fleet. In their victory march, *Roosevelt's* golfers chalked up victories over teams from *uss Bennington* (CVA 20), *uss Yellowstone* (AD 27), *uss Des Moines* (CA 134) and Amphibious Forces afloat.

Members of the "FDR's" championship team were: Lieutenant (junior grade) Ed Barrow, CHRELE L. A. Lawrence; Dick Hildreth, SN; Joe Hern, ADC; Don Brough, AO1; Jack Posten, EM3; and Gerald Dugdale, FN.

- Down in New Orleans, the Navy sponsored All-Service "Weather Vane" golf tourney drew a total of 57 Army, Navy, Marine and Coast Guard golfers. Army Pvt. Monte

Sanders emerged the winner and All-Service champion of the New Orleans area.

Winners in the four other flights were: Dick Lane, DN, USN; CHPCLK M. C. Redford, USCG; Lieutenant Grady Hemphill, USN; and G. H. Ater, SK1, USCG. The match play tournament was held at four different country clubs in the New Orleans area with one round played at each course.

- In the Nation's Capital, Commander Daniel J. Carrison, USN, captain of the BuPers golf team, won the individual honors in the Class "B" championship of the Federal Golf Association. The match play tournament was played over various country clubs in the Washington, D. C., area.

Winner of the team title in the tourney was the Federal Bureau of Investigation golf team. Navy Photographic Center, Anacostia, D. C., placed runner-up and the BuPers team finished third. The Federal Golf Association is made up of golf teams from the various federal agencies in the District of Columbia area and includes most of the Navy bureaus.

Fleet Recreation Center

The construction of a \$1,128,000 recreation project is now underway at the Convoy Escort Piers south of the Norfolk Naval Base. This "Fleet Recreation Center" will have facilities for practically all types of sports and recreation.

The first facility that will be available under this program is the Fleet Social Center, which is expected to begin operation on 30 Apr 1954. The social center will be located at Hampton Boulevard and 90th St., and will feature a huge 90-by-90-foot dance floor, a snack bar and outside terrace.

The outdoor sports area includes a lighted baseball diamond, two lighted softball diamonds, two basketball courts, four badminton courts,



SEA-GOING SERENADERS—Glee Club from *USS Quincy* (CA 71) performs in a variety show at Kobe, Japan. Program was recorded for later broadcast.

one volley ball court and two shuffleboard courts.

Also included in the Norfolk "Fleet Recreation Center" will be a nine-hole pitch-and-putt golf course, a driving range, three unlighted baseball diamonds, handball courts, model airplane ring, bowling alleys and an improved picnic area. The latest equipment will also be available for all the sports.

The center is a project initiated by the Commander in Chief, Atlantic Fleet, to improve recreation facilities for personnel in the Norfolk area.

The funds financing this million dollar project have been supplied by the BuPers Central Recreation Fund. This Fund is comprised of a percentage of the profits from ships' stores and Navy Exchanges and does not include any of the taxpayer's money.

Education Under G. I. Bill

Navy men who are about to leave the service and who plan on taking undergraduate college work under the Korean G. I. Bill may shift from one bachelor's degree to another, without having it count as their one-and-only change of course allowed under the law.

For example, a veteran who enrolls for a four-year course leading to a B.S. degree in agriculture can move over to a B.A. degree in liberal arts. As far as the law is concerned, this would not be considered a change of course.

However, in order to make a switch like this, you must do it soon enough so that your new objective will not involve any more training time than would originally be required to complete your first course of study.

The reason that a change in degree does not constitute a "change in course" is that the Veterans Administration lists a veteran's educational objective as a baccalaureate degree, without any reference to his major field of study.

Even though a veteran puts down a specific type of bachelor's degree on his application for Korean G. I. training, his objective is still considered to be only a baccalaureate degree.

Quincy's Sea-Going Glee Club

A 24-man glee club from the cruiser *USS Quincy* (CA 71) added its voice to good will US-Japanese relations in Kobe, Japan during the cruiser's tour of duty in the Far East.

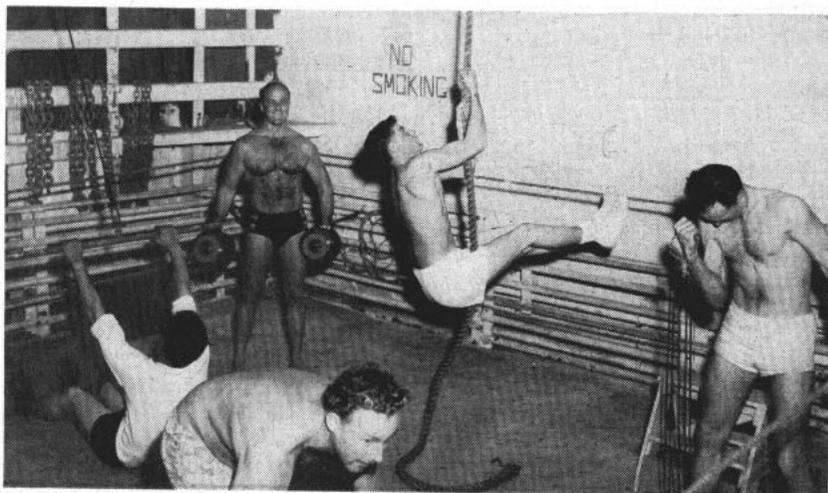
The sea-going glee club was part of a musical variety show presented by *Quincy* crewmembers and jointly sponsored by Radio Kobe (JOCR), Hyogo Chapter of the UN, Association of Japan, Kobe Chamber of Commerce and Industry and the American Cultural Society. The *Quincy* show was recorded for later radio broadcast.

Down at Merrick's Gym

How would you like to have a gymnasium on your ship? If you were on an aircraft carrier, this wouldn't seem too unusual. But if you happen to be on a smaller ship, such as the attack cargo ship *USS Merrick* (AKA 97), a gym would present a bit of a problem.

The crewmen of *Merrick*, however, have overcome the space problem by temporarily converting a cargo hold into an enviable gym and recreation center. Under the direction of Louis P. Provost, BM1, USN, of Lafayette, La., the extensive gym on the attack cargo ship was recently put into commission. Everything is temporary and the space can be cleaned of all athletic gear in less than 30 minutes to allow for cargo stowage.

The ship has among its athletic and recreation gear such equipment as basketball and volleyball courts, woodworking kits, leathercraft, fishing tackle, baseball and



HOME-MADE GYM—Located below deck in one of the cargo holds, boxing-wrestling ring of *Merrick's* new gym contains wide variety body-building gear.

softball gear, and a variety of body building apparatus, including a combined boxing-wrestling ring. The courts and ring are located below-decks in one of the cargo holds.

Money for the athletic equipment was made available through the ship's welfare and recreation fund.

Other morale-lifting features on *Merrick* are a combination library-lounge, also located in a cargo hold; competition between the various divisions in volleyball and basketball; and a ship's insignia contest, with a 48-hour liberty pass as the prize.

The men of *Merrick* are proud of their accomplishments and during all off-duty hours can be found relaxing in the lounge or participating in a game of volleyball or basketball in the gym. *Merrick* is currently serving in the Far East.

Navyman in World Pentathlon

Ensign William J. Andre, USN, of *uss Albany* (CA 123), led the U. S. Military Pentathlon team to fifth place in the annual World Modern Pentathlon held in Santiago, Chile, last December. The Pentathlon is held annually and is identical to the pentathlon staged in the Olympic Games.

Ensign Andre is the first Navyman ever to become a member of the U. S. team. Other service members of the 1953 U. S. team were Lieutenant, H. W. Johnson, USA, Lieutenant Dave Allred, USA, and Lieutenant Jack Martin, USA.

The events in the pentathlon are: a 5000-meter, cross-country ride on a horse, a 300-meter swim, pistol shooting at bobbing targets, fencing, and a 4000-meter, cross-country foot race.

Individually, here's how the U. S. team members finished. Andre finished 3rd, Johnson 7th and Allred 23rd. As a team, the U. S. group finished 2nd in shooting, 3rd in running, 4th in fencing, 6th in swimming and 7th in horseback riding for fifth place among the 16 teams competing.

Ensign Andre, the first Navy representative on the team, has been training since the age of 12, with an eye to this event.

In addition to the U. S. and Mexico, the other American countries that participated in the Santiago events were Argentina, Chile, Brazil, Peru, Uruguay and Paraguay. European teams were from Sweden, Hungary, France, Belgium, England, Germany, Spain and Switzerland.

SIDELINE STRATEGY

SPACE ran short in last month's column and we still had a few other Navy basketball teams to mention that will have to be reckoned with by any team having All-Navy aspirations.

NAS Barber's Point, Hawaii, has come up with a team that boasts youth, speed, height and scoring power. In pre-season tilts, the "Pointers" have been chalking up impressive victories over such outstanding opponents as the University of Hawaii and Hickam AFB, Hawaiian Interservice champions the past two seasons.

Pointer coach Sam Watson has for this year's outfit such outstanding players as Rich Hendricks, Bob Kolf, Dave Fisher, Bob Belton and Len Gibson.

Last year's All-Navy runners-up, NTC Great Lakes, is again grooming what is expected to be a top Navy five. Leading the "Bluejackets" this year will be Carl McNulty and Harvey Fromme, the two forwards who led NTC in scoring last season.

Down at NAS Jacksonville, the "Fliers" are showing signs of becoming a big power in 6th Naval District competition. As an indication, the "Fliers" cracked the 100 mark in scoring in winning their first game of the season.

★ ★ ★

From the "Crow's Nest," which is the Royal Canadian Navy's equivalent of ALL HANDS, comes the following report:

While the world series is history and the slate has been cleared for a new batch of baseball statistics, the results of two softball games played while HMCS *Algonquin* was at Key West, Fla., may be of interest.

In a game between *Algonquin* men and U. S. Navy enlisted men from the Key West base, the score was: USN 17, RCN 4. But—

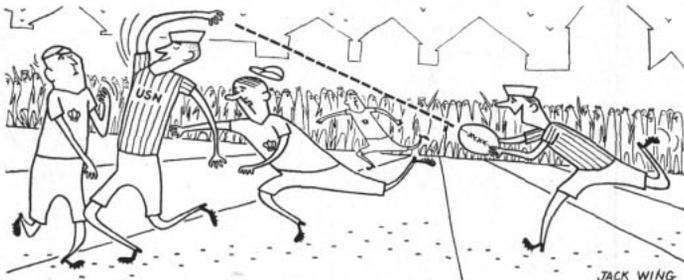
In a contest between *Algonquin* chiefs and petty officers and the USN CPOs the score was: RCN 42, USN 11.

A visiting RCN lieutenant commander drew the following conclusions from the scores: "Although the data cannot be termed conclusive, a first letter report on the subject would indicate that the hit-producing capability of U. S. Navy men is inversely proportional to his time in the service."

★ ★ ★

Down in Bermuda, Navy white hats again showed their versatility when a pick-up rugby team from the Navy Weather Station smashed the Royal Welsh Fusilier team 17-3. The British Army team is rated among their best.

The rangy sailors were unhampered by the British ban on blocking and forward passing. But they had a secret weapon. They rolled over their Royal Welsh opponents after finding out they could pass the pigskin laterally—"just like basketball." — Rudy C. Garcia, JO1, USN.



THE BULLETIN BOARD

Here's Summary to Help You in Making Out Income Tax Reports

TO aid naval personnel in filing this year's Federal Income Tax return, the Bureau of Supplies and Accounts has published a pamphlet, "Federal Income Tax Information." Distribution of this pamphlet has been made to all ships and stations and is available to all personnel.

No U. S. citizen in the Navy is exempt from provisions of the income tax laws. Some naval personnel will not actually pay taxes because of their exemptions and deductions, but nevertheless are required to file a return if their income exceeds \$600. To help you make out your return, you will be supplied by your disbursing officer with a "Form W-2 (a statement of wages paid you and taxes withheld).

The Navy merely acts as an "employer" for purposes of the withholding procedure. Funds are deducted from your pay, based on the table of income brackets and exemptions, and are turned over by the Navy to the Bureau of Internal Revenue.

What part of a Navyman's pay is withheld? The Navy withholds on all taxable pay of the serviceman, including the retainer pay of the Fleet Reservist and the taxable portion of retired pay. But the Navy does not withhold on travel allowance of servicemen.

The following items of income constitute "gross income" and, to the extent that they are not reduced by allowable "business expenses", must be reported:

- *Active duty pay* (in excess of combat zone exclusion) which includes basic pay for active duty, training duty, summer cruises and drills; incentive pay for hazardous duty; special pay for physicians and dentists, diving duty, sea and foreign pay, and reenlistment bonus; pay for accrued leave on separation, reenlistment allowances, battle efficiency prizes, combat duty pay and credits for back pay.

- *Retired pay*, if retired for other than physical disability resulting from active service.

- *Retainer pay* of enlisted members transferred to the Fleet Reserve.

- *Retired pay* of enlisted members transferred to the retired list for other than physical disability resulting from active duty.

- *Pay* of all midshipmen and naval aviation cadets, and retainer pay of \$50 and \$100 per month of students enrolled in the NROTC and Naval Aviation College programs.

- *Compensation* for employment in officer's clubs, messes, post and station theaters, Navy Exchange, etc.

- *Mileage*—The total amount received as mileage should be included in gross income. However, the actual expenses the Navyman paid while performing the travel, such as meals, train fares, lodging, may be deducted. (Note, however, that no part of mileage for wife and dependents is taxable and such mileage should not be reported).

- *Travel allowance* on discharge and furlough travel allowance on re-enlistment. Provisions here are the same as mileage.

- *Interest* received on deposits of *Navy Savings Account*.

- *Interest on armed forces* (terminal) *leave bonds* or on payments for terminal leave.

- *Lump sum payment* received by officers upon honorable discharge or complete separation other than disability severance pay.

From sources other than the Navy the following must be reported:

- *Compensation* for personal or professional services.

- *Amounts* received from former employer even though paid to the dependents of a serviceman.

- *Business income*, either as an individual proprietor or as a partner in a business operated for profit.

- *Annuities and endowments* in excess of cost.

- *Pensions* paid by the state for services.

- *Income from investments* in properties or securities, such as rent, interest, or dividends from domestic and foreign corporations.

Some items of naval compensation, however, are specifically excluded from gross income and therefore need not be reported on tax returns.

- *Combat zone pay*—One big exclusion for Navyman up to and including commissioned warrant officers is all service pay earned for each month, any day of which was spent in a "combat zone" (between 24 Jun 1950 and 1 Jan 1954). Commissioned officers in pay grade of ensign and above, may exclude up to \$200 of their service income for each month, any day of which was spent in a "combat zone" during the period when computing their tax.

This "combat zone" exclusion is also extended to include pay earned during periods of hospitalization caused by wounds, disease or injury occurring while serving in a "combat zone."

Other items of income from naval sources which are specifically excluded from "gross income" and hence are not taxable are:

- *Retired pay* of persons retired from the armed forces prior to 1 Oct 1949 for *physical disability* resulting from active service. This includes the retired pay of persons recalled to active duty subsequent to retirement for other than physical disability and returned to inactive duty prior to 1 Oct 1949.

- *Disability retirement pay* or *disability severance pay* received for retirement or separation after 30 Sep 1949 under the Career Compensation Act of 1949.

- *Basic allowance for quarters*.

- *Basic allowance for subsistence*.

- *Cost to Government for trans-*



"And with this one, a 32-piece Navy band steps out and plays 'Anchors Aweigh.'"

portation of dependents (mileage for wife and dependents) and for household effects.

- **Uniform gratuity** or clothing allowance paid to officers, nurses, or enlisted personnel.

- **Death gratuity pay** (six months' pay to the beneficiary of a deceased officer or enlisted man).

- **Personal money allowances** received by fleet admirals, admirals and vice admirals.

- **Armed forces terminal leave bonds** issued or other payments made under Section 6 of the Armed Forces Leave Act of 1946. (However, interest on these bonds or payments constitutes gross income in the year received and must be reported).

- **Per diem allowance.**

- **Mustering out pay.**

From other sources the following are not taxable and should not be reported on your tax form:

- **Life insurance or indemnity** (government or private companies) amounts received under a life insurance contract paid by reason of death of the insured, whether in a single sum or otherwise. (However, if such amounts are held by the insurer under an agreement to pay interest thereon, the interest payments must be included in gross income).

- **Government insurance dividends**, including regular and special, on U. S. Government and National Service Life insurance; proceeds from maturing U. S. Government endowment insurance contracts and proceeds from surrendering U. S. Government and National Service Life insurance policies.

- **Veterans pensions**—Pensions received from the U.S. by a veteran or the family of a veteran for services rendered to the U. S.

- **State bonus** — Payments by a state to veterans for services rendered to the U. S.

- **Social Security benefits** — Amounts received from the Federal or State governments under the Federal Social Security program.

- **Serviceman's Benefits**, under various so-called G.I. Bills. This includes unemployment compensation, disability pension or compensation, educational benefits, etc.

- **Commercial insurance dividends** representing refund of non-deductible premium payments.

- **Gifts, inheritances, and bequests**



"For goodness' sake! Just over a silly, little ol' I.D. card!"

are not reported on annual income tax returns. However, these are covered by other types of taxes.

How to file—Naval personnel can choose any one of three types of income tax returns to file—Form 1040A, Short-Form 1040 and Long-Form 1040.

Form 1040A is the simplest of the three. If you file this form, you do not need to figure your own tax. From the figures you put down, the District Director of Internal Revenue will figure your tax for you and send you a refund or a bill (the amount of tax you owe over and above what you paid through Withholding).

You may use this form if your total income was less than \$5000,

consisted entirely of wages, dividends, or interest, if not more than \$100 of it was from a source not subject to withholding.

Form 1040 may be used either as a short or a long form. The Short-Form 1040, differs from Form 1040A in that (1) you must figure your own tax; (2) you may deduct travel and reimbursed expenses from your wages; and (3) you include income from sources not reportable on Form 1040A. Therefore, if your income was less than \$5000 and you do not itemize non-business deductions, find your tax from the table on the back of the form, tear off the first sheet and file it as a Short-Form 1040.

Long-Form 1040 *must* be used if your income was \$5000 or more. If your non-business deductions are more than 10 per cent of your income, you will ordinarily save money by itemizing your deductions on this form.

When To File—Income tax returns made on the basis of the calendar year shall be filed on or before the 15th day of March following the close of the calendar year. However, naval personnel who on 15 Mar 1954 are residing or traveling *outside* the U. S., Alaska and Hawaii, are allowed an extension of time until 15 Jun 1954 for filing the 1953 annual

WHAT'S IN A NAME

Sailors' Saint Nicholas

Though many people think of Saint Nicholas only in terms of Santa Claus and the Yule holiday, the hard-working saint is also a special patron of sailors.

Little is known with certainty of Saint Nicholas's personal history. He was the bishop of Myra, Asia Minor, during the Fourth Century and is regarded in many countries as the special patron of the young (in Western countries) and of scholars, parish clerks, travelers and sailors (in Eastern countries). His protection was often implored against robbers, and these persons for whom he was patron came to be called "Clerks of Saint Nicho'as."

Exactly how the Saint became the patron of sailors is not known for certain although it may be an outgrowth of the legend that during his lifetime he appeared to storm-tossed mariners off the coast of Lycia. They invoked his aid and he brought them safe to shore.

In the Aegean and Ionian Seas sailors,

following a common Eastern custom, had a "Star of Saint Nicholas" (probably a star they would navigate by at night). They would also wish one another a safe voyage with the phrase "May Saint Nicholas hold the tiller."



tax returns. If you make use of this provision, however, you must pay interest at the rate of six per cent per year on the unpaid tax, if any, from the original date due, until your tax is paid.

Also, a Navyman in a "combat zone" or one who is hospitalized as a result of wounds, injury or disease incurred in a combat zone after 24 Jun 1950 is exempted for 180 days thereafter from filing an income tax return or paying his tax or any installments on it.

For example, if a Navyman left the "combat zone" on 15 Oct 1953, the due date for his income tax return is 13 Apr 1954. This postponement is *not* applicable to the spouse of such a person. When filing the return a statement should be attached which will indicate to the District Director of Internal Revenue the date on which combat service, or hospitalization as the result of combat service, was terminated.

When To Pay—When using *Short Form 1040* or *Long Form 1040*, the full sum of any tax you owe is due at the time you file your return. However, a taxpayer who is authorized to use Form 1040A will *not* make any payment when the return is filed. The District Director of Internal Revenue will compute the tax in such cases (see above), and if an overpayment is shown, refund will be made; if there is a balance due, a bill will be sent to the taxpayer and he will be allowed 30 days in which to pay it.

Where no general or automatic extension of time has been granted to a member of the Armed Forces, as such, for the payment of taxes, he may be interested in and entitled to the following provisions:

- Under the provisions of the Soldiers' and Sailors' Civil Relief Act of 1940, as amended, a member of the armed forces whose ability to pay his tax is "materially impaired" by reason of his being in the service, may defer the payment of his tax (but *not* the filing of his return), without penalty or interest until the termination of the act by Congress or until separation from the service, whichever comes earlier. A specific request for this deferment should be addressed to the District Director when the return is filed.

- Also at the request of a tax-

payer, the District Director of Internal Revenue may extend the time for payment of the tax for a period not exceeding six months from the date prescribed for the payment of the tax. Under this provision, there shall be collected as a part of such amount interest thereon at the rate of six per cent per year from the date such payment should have been made, if no extension had been granted, until paid.

- It should also be noted that the time for paying Federal income taxes falling due while a taxpayer is in a "combat zone" or is hospitalized outside of the U. S. as the result of a "combat zone" injury, is extended until the due date for filing returns.

Declaration of Estimated Tax for 1954 — Under certain conditions a Navyman is required to file a declaration of estimated tax (Form 1040-ES) for the calendar year 1954 if he expects to receive during such calendar year: (1) Wages subject to withholding in excess of \$4500 plus \$600 for each exemption to which he is entitled; or (2) "Gross Income" from all other sources in excess of \$100, provided his total "gross income" is expected to amount to \$600 or more.

It should be emphasized that any serviceman who fulfills either or both of the above conditions *must* file a Declaration of Estimated Tax *even though* the withholding from his wages may satisfy completely his ultimate tax and even if he has nothing to pay on the estimated tax.

For example, take a lieutenant with lengthy service and receiving flight pay. He receives \$444.60 monthly in active duty pay (this does *not* include allowances for quarters and subsistence), and in addition he gets

\$120.00 monthly flight pay, making a monthly total of \$564.60, and an annual gross income of \$6775.20. He has no other income other than his service pay. He is married and has one child. Counting his exemption (for self and his dependents) of \$1800, he adds this exemption to the sum of \$4500 (as established in the provisions of the law) and gets a total of \$6300. This figure represents the sum, in his particular case, which will determine whether or not he must file a Declaration of Estimated Tax. Since his gross income is higher than \$6300, he must file a Declaration of Estimated Tax on the entire gross income, that is, on \$6775.20.

Also, any Navyman who knows that he will receive some income during the coming tax year from all other sources than wages subject to withholding, and if this other income will total more than \$100, is also required to file a Declaration of Estimated Tax.

Worksheets are provided on the Treasury Form 1040-ES for making a computation of estimated tax for 1954. Declarations should be filed with the District Director of Internal Revenue with whom the 1953 return is filed, or with whom the taxpayer expects to file his 1954 income tax return.

Incidentally, beginning 1 Jan 1954, the income tax rate will be reduced by 10 per cent as a result of passage of the Revenue Act of 1951. The savings to Naval personnel will amount to about two per cent of their taxable income in excess of exemptions and deductions.

For example, a seaman with two exemptions, drawing \$122.30 a month had \$2.20 a month withheld in 1953. Starting 1 Jan 1954, with the reduction in rates, he will have \$2.00 a month withheld. Another example would be of a lieutenant with three exemptions, drawing \$355.68 per month, will have \$34.10 deducted in 1954 as against \$37.90 in 1953.

One last word: If trouble is encountered in working out 1953 income tax returns, Navyman may consult: (1) Legal Assistance Officers; (2) District Director of Internal Revenue; or (3) may direct specific inquiries to: Bureau of Supplies and Accounts, Washington 25, D. C., Attn: B-1.



"Higgins! I said drop whatever you're doing and come over here!"

Emergency Data Record must be Kept Current for Protection of Navyman's Dependents

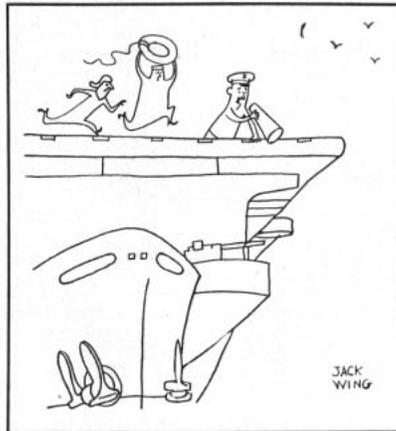
The *Record of Emergency Data* (DD Form 93) which becomes a part of your service record upon your initial entry into the service, is one of the most important forms you are required to fill out and keep current. This form is similar to a will for a civilian estate in that it provides an adequate record for emergency data pertaining to:

- Person to be notified in case of emergency.
- Person to receive six months' death gratuity.
- Person (including commercial insurance companies or banks) to receive special allotment and the sum to be so received, in the event that you become missing, missing in action, or in any way prevented from returning to Naval jurisdiction.
- Person to receive proceeds of Servicemen's Indemnity in event of your death while on active duty or 120 days after release if eligible.

The care with which this form should be filled out cannot be over-emphasized. Carelessness, incompleteness of the form, or lack of understanding may result in undue delay in carrying out one of the above desires of the individual. A Navyman's dependents may be faced with unnecessary hardship if his DD Form 93 is not up-to-date. For example, if a Navyman gets married but fails to list his wife as his beneficiary and he later dies in service, the death gratuity may erroneously be paid to persons last listed.

Be sure that your *Record of Emergency Data* is up-to-date. Here are the times when you should fill out a DD Form 93:

- Upon your initial entry into the service.
- Upon reenlistment.
- Upon recall to active duty.
- If a Naval Reservist, upon being ordered to extended duty, etc.
- Upon promotion from enlisted rating to officer rank.
- Whenever a major change in your status occurs such as marriage, change in dependents or a divorce.
- Whenever there is a change of permanent address of dependents or beneficiaries or person to be notified in the event of an emergency.
- Change in designation of per-



"Hey Gunner!... When you gonna learn to stay off that catapult?"

son to receive the six months' death gratuity.

- Change in the dependents to receive the special allotment of pay in the event the service member is in a missing status.
- Change in beneficiary under the Servicemen's Indemnity.

WAY BACK WHEN

Columbus Slept Here

The U. S. Naval Base Guantanamo Bay, Cuba, recently celebrated the golden anniversary of its establishment. It was on 10 Dec 1903, that the Cuban Government formally turned over the property and surrounding waters to the U. S. for a Naval Reservation.

On that day, the battleship *USS Kearsarge* (BB 53) lay at anchor in Guantanamo Bay with the Commander in Chief, North Atlantic Fleet, representing the U. S., and Senor Portuondo, Chief of the Public Works of the Province of Santiago, representing Cuba, on board.

As the ship's bell tolled the hour of noon, Cuba turned over to the U. S. 19,621 acres of land to be used as a coaling and naval station. Lieutenant Commander W. H. Allen, USN, assumed command of the area and thus became the first commandant of the naval station.

In the days of early explorers traveling the Spanish Main, the bay was used as a pirate's haven and many are the legends of pirate hoards and hidden treasures. Christopher Columbus, on his second cruise in 1494, entered Guantanamo Bay and spent the night there.

During the Spanish-American War, the harbor at Guantanamo Bay was an invaluable base for repairing and coaling the blockading fleet off Santiago.

The first successful U. S. attack against the

Augmentation Board Recommends Officers for Transfer to USN

In their final action of 1953 the Navy Augmentation Board recommended that 213 Naval Reserve LTJG's and ensigns be transferred to the Regular Navy.

Of the total number of selectees, 145 were selected for unrestricted line; 12 for aviation line; 28 for the Supply Corps; 11 for the Chaplain Corps; 14 for the Navy Nurse Corps; two for the Medical Service Corps and one for the Civil Engineer Corps.

Some 491 Reserve officers have been absorbed into the Regular Navy since the program was inaugurated in October of 1952. The Navy's authority for the augmentation program expired on 31 Dec 1953 and unless further legislation is passed by Congress the program will be discontinued. (See ALL HANDS, January 1954, page 8.)

Spanish-held Guantanamo Bay began on 7 Jun 1898 with the cruiser *Marblehead* and the auxiliary *Yankee* making a reconnaissance of the area while the auxiliary *St. Louis* cut the communication cables. Marines were landed soon afterward and with the support of insurgent Cuban troops and fire support from afloat, they gained control of the Bay on 14 Jun 1898.

The lease agreement was signed by President Theodore Roosevelt and President Estrada Palma of Cuba in February 1903. Nine months later, the U. S. assumed control of Guantanamo Bay and thus was born one of the largest American naval operating bases in the Atlantic Ocean.—Harvey E. Davis, JOC, USNR.



DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current *Alnavs* and *NavActs* as well as certain *BuPers Instructions*, *BuPers Notices*, and *SecNav Instructions* that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since *BuPers Notices* are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult *Alnavs*, *NavActs*, *Instructions* and *Notices* for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; *NavActs* apply to all Navy commands; *BuPers Instructions* and *Notices* apply to all ships and stations.

Alnavs

No. 60—States that the opening of dead-ended portions of hydraulic, pneumatic or oxygen systems to much higher pressures should be avoided (see *Word*, p. 8).

No. 61—States that pending complete instructions to be issued at a later date all hydrographic information produced by agencies other than Navy Hydro will be handled as "Confidential" under the new security regulations.

No. 62—Concerns reclassification of *BuShips* allowance lists, machinery indexes and tender load lists under the new security regulations.

No. 63—Has to do with reclassification of various operational publications and parts thereof under the new security regulations.

No. 64—Concerns reclassification of various publication items distributed by *BuPers* as a result of the new security regulations.

No. 65—Contains reclassification procedure to be followed for various instructions and lists distributed by *BuOrd* as a result of the new security regulations.

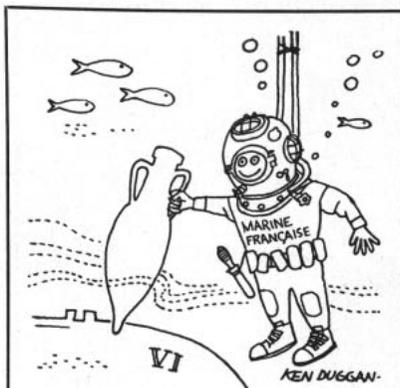
No. 66—Contained Christmas greetings from *SecNav*.

No. 67—Waived the yeoman stenographic performance test for the February 1954 servicewide competitive exams for advancement in rating.

BuPers Instructions

No. 1001.15—Publicizes in general terms what the Navy's policy will be on any future involuntary recall of Ready Reservists to active service.

No. 1133.3—Reviews the Navy's current reenlistment situation and



Ancient Scuttlebutt Appears From Davey Jones' Locker

A 2000-year-old scuttlebutt was reactivated and put back into active duty at the Naval Gun Factory in Washington, D. C., recently.

The "scuttlebutt" was a gift from a group of French Navy Officers to the Deep Sea Diving School and Experimental Diving Unit at the Gun Factory.

Standing three and one half feet tall, the gift was an ancient Roman urn called an "amphora." When found in 1953, by divers of the Submarine Research Group of the French Navy, it was 135 feet under the Mediterranean in the wreck of a Roman galley.

Romans used the amphora to carry "mead" (a fermented drink of honey and water, sometimes flavored with spices). The urns were standard issue on all galleys of the Romans and were carried throughout the Mediterranean by these ships.

At the time of the presentation of the gift the three French officers were visiting the Experimental Diving Unit, demonstrating the latest devices and techniques of aqualung work used in the French Navy.

states that personnel in a limited duty status or those in Pay Grade 3 who have failed to pass a servicewide examination for advancement to Pay Grade 4 shall not be considered for reenlistment at the present time.

No. 1311.1A—Summarizes instructions for effecting transfers of commissioned officers and warrant officers on active duty to naval hospitals for treatment.

No. 1741.7—Brings to the atten-

tion of commanding officers the fact that the "Insurance Manual for Benefits and Insurance Officers" is the official source of information on all Government life insurance questions.

No. 1750.1—Explains the provisions of the new annuity plan for servicemen, the "Uniformed Services Contingency Option Act of 1953."

BuPers Notices

No. 1741 (23 Nov 1953)—Advises naval personnel to investigate carefully the medical care due them as a serviceman before considering a commercial health and accident insurance policy.

No. 1050 (2 Dec 1953)—Restates the Navy's policy that commanding officers are encouraged to grant annual leave to naval personnel at the normal rate they accrue it, consistent only with service requirements or other exigencies.

No. 1130 (7 Dec 1953)—Makes a few minor changes in *BuPers Instruction* 1130.4 relating to enlistment or reenlistment of Regular Navy and Naval personnel on active duty.

No. 1418 (8 Dec 1953)—Makes several changes in *BuPers Instruction* 1418.7 which relates to service-wide competitive exams for advancement to pay grade E-7.

No. 1120 (9 Dec 1953)—Makes several minor changes in *BuPers Instruction* 1120.18 (Change One) which relates to appointment of personnel to the grade of ensign, limited duty only, in the U. S. Navy.

No. 1414 (14 Dec 1953)—Contained tentative qualifications for advancement in rating of fire control technicians, quals which were to be used as the basis of study for the February 1953 exams.

No. 1400 (15 Dec 1953)—Gives the cut-off register number for the promotion zone for selection of Naval Reserve officers to LCDR.

No. 4641 (16 Dec 1953)—Reminds naval personnel that furlough fares are still available on passenger-carrying railroads for Navymen on leave or liberty.

No. 1650 (17 Dec 1953)—States that only those persons who earned both the Philippine Defense Ribbon and the Philippine Liberation Ribbon will be eligible to wear the Philippine Independence Ribbon.

No. 1412 (18 Dec 1953)—Lists officers of the line of the Navy and

Naval Reserve on active duty who were selected for temporary promotion to the grade of LCDR.

No. 1414 (22 Dec 1953)—Clarifies certain details of the basic instruction concerning eligibility for advancement in rating of enlisted personnel as stated in BuPers Instruction 1414.2.

No. 1920 (22 Dec 1953)—Urges commanding officers of the last permanent duty station of officers of the Regular Navy and Naval Reserve scheduled to leave the naval service to deliver to those officers an appropriate letter summarizing the naval duties they have performed and expressing the appreciation of the Navy for the job accomplished.

No. 1120 (23 Dec 1953)—Publishes the list of aviators of the Naval Reserve on active duty selected for commissioned grade in the line of the Regular Navy.

Two Submarine Correspondence Courses Revised for Reservists

Two officer correspondence courses designed for Naval Reserve submariners have been rewritten and are now available.

The revised courses are the *Basic Submarine Course*, which covers the fundamentals of submarine construction and operation, and the *Advanced Submarine Course* which includes a thorough study of submarine systems, techniques, procedures and problems. Each course consists of 12 assignments.

The Basic course carries 24 points Reserve credit and the Advanced course 36 points.

The Basic course is available to officers who are members of or associated with Naval Reserve Submarine divisions, or who are attached to battalions or brigades having Submarine divisions under their administrative command. The course is also available to Reserve officers who are qualified SP, SG or SS and to NROTC midshipmen. The Advanced course is available to Reserve officers who are qualified SG or SS, and who have successfully completed the basic course.

Application for enrollment in either of these courses should be made on form NavPers 994, addressed to the Officer in Charge, U. S. Naval Submarine School, New London, Conn.

Vocational Counseling Available To G. I.s at VA Regional Offices

If you are a Navyman who will soon be getting out of the service and you plan on studying under the Korean G.I. Bill you should have a fairly good idea of the type of training you want before you contact the Veterans Administration on the subject. This way, VA can easily furnish you with the names of schools offering courses in your chosen field so that you may decide which institution to attend.

If you aren't sure what kind of training to take, you may avail yourself of VA's vocational counseling. Tests and interviews in the counseling process better enable you to understand your capabilities and aptitudes, so that you are in a better position to make a wise choice.

The VA urges you however, to seek such counseling information from your VA regional office, not from VA headquarters in Washington, D. C. Your regional office maintains an up-to-date record of courses approved by your state for Korean veterans. This information is not kept in Washington, since changes occur constantly and the list could never be completely current.

New Insurance Manual Gets the Facts Under One Cover

A new *Insurance Manual* covering the many directives on the subject of the three different government insurance programs has been forwarded to all ships and stations.

Issued as NavPers 15,640 (revised June 1953) it is for use by Benefits and Insurance Officers and will spell out under one cover information pertaining to United States Government Life Insurance, National Service Life Insurance and Servicemen's Indemnity for Navy and Marine Corps personnel. Such information has up to now been contained in many different directives.

Any further changes will be issued in Navy directives so that the contents of the manual may be kept on a current basis.

The manual is not available for individual distribution. Navy men interested in obtaining information on the servicemen's indemnity or other insurance should consult their insurance officers.

You probably know from intimate contact that Navy ships use a lot of paint—but do you know how much? The Navy uses from 25 to 30 million gallons of all types of paint each year. Roughly 20 million gallons are used for maintenance and are applied by men in the Fleet.

To paint a ship's exterior topside with one coat takes from 30 gallons on a PT boat and 50 gallons on a submarine to as much as 950 gallons on an aircraft carrier. The average basic requirement for maintenance of a destroyer is 270 gallons every two months. When originally built, an LCT takes 300 gallons. This figure soars to



more than 16,000 gallons for a cruiser and 40,000 gallons for a battleship. You could paint 3000 houses with the amount of paint used on one of the *Midway*-class carriers, and the *USS Forrestal* will need 92,000 gallons.

Ships have been painted lots of different colors too. The painting of the Continental Navy vessels seems to have been left up to their Commanding Officers. Colors used for painting some of the ships included white, yellow, black, red and brown. Ships of that day were usually painted black with red, white and yellow stripes in very narrow bands; or were yellow with black mouldings or narrow strips. It is believed that some of the smaller ves-



sels, such as those built on Lake Champlain, were painted red.

In 1840 green became a popular color. This lasted for 10 years. Navy ships were later painted black. About the time of the Spanish-American War they were dark gray. The Navy got around to white in the days of the Great White Fleet in 1907-8. When the Fleet returned to Hampton Roads a few ships were painted gray after a sad experience with white paint surfaces during coaling at various stations. The neat appearance made a favorable impression, and it was shortly after accepted as standard.

Round-Up on Licenses and Deadlines for Navymen Who Drive Cars

If you're like most servicemen you get a little confused when the time comes to renew your driver's license or register your automobile. Moving about the world, you are apt to lose track of the latest auto registration laws of your home state.

In order that you might have these facts and figures at your fingertips, ALL HANDS has compiled an up-to-date summary of automobile licensing and registration rules now in effect in the various states. The facts are taken from a compilation of motor laws published by the American Automobile Association.

Keep in mind, however, that states change their laws and tax rates from time to time. Hence, it is important that you write to your state's motor vehicle office for the latest dope before you send in any money. You'll have to use the right form to make application for a license or registration anyway and the form will have to come from that office.

A good point to remember is that the Soldiers' and Sailors' Civil Relief Act provides that a military person who has paid the required license, fee, or excise for operation of his automobile in the state of which he is a resident or in which he is domiciled, shall not be required to purchase a license in a State where he is stationed or residing in compliance with orders. Here are the general rules:

Car Registration and Fees — A motor vehicle owned by a person in the armed services generally may be registered either at the place of the person's permanent home or at the place where he is stationed. In the event the vehicle is registered at the place of his permanent home, he need not purchase a license in the State where he is stationed. If the individual elects to register his vehicle in the State where he is stationed, it is considered that he voluntarily waives the protection of the Soldiers' and Sailors' Civil Relief Act as to that piece of property, and he must, therefore, pay all licenses and other taxes which usually include the personal property tax which the locality imposes on the use or ownership of the vehicle. Note that for the above conditions to apply, *ownership* of the

Not So Secret Weapon Takes Its Toll

Automobiles are as deadly as bullets, or so at least statistics seem to say.

Admissions to the Navy sick list show that battle casualties and motor-vehicle accident casualties were almost equal in 1952—8,700 for bullets and 8,486 for cars.

Most of the automobile accidents involved cars colliding or running into a stationary object. Most accidents happened on leave.

As is true among civilians also, most of the accidents occurred during holidays and during the summer months. In 9 out of 10 cases the service man was under 30 years of age.

motor vehicle *must be in the name* of the serviceman.

Drivers' licenses—Drivers' licenses are a matter of local regulation and are not within the purview of the Soldiers' and Sailors' Civil Relief Act. In most jurisdictions it is required that the operator of a motor vehicle have a driver's license *issued by the same State in which the vehicle is registered*. In the event the serviceman desires to register his automobile locally and procure local license plates he should also comply with the requirements as to drivers' licenses of the state in which he registers the automobile.

• **ALABAMA:** Driver's license is good for two years and expires on licensee's birthday. Issued by the Probate Judge in county of residence at a fee of \$2.25. Written test, driving test and eye test are required for original license.

Auto must be registered annually with the Probate Judge in county of residence except in counties of Jefferson and Mobile, where application is made to Commissioner of Licenses. Deadline date for registration is midnight 30 September with a period of grace to midnight on the following 15 November. Registration fee is \$3 plus 75 cents issuance fee. Motor vehicle inspection not required but cities have authority to maintain in-

spection stations and enforce local inspection law.

• **ARIZONA:** Driver's license is good for three years and expires on licensee's birthday. License is obtained from State Highway Dept. in Phoenix or branches of the Highway Dept. in other cities at a fee of \$2. Written and oral examinations plus eye tests and driving tests are required.

Auto must be registered annually with the county assessor's office in county of residence. Deadline date for registration is midnight 31 December with a period of grace to midnight on the following 30 January. Fee is \$3.50. If auto is registered after 1 July, the fee is \$2. Vehicle inspection is not required.

• **ARKANSAS:** Driver's license expires annually on 31 December and may be obtained from the Motor Vehicle Division, Department of Revenue, Little Rock, at a fee of \$1. Written and oral examinations plus driving tests and eye tests are required for the original license.

Auto must be registered annually with the Revenue Inspector in the appropriate county seat. Deadline date for registration is midnight 31 December with a period of grace to midnight the following 31 January. Registration fee is 6½ cents per horsepower plus weight tax. Vehicles weighing 3500 pounds or less are taxed at the rate of 27½ cents per 100 pounds or fraction thereof; from 3501 to 4500 pounds it is 30 cents per 100 pounds; and over 4500 pounds 32½ cents per 100 pounds. There is a one-half reduction in this fee on 1 July and a three-quarters reduction on 1 October. No vehicle inspection required.

• **CALIFORNIA:** Driver's license expires four years from date of issuance and can be obtained from the Division of Driver's Licenses, Department of Motor Vehicles or its branch offices at a cost of \$3. Written, road sign, vision and driving tests are all required for the original license.

Application for auto registration must be made to the Department of Motor Vehicles, Sacramento, or any of its branch offices. The Registration

fee is a flat \$8 plus a vehicle license fee in lieu of property tax which runs \$2 per \$100 of the market value of the auto. Deadline date for registration is midnight 31 December, with no period of grace. Vehicle inspection is not required.

- **COLORADO:** Driver's license is good for three years and expires on licensee's birthday. License is obtained from the clerk's and recorder's office of the county of residence except in Denver, where it can be obtained through the State Motor Vehicle Department at a fee of \$1. Written, oral, driving and eye tests are required for original license. An eye test is required for renewals.

Application for auto registration must be made to the office of the county clerk and recorder of your county of residence, except in Denver where it is made to the office of the Manager of Revenue. Registration fees run according to the weight of the auto. Cars up to 2600 pounds, \$5; 15 cents for each additional 100 pounds from 2600 to 4500 pounds and 60 cents for each 100 pounds above 4500. Deadline date for registration is midnight, 31 December, with no official period of grace. Vehicle inspection is required twice a year, at the time plates are put on, and again on 1 July.

- **CONNECTICUT:** Driver's license expires on 30 April of each year and is obtained from the Dept. of Motor Vehicles in Hartford or in one of the 10 branch offices of the Dept. located in principal cities. The fee is \$3 plus \$2 for examination upon issuance of the first license. Renewals run to \$3. Written, oral, eye and driving tests are required for original license.

Application for registration also must be made to the Dept. of Motor Vehicles, Hartford, or to one of the 10 branch offices of the Dept. Registration fee is determined by weight. Cars weighing up to 3500 pounds, \$7; 3501 to 4500, \$9; over 4500, \$11. There is a one-half reduction in this fee after 1 October. Deadline date for registration is 28 February with no period of grace. There is an annual voluntary inspection at authorized garages plus "spot inspections" on the highways by uniformed motor vehicle inspectors.

- **DELAWARE:** Driver's license is good for two years, expiring on



"What'll we do now? . . . It says to pass it on to ten readers."

licensee's birthday and may be obtained from the Motor Vehicle Division, Dover, or branch offices in Wilmington and Georgetown at a fee of \$4. Written and driving tests are required for the original license. Servicemen having Delaware license at time of entry into service may drive in the state until 90 days after discharge, provided license has not been revoked or suspended and serviceman is not incapacitated.

Application for auto registration is made to either the Motor Vehicle Division in Dover or the branch offices in Wilmington and Georgetown. Registration fee for a 12-month period is \$10 for a car weighing 4000 pounds or less and \$16 for a car weighing over 4000. Six-month period fees are one-half of the 12-month period fee, plus \$1. Three-month period fees are one-fourth of the 12-month period fee plus \$1. Deadline dates for plate inserts are midnight on 31 March, 30 June, 30 September and 31 December, with no period of grace. Vehicle inspection is required once a year at state owned and operated inspection stations at no charge.

- **DISTRICT OF COLUMBIA:** Driver's license is good for three years from date of issuance and can be obtained from the Department of Vehicles and Traffic at a fee of \$3. Written, oral, driving and eye tests are required for the original license.

Application for auto registration must be made to the Department of Vehicles and Traffic. Registration fees are judged by weight. Autos up to 3500 pounds, \$5; from 3501 to 4500, \$8; over 4500, \$12. Deadline

date for registration is midnight 31 March with no period of grace. Vehicle inspection is required once a year at a fee of \$1.

- **FLORIDA:** Driver's license expires annually on 30 September and license is renewable upon payment of fee without new examination. They are obtained from the County Judge's office in county of residence at a fee of \$1. Written, vision and road driving tests are required for the original license. Servicemen may renew driver's license without examination or delinquent fee upon presentation within 90 days after discharge.

Application for auto registration must be made to the Motor Vehicle Commissioner in Tallahassee or authorized agents throughout the state. Registration fees are based on the weight of the car, \$5 for those under 2000 pounds; \$10 for those between 2000 and 2500 pounds; \$15 for those between 2500 and 3500 pounds; \$20 for those between 3500 and 4500 pounds; and \$25 for all over 4500 pounds. Deadline date for registration is midnight 5 February with a period of grace until midnight the following 20 February. No vehicle inspection is required.

- **GEORGIA:** Driver's license can be obtained from the Department of Public Safety in Atlanta and is good until suspended, cancelled or revoked, at a fee of \$1; family license 50 cents additional for spouse and 25 cents for each minor dependent. Driving, eye and written tests are required for original license.

Application for auto registration can be obtained from the Department of Revenue, Motor Vehicle License Unit, Atlanta. Registration fees for autos weighing 2500 pounds or less is \$1.50; for those over 2500 pounds it is \$1.50 plus \$1 for each additional 500 pounds or fraction thereof. Deadline date for registration is midnight 31 December with a period of grace to midnight 31 March. No vehicle inspection is required.

- **IDAHO:** Driver's license is good for two years expiring on licensee's birthday and may be obtained from the Sheriff in the various counties at a fee of \$2. Written and driving tests are required.

Application for registration must be made to the county assessor's

office in the county of residence. Registration fees are a flat \$5. Deadline date for registration is 14 January with no official period of grace. No vehicle inspection is required.

• **ILLINOIS:** Driver's license good for three years from date of issuance may be obtained from the Secretary of State's Office, Springfield at a fee of \$1. A written examination, driving and eye tests are required for the original license.

Application for auto registration must be made to Secretary of State, Springfield. The registration fees are based on the horsepower of the auto; 25 h.p. and less, \$6.50; between 25 and 35 h.p., \$10.50; between 35 and 50 h.p., \$17; over 50 h.p., \$22. A half-year fee is charged if vehicle is purchased after 1 July. Deadline date for registration is 31 December with no legal period of grace, however, an extension of time may be allowed if application is filed before 31 December. No vehicle inspection required by state however cities of over 40,000 population may provide for compulsory inspection of passenger cars.

• **INDIANA:** Driver's license good for two years from most recent birthday may be obtained from any license branch of the Department of Motor Vehicles at a fee of \$1.25. Written examination, driving test and eye tests are required for original license.

Application for auto registration must be obtained in the county of residence from the Department of Vehicles. Registration fees are based on the horsepower and weight of the auto; less than 25 h.p. and less than 2500 pounds, \$7; less than 25 h.p. and between 2500 and 3000 pounds, \$8; less than 25 h.p. and between 3000 and 3500 pounds, \$9; less than 25 h.p. and 3500 pounds or more \$10; 25 h.p. or more and less than 2500 pounds, \$10; 25 h.p. or more and between 2500 and 3000 pounds, \$11; 25 h.p. or more and 3500 pounds or more, \$12. Fees are reduced one-half on 1 August. Deadline date for auto registration is midnight 28 February, with no period of grace. No vehicle inspection is required.

• **IOWA:** Driver's license expiring two years from licensee's birthday can be obtained from either the Department of Public Safety in Des

Moines or one of the examiners in all county seats and principal cities at a fee of \$1.50. Written, driving and eye tests are required for the original license. All applicants are required to pass a satisfactory vision test to obtain a new or renewed license.

Application for auto registration must be made with the County Treasurer in county of residence. Applicant must have a permanent Iowa address. Registration fees are 40 cents per hundred-weight, plus additional tax as follows: first five years of registration, 1 per cent of list price; sixth year, 3/4 of 1 per cent of list price; seventh and eighth year, 1/2 of 1 per cent of list price; subsequent years 1/10 of 1 per cent of list price. Monthly reduction of 1/12 of total tax for late registration. There is a deadline date for registration of midnight 31 December with a period of grace until midnight the following 31 January. There is no state vehicle inspection but cities and towns may provide for compulsory inspection.

• **KANSAS:** Driver's license expires on 1 July of odd years and may be obtained from the Driver's License Division, Motor Vehicle Commission, Topeka at a fee of \$1. Written, driving and vision tests are required for original license. Non-resident servicemen operating with Kansas vehicle registration must also have Kansas driver's license.

Application for auto registration can be made in the County Treasurer's office in the county of residence. Registration fees are \$6.50 plus 35 cents per 100 pounds of gross weight in excess of 2050 pounds. Quarterly reductions are granted on cars acquired after beginning of registration year. Deadline date for registration is midnight 31 December with a

period of grace until the following 15 February. No vehicle inspection required.

• **KENTUCKY:** Driver's license issued biennially. Names beginning with initials "A" through "K" renew in even years; names beginning with initials "L" through "Z" renew in odd years. New drivers and residents secure licenses to next biennial period in accord with name group. They are obtained from the circuit court clerk of the county of residence at a fee of \$1 for one year, \$2 for two years. Penalty for late renewal is \$1. Written, driving, vision, hearing and physical disability tests are required for original license.

Application for auto registration must be made to the County Clerk in county of residence. Registration fee is \$4.50 plus a 50 cents clerk's fee. Deadline date for registration is midnight 31 December with a period of grace to midnight 1 March. No vehicle inspection is required.

• **LOUISIANA:** Driver's license is good for one year from date of issuance and is obtained from the Driver's License Division, Department of Public Safety, Baton Rouge, at a cost of \$1, except in cities of over 300,000 where it costs \$2. Oral, written, eye and driving tests are required of all new applicants.

Application for auto registration must be made to the Department of Revenue, Motor Vehicle Division, Baton Rouge. Registration fee is a flat \$3 with no periodic reductions. Deadline date for registration is 31 December with a period of grace until midnight 6 February. Vehicle inspection is required in New Orleans parish only.

• **MAINE:** Driver's license expires annually on 31 December and can be obtained from the Motor Vehicle Division, Office of Secretary of State, at a fee of \$2. Oral, written, eye and driving tests are required for the original license.

Application for auto registration must be made to the Motor Vehicle Division, Office of Secretary of State. Registration fee is based on horsepower. Cars of 17 h.p. or less \$10; 18 to 24 h.p., \$12; 25 to 30 h.p., \$14; 31 h.p. and over, \$16. All fees are reduced one-half on 1 September. Deadline date for registration is midnight 31 December with a period



of grace until midnight the following 28 February. Vehicle inspection is required twice a year, during months of April and October.

- **MARYLAND:** Driver's license is good until suspended or revoked and can be obtained from the Department of Motor Vehicles, Baltimore at a fee of \$3.50. Written, eye and driving tests are required.

Application for auto registration must be made to the Department of Motor Vehicles, Baltimore. Registration fees are based on weight. Those autos with a manufacturer's shipping weight of 3700 pounds or less, \$15; over 3700 pounds, \$23. Both fees are reduced one-half on 1 October. Deadline date for registration is 31 March with no period of grace. Vehicle inspection is not required.

- **MASSACHUSETTS:** Driver's license expires two years from the date of issuance and can be obtained from the Registry of Motor Vehicles in Boston or branch offices at a cost of \$8 for original license (\$5 for license and \$3 for examination). Renewal fee is a flat \$5. Oral, driving and eye tests are required for original license. Servicemen whose license expired while in military service may operate on the expired license until 60 days after the termination of his service (by honorable discharge).

Application for auto registration must be made to the Registry of Motor Vehicles in Boston or branch offices. However, due to state's compulsory insurance law, registration applications must be certified by an insurance company or agent, before being presented to the registry. Registration fees are based on horsepower. Autos with less than 30 h.p., \$4.50; 30 to 40 h.p., \$6.50; 40 to 50 h.p., \$9; 50 h.p. and over \$11.50. There is a one-half reduction on all cars registered after 30 September. Deadline date for registration is midnight 31 December with no period of grace. Vehicle inspection is required twice a year during the months of April and October.

- **MICHIGAN:** Driver's license good for three years and expiring on licensee's birthday can be obtained by applying in person to sheriffs and their deputies or Chiefs of Police. Original fee is \$3, renewal fee \$1.50. A written or oral exam, vision and road tests are required for original license. For renewals only the vision



C. W. Keiningham, SK3, USN

test is required.

Application for auto registration must be made to the Office of Secretary of State or any authorized agency located throughout state. Registration fee is 35 cents per hundred pounds and is reduced by one-half after 1 September. Deadline date for registration is 28 February with no period of grace. No vehicle inspection is required.

- **MINNESOTA:** Driver's license good for four years is renewable on licensee's birthday. Licenses can be obtained from the Driver's License Department, St. Paul, for a \$1 fee. Written, eye and driving tests are required for original license. For servicemen having valid Minnesota license upon entry into service, their license remains valid until 90 days after discharge or release.

Application for auto registration must be made to the Secretary of State in St. Paul or authorized deputies located throughout the state. Registration fees are based on weight. Rates are graduated from \$5 for autos under 801 pounds to \$75 for those over 5000 pounds. The tax is the same for the first three years of use with a reduction occurring every three years thereafter. Deadline date for registration is midnight 31 December, with no period of grace. No state vehicle inspection is required.

- **MISSISSIPPI:** Driver's license good for two years can be obtained

QUIZ AWEIGH ANSWERS

Quiz Aweigh is on page 9.

1. (a) Thirty to 60 seconds.
2. (b) Forty-five to 60 days.
3. (a) Naval aviation observer.
4. (c) 1922.
5. (c) Negat.
6. (a) Six.

from the Commissioner of Public Safety, Jackson, at a fee of \$2. Oral, driving and eye tests are required for the original license.

Application for auto registration must be made to the Sheriff and Tax Collector of the county in which the registration is to be made. Registration fees are based on weight and horsepower. The rate is 30 cents per hundred pounds of gross weight, plus 10 cents per horsepower, plus a \$1 tag fee. Deadline date for registration is midnight 31 October with no period of grace. Vehicle inspection is required at least once a year.

- **MISSOURI:** Driver's license good for three years can be obtained from the Drivers' License Division, Department of Revenue in Jefferson City or any branch office, for a fee of \$1. Written, visual, sign and driving tests are required for original license or if license has been expired for more than 60 days. Servicemen stationed outside state may renew Missouri license by mail.

Application for auto registration must be made to the Department of Revenue in Jefferson City or branch offices. Registration fees are based on horsepower. Vehicles with less than 12 h.p., \$5; between 12 and 24 h.p., \$8.50; between 24 and 36 h.p., \$11; between 36 and 48 h.p., \$20; between 48 and 60 h.p., \$25; between 60 and 72 h.p., \$31.50 and 72 h.p. and over, \$37.50. All registrations are made for a 12-month period without regard to calendar year. Deadline date is date of expiration of current registration. Vehicle inspection not required.

- **MONTANA:** Driver's license good for two years and expiring on licensee's birthday can be obtained from the County Treasurer's office in the county of residence at a fee of \$3. Written examination and eye tests are required for all new drivers and in some cases a driving test is required for old drivers.

Application for auto registration must be made to the County Treasurer's office in county of residence. Registration fees are based on weight. Autos weighing 2850 pounds or under, \$5; over 2850 pounds \$10. Deadline date for registration is midnight 31 December with a period of grace to midnight 1 February.

- **NEBRASKA:** Driver's license good for two years and expiring on

1 September of the odd-numbered years can be obtained at the County Court House at a fee of \$2. Written, driving and vision tests are required for original license. Servicemen holding Nebraska license at the time of entrance to the Armed Services and whose license has expired while in service, may have their permit renewed without examination within 60 days of discharge.

Application for auto registration must be made to the County Treasurer. Registration fees are based on the advertised shipping weight of the auto. Cars under 3000 pounds, \$6; 3000 pounds and over, \$8. There is a reduction of one-half on any auto acquired after 1 July. Deadline date for registration is midnight 31 December with a period of grace until midnight 15 February. No vehicle inspection required.

• **NEVADA:** Driver's license good for two years and expiring on licensee's birthday in the odd numbered years can be obtained from the Driver's License Division, Public Service Comm., Carson City, at a fee of \$1. Written, law, sign recognition, eye and driving tests are required. Servicemen who have a Nevada license may continue to use such license while in active service during national emergency.

Application for auto registration must be made to the county assessor's office in county of residence. Registration fee is a flat \$7.50 with no periodic reductions. Deadline date for registration is midnight 31 December with a period of grace until midnight the following 31 January. There is a \$3 penalty for late registration. No vehicle inspection is required.

• **NEW HAMPSHIRE:** Driver's license expiring on the second anniversary of the holder's birthday following date of issuance can be obtained from the Motor Vehicle Department, Concord, at a fee of \$5. Written, oral, eye and driving tests are required for the applicant's original license.

Application for auto registration must be made to the Motor Vehicle Department, Concord. New registration fees, which become effective in April 1954, are based on the cars weight with a minimum fee of \$12. Autos weighing between 3500 and 4200 pounds, \$15.50; between 4200 and 5000 pounds, \$19.50; between



"We been here two hours now . . . and I ain't heard nothin' through this grapevine yet."

5000 and 6000 pounds, \$25; between 6000 and 8000 pounds, 50 cents for each 100 pounds; anything over 8000 pounds 60 cents for each 100 pounds. There is a reduction of one-half after 1 December. Deadline date for registration is midnight 31 March with no period of grace. Vehicle inspection is required twice a year, once during the month of May and again in October.

• **NEW JERSEY:** Driver's license which expires annually on 31 March can be obtained from authorized agencies throughout the state at a fee of \$3. Written, eye and driving tests are required for the original license.

Application for auto registration must be made to authorized agencies of the Motor Vehicle Division located throughout the state. Registration fees are based on horsepower. Autos with between 10 and 29 h.p., 40 cents per h.p.; 30 h.p. or over, 50 cents per h.p. Fee is reduced one-half on 1 October. Deadline for registration is midnight 31 March with no period of grace. Vehicle inspection is required twice a year at various stations throughout the state. Notice is given by mail and the fee is 50 cents.

• **NEW MEXICO:** Driver's license can be obtained for either two or three year periods, expiring on 31 December as appropriate. The licenses are issued by the Driver's License Division, State Police Bldg., Santa Fe, at a fee of \$1. Written, driving and eye tests are required for original license.

Application for auto registration must be made to the Motor Vehicle

Division, Santa Fe. Auto registration fees when a car has not been previously registered in any state for at least a year are \$18 plus \$2 per 100 pounds in excess of 2400. There is a sliding scale for older cars previously registered. Quarterly reductions are granted. Deadline date for registration is midnight 31 December with a period of grace to midnight the following 2 March. Vehicle inspection is required twice a year and the fee is \$1.

• **NEW YORK:** Driver's license good for three years and expiring 30 September can be obtained from the Bureau of Motor Vehicles in Albany or any authorized agent in county of residence, at a fee of \$.50. Written, driving and eye tests are required for the original license. Servicemen who entered military service on or after 25 June 1950 may continue to use operator's license until 30 September next succeeding either the expiration of the New York State Defense Emergency Act or 60 days after separation from service, whichever occurs first.

Application for auto registration must be made to the Bureau of Motor Vehicles in Albany or New York City, or to any of the county branch offices. Registration fees are 50 cents per hundredweight up to 3500 pounds, 75 cents per each additional hundredweight. There is a one-half reduction on 1 July and a three-quarters reduction on 1 October. Deadline date for registration is midnight 31 December with a period of grace until midnight the following 1 February. No vehicle inspection is required.

• **NORTH CAROLINA:** Driver's license which expires every four years on licensee's birthday can be obtained from the Department of Motor Vehicles, Raleigh, at a fee of \$2. Written exam, driving, road sign and vision tests are required. All drivers must take the re-examination every four years. Servicemen stationed outside the state may renew their North Carolina drivers license by mail. The application must be endorsed by the man's CO.

Application for registration must be made to the Department of Motor Vehicles, Raleigh. Registration fees are based on weight. Vehicles weighing 3500 pounds or less, \$10; between 3501 and 4500 pounds \$12; 4501 and over \$15. Quarterly

reductions are granted. Deadline date for registration is midnight 31 December with a period of grace until midnight the following 31 January. The only vehicle inspection is that required of used vehicles from out of state.

• **NORTH DAKOTA:** Driver's license good for two years, expiring on 30 June of each odd year can be obtained from the State Highway Department, Bismarck, for a fee of \$2. Examination and driving tests are required for all new applicants.

Application for auto registration must be made to the Motor Vehicle Department, Bismarck. Registration fees are on a sliding scale according to weight, ranging from \$15 for autos weighing 2399 pounds or less to \$185 for vehicles weighing over 9000 pounds. Deadline date for registration is 31 December with no period of grace. No vehicle inspection is required.

• **OHIO:** Driver's license good for three years and expiring on licensee's birthday can be obtained from the Registrar of Motor Vehicles or local deputies at a fee of \$1. Written, oral, driving and eye tests are required for the original license and renewal applications made more than three months after expiration of previous license. Servicemen on leave are not required to have drivers license. When discharged, servicemen are granted six months' period of grace to renew driver's license without undergoing examination provided they were properly licensed at time of entry into the service.

Application for auto registration must be made to the Registrar of Motor Vehicles or local deputies. Registration fee is a flat \$10 with quarterly reductions granted. Deadline date for registration is midnight 31 March with no period of grace. No vehicle inspection is required.

• **OKLAHOMA:** Driver's license good for two years expiring on month of birth can be obtained from the Department of Public Safety, Oklahoma City, or authorized agencies throughout the state at a fee of \$3. Oral, driving and eye tests are required for original license.

Application for registration must be made to the Motor Vehicle Division, Oklahoma Tax Commission, Oklahoma City, or local authorized

agencies. Registration fees are based on the delivered price of the vehicle and vary over the years. It is advisable to query the tax commission, stating age and price of car, for further details. Deadline date for registration is midnight 31 December with a period of grace until midnight 31 January. No vehicle inspection except on out-of-state vehicles being registered for first time in Oklahoma.

• **OREGON:** Driver's license good for two years and expiring on licensee's birthday can be obtained from the Secretary of State, Driver's License Division, Salem, or authorized agents throughout the state for \$1.50. Written, driving and eye tests are required for original license.

Application for auto registration must be made to Secretary of State, Motor Vehicle Division, Salem, or authorized agents located throughout the state. The registration fee is a flat \$10. Deadline date for registration is on a monthly schedule according to the time of first registration. There is no official period of grace. No vehicle inspection is required.

• **PENNSYLVANIA:** Driver's license expiring annually at midnight on 31 January can be obtained from the Director, Bureau of Motor Vehicles, Harrisburg, at a fee of \$4, \$1 for renewals. Oral, driving and eye tests are required for original license. Servicemen having Pennsylvania driver's license upon entrance into the service may drive on such license during their period of service and have renewal at any time up to one year after honorable discharge.

Application for auto registration must be made to Director, Bureau of Motor Vehicles, Harrisburg. The registration fee is a flat \$10 for all passenger cars with a one-half reduction on 1 October and a three-quarters

reduction on 1 January. Deadline date for registration is midnight 31 March with no period of grace. A vehicle inspection is required twice a year.

• **RHODE ISLAND:** Driver's license expiring annually on 30 September can be obtained from the Registry of Motor Vehicles, Providence, or at sub-stations located in Newport, Westerly and Woonsocket at a fee of \$4, renewals \$2. Written, eye and driving tests are required for the original license. Servicemen may secure special operator's license issued in exchange for valid Rhode Island license at no cost. Special license is good for the term of service and 30 days after.

Application for auto registration must be made to the Registry of Motor Vehicles, Providence, or sub-stations located in Newport, Westerly and Woonsocket. Registration fees are based on weight. Cars weighing 2500 pounds or less, \$8; between 2501 and 3000 pounds, \$9; 3001 and 3500 pounds, \$10; between 3501 and 4000 pounds, \$12; between 4001 and 4500 pounds, \$14; between 4501 and 5000 pounds, \$16; between 5001 and 5500 pounds \$18. Gross weight is computed on the light weight plus 150 pounds for each passenger capacity. Quarterly reductions are granted. Deadline date for registration is midnight on 31 March with no period of grace. No vehicle inspection is required.

• **SOUTH CAROLINA:** Driver's license good for four years expiring on 30 June in the fourth year after issuance can be obtained from any of the Highway Patrol offices located in various cities throughout the state at a fee of 50 cents. Written, oral and driving tests are required for original license. Servicemen may continue to use current South Carolina operator's license until 90 days after discharge.

Application for auto registration must be made to the Director, Motor Vehicle Division, Columbia, S. C. Registration fees are based on weight of the vehicle. Autos weighing under 2000 pounds, \$2.20; each additional 500 pounds above 2000, or fraction thereof, \$1. No periodic reductions unless the auto is registered in the state for the first time during the last month of current registration



year. Deadline date for registration is midnight 31 October with no period of grace. No vehicle inspection is required.

- **SOUTH DAKOTA:** Driver's license good for two years from date of issuance can be obtained from the County Treasurer in county of residence at a fee of 50 cents. No tests are reported but may be required.

Application for auto registration must be made to the County Treasurer in county of residence. Registration fees are based on weight and vary from \$18 for cars under 2000 pounds to \$75 for cars weighing between 5501 and 6000 pounds. There is a one-half reduction on cars acquired after 1 July and three-fourths reduction on cars acquired after 1 October. Deadline date for registration is midnight 31 March with no period of grace. There is no vehicle inspection required.

- **TENNESSEE:** Driver's license expiring on 1 July of each odd year can be obtained from the County Court Clerk in county of residence at a fee of \$2. Written, driving and eye tests are required.

Application for auto registration must be made to County Court Clerk in county of residence. Registration fees are based on weight. Autos weighing less than 3500 pounds, \$7.50; those in excess of 3500 pounds, \$10. There is a reduction of one-half after 1 April and before 1 September. Deadline date for registration is midnight 1 April with no period of grace. Vehicle inspection is held by certain cities but not by the state.

- **TEXAS:** Driver's license good for two years from date of issuance can be obtained from Headquarters Office, Austin, at a fee of \$1. Oral, written, eyesight and driving tests are required for the original license.

Application for auto registration must be made to the Tax Assessor-Collector in county of residence. Registration fees are based on the weight of the auto. Cars weighing between 1000 and 2000 pounds, 28 cents per hundredweight; between 2001 and 3500 pounds, 36 cents per hundredweight; 3501 to 4500 pounds, 48 cents per hundredweight; over 4500 pounds, 50 cents per hundredweight. Monthly reductions are granted. Deadline date for registration is midnight 1 April with

no period of grace. Vehicle inspection is required once a year at official inspection stations at a fee of \$1.

- **UTAH:** Driver's license, which is renewed every five years, can be obtained from the Utah Department of Public Safety, Salt Lake City, at a fee of \$2. Written, driving and eye tests are required for the original license.

Application for auto registration must be made to the Registration Department, Motor Vehicle Division, Salt Lake City. Registration fee is a flat \$5 with a one-half reduction on 1 July. Deadline date for registration is midnight 31 December with a period of grace until midnight the following 28 February. Vehicle inspection is required once or twice a year on dates set by the State Road Commission. There is an inspection fee of 50 cents.

- **VERMONT:** Driver's license expiring annually on the eve of applicant's birthday can be obtained from the Motor Vehicle Department, Montpelier, at a fee of \$2.50. Written, driving and eye tests are required for original license. Servicemen having valid Vermont license when entering service may continue to use license while in the service and for 30 days after discharge.

Application for auto registration must be made to the Motor Vehicle Department, Montpelier. Registration fees on 1937 or earlier models of all autos weighing under 2500 pounds or less, \$18; all other passenger cars, \$26. There is a one-half reduction on 1 October and a three-fourths reduction on 1 January. Deadline date for registration is midnight 31 March with no period of grace. Vehicle inspection is required

twice a year in May and October at state approved privately owned inspection stations.

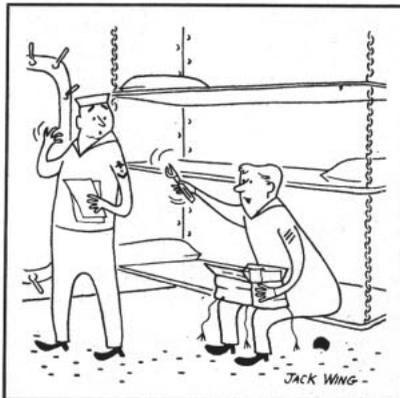
- **VIRGINIA:** Driver's license expiring three years from applicant's birthday can be obtained from the Division of Motor Vehicles, Richmond, at a fee of 50 cents. Oral, written, driving and eye tests are required for original license. Licenses issued to servicemen stationed outside Virginia and due to expire after 14 Mar 1952 remain valid until 6 months after discharge or relocation of serviceman in state.

Application for auto registration must be made to the Division of Motor Vehicles, Richmond. Registration fee is a flat \$10, reduced to \$5 after 1 October and \$3 after 16 January. Deadline date for registration is midnight 31 March with a period of grace until midnight 15 April. Vehicle inspection is required twice a year.

- **WASHINGTON:** Driver's license good for two years and expiring on licensee's birthday can be obtained from the Director, Driver's License Division or State Patrol offices at a fee of \$3. Written, oral, and driving tests are required for original license or for renewal of license which expired over four years prior to date of application. Servicemen having valid Washington license upon entry into service may drive on that license for the duration of their service and 90 days after discharge.

Application for registration must be made to the Department of Licenses, Motor Vehicle Division, Olympia, or to authorized agencies located in each county. The registration fee is a flat \$5.60 with no periodic reductions. Deadline date for registration is midnight 31 December with no period of grace. Servicemen returning from duty in China, Japan or Korea with an auto may drive through Washington without plates if they entered the States at Seattle. Presentation of transfer orders will be accepted in lieu of a license plate. There is no vehicle inspection required.

- **WEST VIRGINIA:** Driver's license good for four years from date of issuance can be obtained from the Department of Motor Vehicles, Charleston, at a fee of \$1. Oral, driving and eye tests are required for original license. Servicemen whose



"Guess Mom got the wrong impression of 'tin can' duty."

license expired while in the military service may operate on their license until six months after honorable discharge.

Application for auto registration must be made to the Department of Motor Vehicles, Charleston, or authorized agencies. Registration fees are \$11 for the first 2000 pounds and 60 cents for each additional 100 pounds. Quarterly reductions are granted. Deadline date for registration is midnight 30 June with no period of grace. A vehicle inspection is authorized but not required, however, State Police hold tests unannounced from time to time on the highways.

- **WISCONSIN:** Driver's license good for four years from date of issuance can be obtained from the Registration Division, Motor Vehicle Department, Madison, at a fee of \$2. Written, driving and eye tests are required for original license. Servicemen having valid Wisconsin license at time of entry into service, whose license expires while on active duty, may at any time within six months from date of discharge apply for a renewal license at a fee of 25 cents.

Application for auto registration must be made to the Registration Division, Motor Vehicle Department, Madison. Registration fee is a flat \$16, unless auto had previously been registered in Wisconsin at a lower rate. Such being the case the fee is the same as the original rate. Operating on a staggered basis, deadline date for registration is the last day of each month. There is no vehicle inspection required.

- **WYOMING:** Driver's license expiring every three years on licensee's birthday can be obtained from the Motor Vehicle Division, Cheyenne, at a fee of \$1. Written, eye and driving tests are required for the original license.

Application for auto registration must be made to the County Treasurer in county of residence. Registration fees are a flat \$5 with reductions on 1 July and 1 December. Deadline date for registration is midnight 31 December with a period of grace until midnight on the following 1 February. No vehicle inspection is required.

- **ALASKA:** Driver's license expires annually on 31 December of even numbered years and may be ob-



"Well, it's addressed to the commissary, like the rest of our supplies."

tained from the Department of Taxation, Juneau, at a fee of \$4 for a two-year period and \$2 for single year or fractional part thereof. A written examination and road test may be required at the discretion of the Tax Commissioner.

Application for auto registration must be made to the Department of Taxation, Juneau. Registration fee is a flat \$10 for private passenger cars, reduced to one-half on cars acquired after 1 September. Deadline for registration is midnight 31 December with a period of grace until midnight the following 28 February. Territorial police are authorized to hold vehicle inspection at roadside, when there is reasonable cause to believe that the vehicle is unsafe.

- **CANAL ZONE:** Driver's license expiring three years from date of issuance may be obtained from the Chief, License Section, Balboa Heights, at a fee of \$1. Written, oral, vision, hearing and driving tests are required as well as a physical examination.

Application for registration must be made to the License Section, Balboa Heights. Registration fee is a flat \$5 with semi-annual reductions granted. Deadline for registration is 31 December with no period of grace. No vehicle inspection is required.

- **HAWAII:** Driver's license, good until revoked, can be obtained from the Honolulu Police Department at a fee of \$3. Written, driving and eye tests are required for original license.

Application for auto registration must be made to the office of the county treasurer. Registration fee is ½ cent per pound for passenger vehicles plus a plate fee of \$1 and a tab fee of 50 cents. Deadline for registration is midnight 31 December

with a period of grace until midnight the following 31 March. Vehicle inspection is required annually through any of the official testing stations.

- **PUERTO RICO:** Driver's license good for four years from date of issuance may be obtained from the Department of Public Works, San Juan, at a fee of \$6. Written and driving tests are required as well as a medical certificate stating that applicant is in good physical condition. Servicemen are permitted an unlimited period of stay in renewing their license.

Application for auto registration must be made to the Department of Public Works, Motor Vehicle Division, San Juan. Registration fees are based on horsepower. Autos up to 20 h.p., \$18; between 21 and 30 h.p., \$30; 31 h.p. or more; \$1.20 for each additional h.p. Monthly reduction of one-twelfth of total tax is granted for autos acquired after deadline for registration which is 30 June with a period of grace until the following 15 July. No vehicle inspection is required.

The Light that Failed— And the LSO Who Didn't

Ever try to thread a needle on a dark moonless night in the middle of an ocean?

That's just the way LT Roy E. Farmer, landing signal officer aboard the USS *Oriskany* (CVA 34), felt when he spotted a plane making a night approach without either landing or cockpit lights.

The ship was operating in the Straits of Formosa and things looked bad until LT Farmer went into action. His paddles showed no hesitation as they went through their familiar gyrations.

Straining his eyes and using a sixth sense developed during his 79 months as an LSO he brought the plane in for a perfect landing.

Later in the ready room LT Thomas Derr, USN, pilot of the airplane, remarked to LT Farmer that he was glad his lights had been working. "They'd gone out once and I was afraid that if they went out again I might crash into the fantail," he said.

Things grew rather quiet when Farmer told Derr that his lights had been out all the time.

BOOKS:

MID-WINTER READING LIST OFFERS FACT AND FICTION

TALES of adventure in the far north, suspense yarns and historical volumes are to be found among the recent books selected for Navy readers by the BuPers library staff. Here are reviews of some of the latest:

• *Winter*, by Cornelius Osgood; W. W. Norton and Company.

Some 25 years ago, Cornelius Osgood set out on a northern trek up the Mackenzie River to Great Bear River and the fishery at Great Bear Lake. Employed as an ethnographer by the Canadian government, Osgood was to study primitive tribes.

During that period, the chief attractions of the barren region—if they can be called “attractions”—were the plentiful fish in the lake,

the herds of caribou and musk ox. (The following decade brought discoveries of valuable minerals, including pitchblende, which figures in atomic bomb production.)

As the writer points out in his foreword, his expedition, although a scientific failure, was quite rewarding from the standpoint of personal experience.

Osgood's book is not, therefore, a scientific chronicle. It is a collection, as he puts it, of “the little things, perhaps unimportant things, the predicaments in the process of learning to stay alive.”

You'll feel the biting, numbing cold as fish nets are set in the lake. You'll experience the strange “kinship” between man and his team of dogs—dogs which can exasperate you in one moment, save your life in the next.

The result is an exciting volume. It should interest most Navymen, especially those who have seen duty in the Arctic wastelands.

★ ★ ★

• *The House That Nino Built*, by Giovanni Guareschi; Farrar, Straus and Young.

Have you ever imagined what it might be like to be a best-selling author and, one day, have your 10-year-old son greet you with “A boy in my class says you write books. I'd like to read them.”?

Giovanni “Nino” Guareschi, author of *The Little World of Don Camillo*, describes this incident—and many others—with candor and humor in his collection of anecdotes stemming from his own experience as husband, father, writer.

Several chapters of *The House That Nino Built* deal with just that—Guareschi's home-building project and all of its ramifications—from mis-connected steam-pipes to non-drawing flues. Humor-filled pages, handled in the author's customary style, are the rule.

★ ★ ★

• *Captain John Smith*, by Bradford Smith; J. B. Lippincott Company.

For many years historians have had to rely on the prolific writings of Captain John Smith for contem-

porary accounts of life in colonial Virginia. This world traveler, adventurer, soldier and chronicler of his times has been the subject of at least two plays (*The Indian Princess*, 1808, and *Pocahontas*, 1830) and the romantic hero of many novels—some appearing as late as 1951.

As early as 1859, people doubted the veracity of Smith's writings. Appropriately enough for the mid-nineteenth century period, a North-South dispute arose over Smith: Charles Deane, a Boston scholar and merchant, denounced Smith's rescue of Pocahontas as pure fiction; Southerners, among them Patrick Henry's grandson, rose in defense of Smith. And so it goes.

This book is neither a denunciation of Smith's claims nor a hymn of praise of his accomplishments. It is, instead, an attempt to set aright the misconceptions, the inaccuracies, surrounding Smith's life.

Written in an interesting manner and carefully documented, this volume is well worth reading. It should interest the casual reader as well as the student of history.

★ ★ ★

• *Last Clear Chance*, by Burke Wilkinson; Little, Brown and Company.

Here's a rousing suspense thriller from the pen of ex-Navyman Burke Wilkinson.

It's his third novel dealing with Geoffrey Mildmay, adventurer and mysterious man-of-the-world.

Set in the Washington, D. C., area, the yarn involves Bill Stacy, a friend of Mildmay's who happens to be working as a civilian adviser to the Navy Department on submarine counter-measures; Jason Craig, multi-millionaire politician, Max Miracle, super-sleuth and spy-catcher; the Gale family — retired Commander Gale and his daughter Judy; and the unusual Lady Sylvia.

There is treason — spelled “communism”—in the air as Stacy watches the goings on of his friends and cohorts. But who are the traitors?

To tell much of the plot would be to rob the reader of the pleasure of finding out for himself how things really stand. Suffice it to say there are action, intrigue on many levels, and adventure ashore and afloat.

As a work of suspense, Wilkinson's novel is one of the best of its kind. Navymen will find it doubly interesting because of the salty flavor throughout.

SONGS OF THE SEA

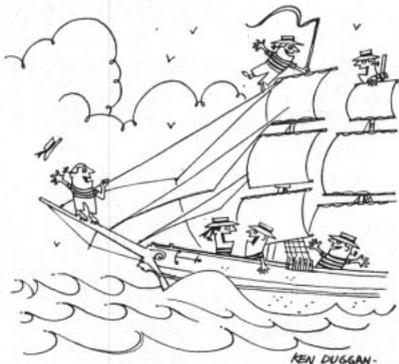
All Hands Ahoy

When mid the howling of the storm,
Old ocean takes his wildest form,
And o'er the rocks with thunder loud
Spreads out his white and threat'ning
shroud,

How solemn sounds the boatswain's cry,
While thro' the ship his mates reply:
All hands ahoy! all hands ahoy!
all hands! ahoy!

And when upon the foaming sea
The warship meets her enemy,
While o'er the taffrail proudly wave
The gleaming banners of the brave,
How cheering sounds that boatswain's cry,
While drums at quarters swift reply:
All hands ahoy! all hands ahoy!
all hands ahoy!

—Old Naval Song



ESCAPE OUT OF THE NORTH

COURAGEOUS TREK TO SAFETY—1855

Leaving behind the crumbling brig *Advance*, Navy Surgeon Elisha Kent Kane and his handful of heroic explorers made their tortuous way by small boats and sledges out of the frozen Arctic hundreds of miles to civilization.

Elisha Kent Kane, Passed Assistant Surgeon of the U. S. Navy, and his group of hardy explorers had come to the Arctic in the brig *Advance* in 1853 to try to find some trace of Sir John Franklin, an English explorer who with his party had disappeared into the northern wasteland several years previously.

But Kane's ship, after penetrating into Smith Sound near the 80th parallel, had itself become icebound, unable to move. Although only prepared to stay one year in the northland, the explorers stuck it out until the summer of 1855 in the hope of a thaw which never came.

Now, finally, Kane had decided that they could do no more good and that they had to strike out for the south. Scurvy and typhoid fever had already taken two victims.

In the party, in addition to Kane himself, was James McGary, second in command; Henry Brooks, boat-swain; August Sontag, astronomer; Dr. I. I. Hayes, surgeon; and George Riley, William Morton, Amos Bonsall, John Wilson, Henry Goodfellow, George Stephenson, Thomas Hickey, William Godfrey, Charles Blake and George Whipple, seamen.

The band left the brig in May of 1855, making their way across the frozen sea with special sledges built to carry three small boats, another sledge to transport the sick. In the boats were what supplies and records of the expedition they could carry with them.

Across the ice—this sea is now known as "Kane Basin" in honor of the trek—the band had made their way 80 miles to Cape Alexander where they were aided by friendly Eskimos of Etah village. From here on to their destination, Upenavik to the south, it would be even tougher.

This is the story of how Kane and his men made their way among the ice floes, as told by Kane himself in his book *Arctic Explorations*, 1853, 1854, 1855. We pick up his story as the party leaves Cape Alexander.

ALL HANDS were called to prepare for embarking. The boats were stowed, and the cargo divided between them equally; the sledges unlashed and slung outside the gunwales; and on Tuesday the 19th of June, at 4 P.M., with the bay as smooth as a garden-lake, I put off in the *Faith*. She was followed by the *Red Eric* on our quarter, and the *Hope* astern. In the *Faith* I had with me Mr. McGary, and Petersen, Hickey, Stephenson, and Whipple. Mr. Brooks was in the *Hope*, with Hayes, Sontag, Morton, Goodfellow, and Blake. Seamen Bonsall, Riley, and Godfrey made the crew of the *Eric*.

The wind freshened as we doubled the westernmost point of Cape Alexander, and, as we looked out on the expanse of the sound, we saw the kittiwakes and the ivory-gulls and



Elisha Kane, M.D., USN

ESCAPE OUT OF THE NORTH

Jagers dipping their wings in the curling waves. They seemed the very same birds we had left two years before screaming and catching fish in the beautiful water. We tried to make our first rest at Sutherland Island; but we found it so barricaded by the precipitous ice-belt that it was impossible to land. I clambered myself from the boat's mast upon the platform and filled our kettles with snow, and then, after cooking our supper in the boats, we stood away for Hakluyt.

It was an ugly crossing: we had a short chopping sea from the southeast; and, after a while, the red boat swamped. Riley and Godfrey managed to struggle to the *Faith*, and Bonsall to the *Hope*; but it was impossible to remove the cargo of our little comrade: It was as much as we could do to keep her afloat and let her tow behind us. Just at this time, too, the *Hope* made a signal of distress; and Brooks hailed us to say that she was taking water faster than he could free her.

The wind was hauling round to the westward, and we could not take the sea abeam. But, as I made a rapid survey of the area around me, studded already with floating shreds of floe-ice, I saw ahead the low gray blink of the pack. The margin of these large fields is almost always broken by inlets of open water, which give much the same sort of protection as the creeks and rivers of an adverse coast. We were fortunate in finding one of these and fastening ourselves to an old floe, alongside of which our weary men turned in to sleep without hauling up the boats.

In the morning of the 22nd we pushed forward through the snow-storm for Northumberland Island, and succeeded in reaching it a little to the eastward of my former landing-place. Myriads of auks greeted us, and we returned their greeting by the appropriate invitation to our table. A fox also saluted us with an admirable imitation of the "Huk-huk-huk," which among the Esquimaux is the never-unheeded call of distress; but the rascal, after seducing us a mile and a half out of our way, escaped our guns.

The next day gave us admirable progress. The ice opened in leads before us, somewhat tortuous, but, on the whole, favoring, and for sixteen hours I never left the helm. We were all of us exhausted when the day's work came to a close. Our allowance had been small from the first; but the delays we seemed fated to encounter had made me reduce them to what I then thought the minimum quantity, six ounces of bread-dust and a lump of tallow the size of a walnut: a paste or broth, made of these before setting out in the morning and distributed occasionally through the day in scanty rations, was our only fare. We were all of us glad when, running the boats under the lee of a berg, we were able to fill our kettles with snow and boil up for our great restorative, tea.

The next day's progress was slow and wearisome, pushing through alternate ice and water for the land-belt. We fastened at last to the great floe near the shore, making our harbor in a crack which opened with the changes of tide.

The imperfect diet of the party was showing itself more and more in the decline of their muscular power. They seemed scarcely aware of it themselves, and referred the difficulty they found in dragging and pushing to something uncommon about the ice or sludge rather

than to their own weakness. But, as we endeavored to renew our labors through the morning fog, belted in on all sides by ice-fields so distorted and rugged as to defy our efforts to cross them, the truth seemed to burst upon every one. We had lost the feeling of hunger, and were almost satisfied with our pasty broth and the large draughts of tea which accompanied it. I was anxious to send our small boat, the *Eric*, across to the *lumme* (bird) hill of Appah, where I knew from the Esquimaux we should find plenty of birds; but the strength of the party was insufficient to drag her.

We were sorely disheartened, and could only wait for the fog to rise, in the hope of some smoother platform than that which was about us, or some lead that might save us the painful labor of tracking. I had climbed the iceberg; and there was nothing in view except Dalrymple Rock, with its red brassy face towering in the unknown distance. But I hardly got back to my boat, before a gale struck us from the northwest, and a floe, taking upon a tongue of ice about a mile to the north of us, began to swing upon it like a pivot and close slowly in upon our narrow resting-place.

At first our own floe also was driven before the wind; but in a little while it encountered the stationary ice at the foot of the very rock itself. On the instant the wildest imaginable ruin rose around us.

The men sprang mechanically each one to his station, bearing back the boats and stores; but I gave up for the moment all hope of our escape. It was not a nip, such as is familiar to Arctic navigators; but the whole platform, where we stood and for hundreds of yards on every side of us, crumbled and crushed and piled and tossed itself madly under the pressure. I do not believe that of our little body of men, all of them disciplined in trials, able to measure danger while combating it,—I do not believe there is one who this day can explain how or why—hardly when, in fact—we found ourselves afloat. We only know that in the midst of a clamor utterly indescribable, through which the braying of a thousand trumpets could no more have been heard than the voice of a man, we were shaken and raised and whirled and let down again in a swelling waste of broken hummocks, and, as the men grasped their boathooks in the stillness that followed, the boats eddied away in a tumultuous *skreed* of ice and snow and water.

We were borne along in this manner as long as the unbroken remnant of the in-shore floe continued revolving,—utterly powerless, and catching a glimpse every now and then of the headland that looked down on us through the snowy sky. At last the floe brought up against the rocks, the looser fragments that hung round it began to separate, and we were able by oars and boathooks to force our battered little flotilla clear of them. To our joyful surprise, we soon found ourselves in a stretch of the land-water wide enough to give us rowing-room, and with the assured promise of land close ahead.

As we neared it, we saw the same forbidding wall of belt-ice as at Sutherland and Hakluyt. We pulled along its margin, seeking in vain either an opening of access or a nook of shelter. The gale rose, and the ice began to drive again; but there was nothing to be done but get a grapnel out to the belt and hold on for the rising tide. The *Hope* stove her bottom and lost part of her weather-boarding, and all the boats were badly chafed.

It was an awful storm; and it was not without constant exertion that we kept afloat, baling out the scud that broke over us, and warding off the ice with boat-hooks.

At three o'clock the tide was high enough for us to scale the ice-cliff. One by one we pulled up the boats upon a narrow shelf, the whole sixteen of us uniting at each pull. We were too much worn down to unload; but a deep and narrow gorge opened in the cliffs almost at the spot where we clambered up and, as we pushed the boats into it on an even keel, the rocks seemed to close above our heads, until an abrupt turn in the course of the ravine placed a protecting cliff between us and the gale. We were completely encaved.

Just as we had brought in the last boat, the *Red Eric*, and were shoring her up with blocks of ice, a long-unused but familiar and unmistakable sound startled and gladdened every ear, and a flock of eiders flecking the sky for a moment passed swiftly in front of us. We knew that we must be at their breeding-grounds; and, as we turned in wet and hungry to our long-coveted sleep, it was only to dream of eggs and abundance.

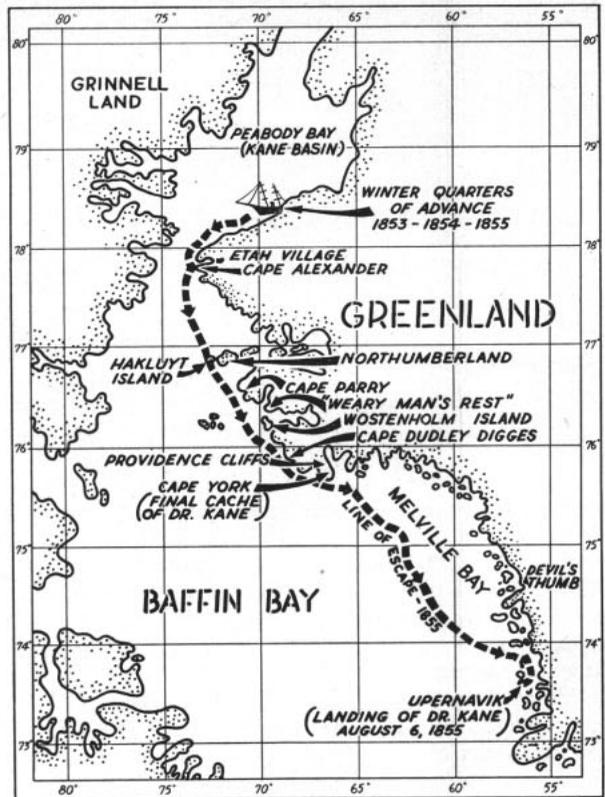
We remained almost three days in our crystal retreat, gathering eggs at the rate of twelve hundred a day. Outside, the storm raged without intermission, and our egg-hunters found it difficult to keep their feet; but a merrier set of gourmands than were gathered within never surfeited in genial diet.

On the 3rd day of July the wind began to moderate, though the snow still fell heavily; and the next morning, after a patriotic egg-nog, the liquor borrowed grudgingly from our alcohol-flask, and diluted till it was worthy of temperance praise,—we lowered our boats, and bade a grateful farewell to "Weary Man's Rest." We rowed to the southeast end of Wostenholm Island; but the tide left us there, and we moved to the ice-foot.

In the mean time, the birds, which had been so abundant when we left Dalrymple's Island, and which we had counted on for a continuous store, seemed to have been driven off by the storm. We were again reduced to short daily rations of bread-dust, and I was aware that the change of diet could not fail to tell upon the strength and energies of the party. I determined to keep in-shore, in spite of the barricades of ice, in the hope of renewing, to some extent at least, our supplies of game. We were fifty-two hours in forcing this rugged passage: a most painful labor, which but for the disciplined endurance of the men might well have been deemed impracticable.

Once through the barrier, the leads began to open again, and on the 11th we found ourselves approaching Cape Dudley Digges, with a light breeze from the northwest. It looked for some hours as if our troubles were over, when a glacier came in sight not laid down on the charts, whose tongue of floe extended still farther out to sea than the one we had just passed with so much labor. Our first resolve was to double it at all hazards, for our crews were too much weakened to justify another tracking through the hummocks, and the soft snow which covered the land-floes was an obstacle quite insuperable. Nevertheless, we forced our way into a lead of sludge, mingled with the comminuted ice of the glacier.

I again climbed the nearest berg,—for these ice-mountains were to us like the look-out hills of men at home,—and surveyed the ice to the south far on toward Cape York. My eyes never looked on a spectacle more painful. We were in advance of the season: the floes



MAP traces journey from Cape Alexander to Upernavik.

had not broken up. There was no "western water." Here, in a cul-de-sac, between two barriers, both impassable to men in our condition, with stores miserably inadequate and strength broken down, we were to wait till the tardy summer should open to us a way.

★ ★ ★

It was the 18th day of July before the aspects of the ice about us gave me the hope of progress. We had prepared ourselves for the new encounter with the sea and its trials by laying in a store of *lumme*; two hundred and fifty of which had been duly skinned, spread open, and dried on the rocks, as the *entremets* of our bread-dust and tallow.

In launching the *Hope* from the frail and perishing ice-wharf on which we found our first refuge from the gale, she was precipitated into the sludge below, carrying away rail and bulwark, losing overboard our best shot-gun, Bonsall's favorite, and, worst of all, that universal favorite, our kettle,—soup-kettle, paste-kettle tea-kettle, water-kettle, in one.

Our descent to the coast followed the margin of the fast ice. After passing the Crimson Cliffs of Sir John Ross, it wore almost the dress of a holiday excursion,—a rude one perhaps, yet truly one in feeling.

Our course, except where a protruding glacier interfered with it, was nearly parallel to the shore. The birds along it were rejoicing in the young summer, and when we halted it was upon some green-clothed cape near a stream of water from the ice-fields above.

This coast must have been a favorite region at one time with the natives,—a sort of Esquimaux Eden. We seldom encamped without finding the ruins of their habitations, for the most part overgrown with lichens, and exhibiting every mark of antiquity. One of these, in



WEEK of waiting, rest was spent at Providence Halt.

latitude $76^{\circ} 20'$, was once, no doubt, an extensive village. Cairns for the safe deposit of meat stood in long lines, six or eight in a group; and the huts, built of large rocks, faced each other, as if disposed on a street or avenue.

We reached Cape York on the 21st, after a tortuous but romantic travel through a misty atmosphere. Here the land-leads ceased, with the exception of some small and scarcely-practicable openings near the shore, which were evidently owing to the wind that prevailed for the time. Every thing bore proof of the late development of the season. The red snow was a fortnight behind its time. A fast floe extended with numerous tongues far out to the south and east. The only question was between a new rest, for the shore-ices to open, or a desertion of the coast and a trial of the open water to the west.

I called my officers together, explained to them the motives which governed me, and prepared to re-embark. The boats were hauled up, examined carefully, and, as far as our means permitted, repaired. The *Red Eric* was stripped of her outfit and cargo, to be broken up for fuel when the occasion should come. A large beacon-cairn was built on an eminence, open to view from the south and west; and a red flannel shirt, spared with some reluctance, was hoisted as a pennant to draw attention to the spot. Here I deposited a succinct record of our condition and purposes, and then directed our course south by west into the ice-fields.

By degrees the ice through which we were moving became more and more impacted; and it sometimes required all our ice-knowledge to determine whether a particular lead was practicable or not. The irregularities of the surface, broken by hummocks, and occasionally by larger masses, made it difficult to see far ahead; besides which, we were often embarrassed by the fogs. I was awakened one evening from a weary sleep in my fox-skins, to discover that we had fairly lost our way. The officer at the helm of the leading boat, misled by the irregular shape of a large iceberg that crossed his track, had lost the main lead some time before, and was steering shoreward far out of the true course. The little canal in which he had locked us was hardly two boats-lengths across, and lost itself not far off in a feeble zigzag both behind and before us: it was evidently closing, and we could not retreat.

Without apprising the men of our misadventure, I ordered the boats hauled up, and, under pretence of drying the clothing and stores, made a camp on the ice. A few hours after, the weather cleared enough for the first time to allow a view of the distance, and McGary and myself climbed the berg some three hundred feet high for the purpose. It was truly fearful: we were deep in the recesses of the bay, surrounded on all sides by stupendous icebergs and tangled floe-pieces.

There was but one thing to be done: cost what it might, we must harness our sledges again and retrace our way to the westward. One sledge had been already used for firewood; the *Red Eric*, to which it had belonged, was now cut up, and her light cedar planking laid upon the floor of the other boats; and we went to work with the *rue-raddies* as in the olden time.

It was not till the third toilsome day was well spent that we reached the berg which had bewildered our helmsman.

We hauled over its tongue, and joyously embarked again upon a free lead, with a fine breeze from the north.

Our little squadron was now reduced to two boats. The land to the northward was no longer visible; I was obliged to trust entirely to the compass. We had at least eight days' allowance of fuel on board; but our provisions were running very low, and we met few birds, and failed to secure any larger game. We saw several large seals upon the ice, but they were too watchful for us; and on two occasions we came upon walrus sleeping,—once within actual lance-thrust; but the animal charged in the teeth of his assailant and made good his retreat.

So far we had generally coasted the fast ice: it had given us an occasional resting-place and refuge, and we were able sometimes to reinforce our stores of provisions by our guns. But it made our progress tediously slow, and our stock of small-shot was so nearly exhausted that I was convinced our safety depended on an increase of speed. I determined to try the more open sea.

For the first two days the experiment was a failure. We were surrounded by heavy fogs; a southwest wind brought the outside pack upon us and obliged us to haul up on the drifting ice. We were thus carried to the northward, and lost about twenty miles. My party, much overworked, felt despondingly the want of the protection of the land-floes.

It is a little curious that the effect of a short allowance of food does not show itself in hunger. The first symptom is a loss of power, often so imperceptibly brought on that it becomes evident only by an accident. I remember our look of blank amazement as, one day, the order being given to haul the *Hope* over a tongue of ice, we found that she would not budge. At first I thought it was owing to the wetness of the snow-covered surface in which her runners were; but, as there was a heavy gale blowing outside, and I was extremely anxious to get her on to a larger floe to prevent being drifted off, I lightened her cargo and set both crews upon her. [Ordinarily] such a force would have trundled her like a wheelbarrow: we could almost have borne her upon our backs. Now with incessant labor and standing-hauls, she moved at a snail's pace.

The *Faith* was left behind, and barely escaped destruction. The outside pressure cleft the floe asunder, and we saw our best boat, with all our stores drifting rapidly away from us. The sight produced an almost hysterical

impression upon our party. Two days of want of bread, I am sure, would have destroyed us; and we had now left us but eight pounds of shot in all. Happily, before we had time to ponder our loss, a flat cake of ice eddied round near the floe we were upon: McGary and myself sprang to it at the moment, and succeeded in floating it across the chasm in time to secure her. The rest of the crew rejoined her by only scrambling over the crushed ice as we brought her in at the hummock-lines.

Things grew worse and worse with us: the old difficulty of breathing came back again, and our feet swelled to such an extent that we were obliged to cut open our canvas boots. But the symptom which gave me most uneasiness was our inability to sleep. A form of low fever which hung by us when at work had been kept down by the thoroughness of our daily rest: all my hopes of escape were in the refreshing influences of the halt.

We were now in the open bay, in the full line of the great ice-drift to the Atlantic, and in boats so frail and unseaworthy as to require constant bailing to keep them afloat.

It was at this crisis of our fortunes that we saw a large seal floating—as is the custom of these animals—on a small patch of ice, and seemingly asleep. It was an ussuk, and so large that I at first mistook it for a walrus. Signal was made for the *Hope* to follow astern, and, trembling with anxiety, we prepared to crawl down upon him.

Petersen, with the large English rifle, was stationed in the bow, and stockings were drawn over the oars as mufflers. As we neared the animal, our excitement became so intense that the men could hardly keep stroke. I had a set of signals for such occasions, which spared us the noise of the voice; and when about three hundred yards off, the oars were taken in, and we moved on in deep silence with a single scull astern.

He was not asleep, for he reared his head when we were almost within rifle-shot; and to this day I can remember the hard, careworn, almost despairing expression of the men's thin faces as they saw him move: their lives dependent on his capture.

I depressed my hand nervously, as a signal for Petersen to fire. McGary hung upon his oar, and the boat, slowly but noiselessly sagging ahead, seemed to me within certain range. Looking at Petersen, I saw that the poor fellow was paralyzed by his anxiety, trying vainly to obtain a rest for his gun against the cut-water of the boat. The seal rose on his fore-flippers, gazed at us for a moment with frightened curiosity, and coiled himself for a plunge. At that instant simultaneously with the crack of our rifle, he relaxed his long length on the ice, and, at the very brink of the water, his head fell helpless to one side.

I would have ordered another shot, but no discipline could have controlled the men. With a wild yell, they urged both boats upon the floes. A crowd of hands seized the seal and bore him up to safer ice. The men seemed half crazy: I had not realized how much we were reduced by absolute famine. They ran over the floe, crying and laughing and brandishing their knives. It was not five minutes before every man was sucking his bloody fingers or mouthing long strips of raw blubber.

Not an ounce of this seal was lost. The intestines found their way into the soup-kettles without any observance of the preliminary home-processes. The cartilaginous parts of the fore-flippers were cut off in the

melee, and passed round to be chewed upon; and even the liver, warm and raw as it was, bade fair to be eaten before it had seen the pot.

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On the 1st of August we sighted the Devil's Thumb, and were again among the familiar localities of the whalers' battling-ground. The bay was quite open, and we had been making easting for two days before. We were soon among the Duck Islands, and, passing to the south of Cape Shackleton, prepared to land.

"Terra firma!" How very pleasant it was to look upon, and with what a tingle of excited thankfulness we drew near it! A little time to seek a cove among the wrinkled hills, a little time to exchange congratulations, and then our battered boats were hauled high and dry upon the rocks, and our party, with hearts full of our deliverance, lay down to rest.

Two days after this, a mist had settled down upon the islands which embayed us, and when it lifted we found ourselves rowing, in lazy time, under the shadow of Karkamoot. Just then a familiar sound came to us over the water. We had often listened to the screeching of the gulls or the bark of the fox, and mistaken it for the "Huk" of the Esquimaux; but this had about it an inflection not to be mistaken, for it died away in the familiar cadence of a "halloo."

"Listen, Petersen! oars, men!" "What is it?"—and he listened quietly at first, and then, trembling, said in half whisper, "Dannemarkers!"

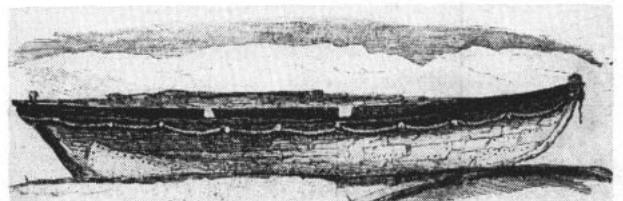
I remember this, the first tone of Christian voice which had greeted our return to the world. How we all stood up and peered into the distant nooks; and how the cry came to us again, just as, having seen nothing, we were doubting whether the whole was not a dream; and then how, with long sweeps, the white ash cracking under the spring of the rowers, we stood for the cape that the sound proceeded from.

By-and-by—for we must have been pulling a good half hour—the single mast of a small shallop showed itself; and Petersen, who had been very quiet and grave, burst out into an incoherent fit of crying, only relieved by broken exclamation of mingled Danish and English. "Tis the Upernavik oil-boat!"

Kasarsoak, the snow top of Sanderson's *Hope*, showed itself above the mists, and we heard the yelling of dogs.

We hugged the land by the big harbor, turned the corner by the old brew-house, and, in the midst of a crowd of children, hauled our boats for the last time upon the rocks.

For eighty-four days we had lived in the open air. Our habits were hard and weather-worn. We could not remain within the four walls of a house without a distressing sense of suffocation. But we drank coffee that night before many a hospitable threshold, and listened again and again to the hymn of welcome, which, sung by many voices, greeted our deliverance.



THE FAITH was one of two boats that finished the trek.

TAFFRAIL TALK

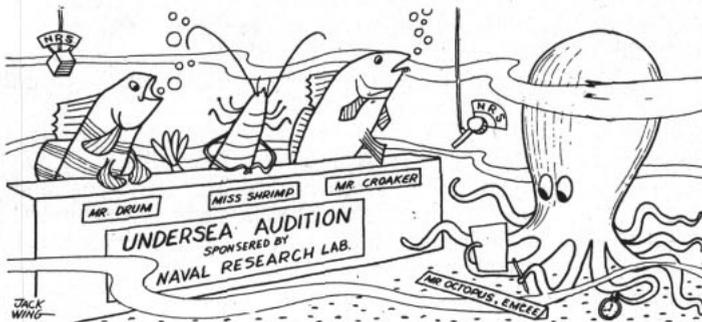
In true Navy tradition we decided to go over our files of story ideas which have accumulated during the past several months and in so doing came up with a few gems of this and that, odds and ends, which we would like to pass on to you:

Recruiting stories run pretty much along the same lines but we came across a couple of unusual ones during our search. Dale Taylor of New Cristobal, Canal Zone, heard the call of the sea and decided to enlist in the Navy. But he went about it the long way: from Panama by ship to New York City and then by air to San Diego where he entered the Navy. We haven't yet figured out why he took this route—but the 6000 miles he traveled represent one of the lengthiest trips we've heard of to join the sea service.

From the other end of the line a letter came to us from Harry R. Ahngasuk of Point Barrow, Alaska, who described himself as "Age 18; Tribe: Eskimo." He too wanted to join the Navy (after reading a copy of ALL HANDS). We suggested he contact the nearest recruiting office which, incidentally, is at Kodiak.

★ ★ ★

The Naval Research Laboratory announced that it had taken recordings of the noises made by the denizens of the deep including croakers, drum fish, snapping shrimps and others. Probably they tuned in during a bull session while the fish were telling tales about how they got away. That would be some fish story.



A spear fisherman out in Hawaii drew a bead on a huge moray eel not too long ago and then decided against shooting. Instead he called in the Navy's Mine Disposal Unit at Oahu and let them dispose of the mine the eel was resting on. Seems to us that if he had fired he probably would have gotten a big bang out of it.

★ ★ ★

Most misleading headline of the year appeared in "The Carrier," station paper at NAS Alameda, Calif. It read "Flies Head Mars VIP List." The story was another matter. It told how 2200 flies, the common house variety, were taken aboard the huge flying boat in wire cages. While in flight a new insecticide was tested which killed 68% of the insects. If that's what they call VIP treatment we'll stick to being just regular passengers, please.

The All Hands Staff

ALL HANDS

THE BUPERS INFORMATION BULLETIN

With approval of the Bureau of the Budget on 17 June 1952, this magazine is published monthly 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 if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor.

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Distribution: By Section B-3203 of the Bureau of Naval Personnel Manual the Bureau directs that appropriate steps be taken to insure that all hands have quick and convenient access to this magazine, and indicates that distribution should be effected on the basis of one copy for each 10 officers and enlisted personnel to accomplish the purpose of the magazine.

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 issues.

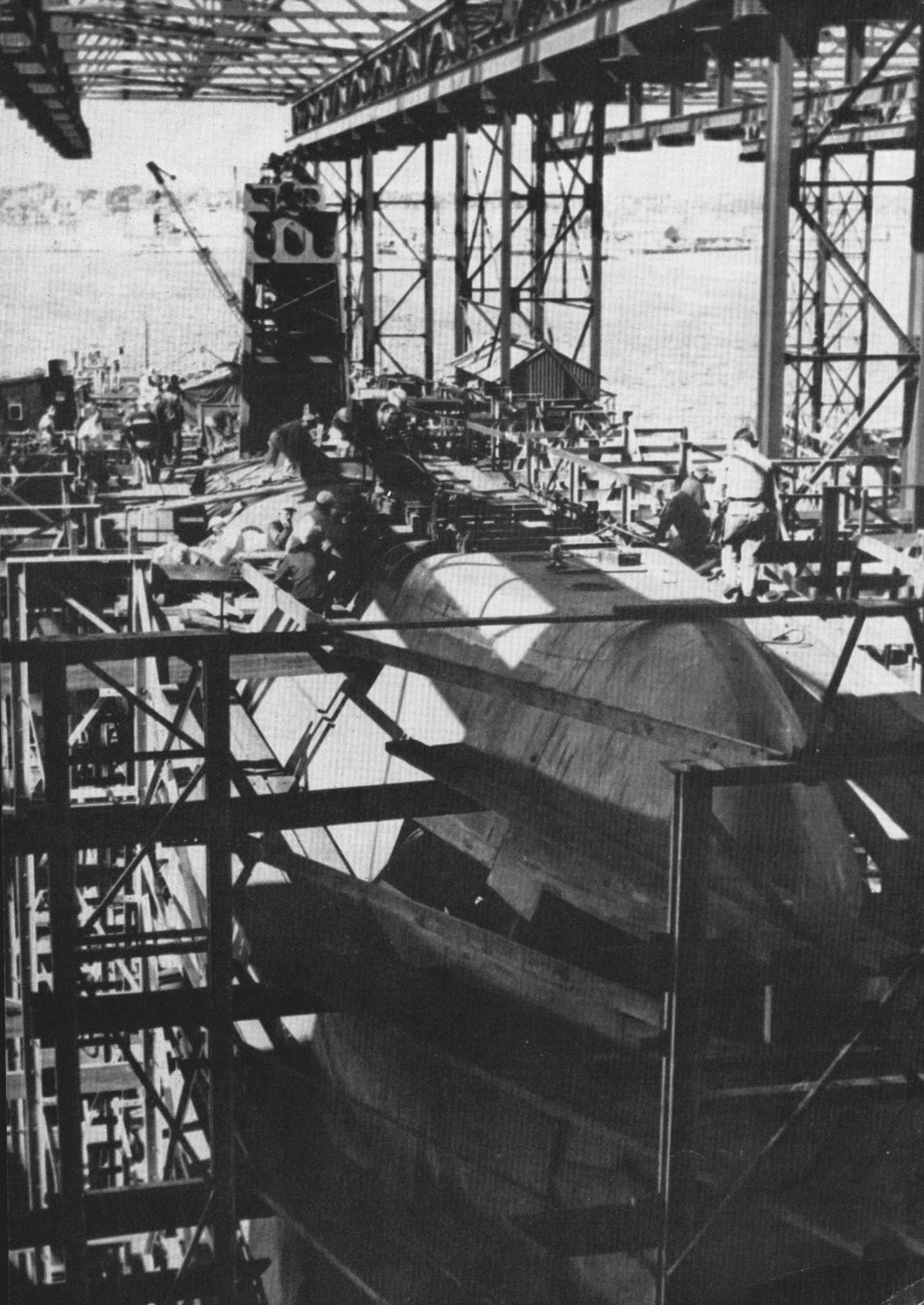
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Normally, copies for Navy activities are distributed only to those on the Standard Navy Distribution List in the expectation that such activities will make further distribution as necessary; where special circumstances warrant sending direct to sub-activities, the Bureau should be informed.

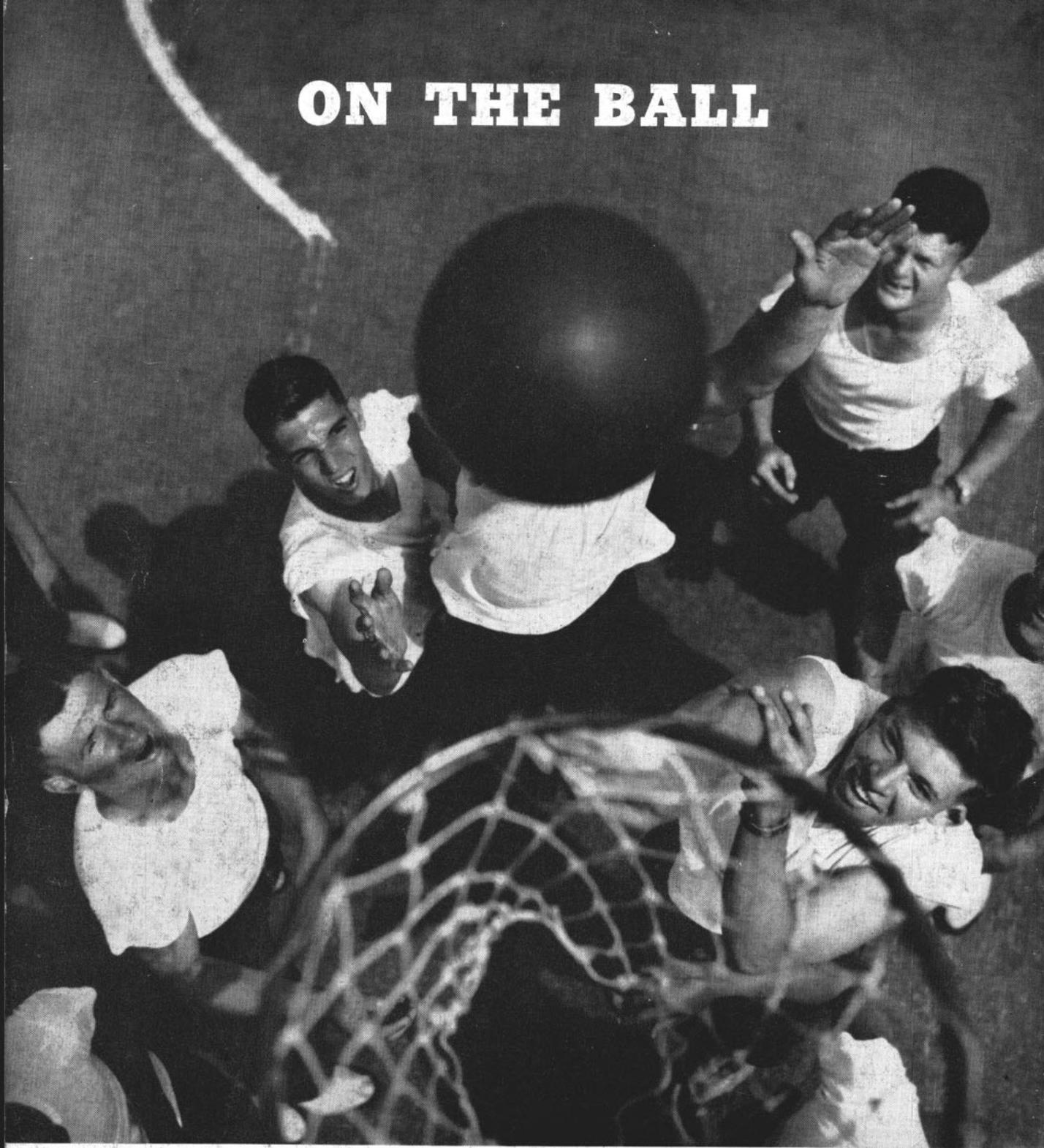
Distribution to Marine Corps personnel is effected by the Commandant, U. S. Marine Corps. Requests from Marine Corps activities should be addressed to the Commandant.

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 "NBD" used as a reference, indicate the official Navy Department Bulletin.

• AT RIGHT: USS NAUTILUS (SSN 571), world's first nuclear-powered submarine, is shown in late stages of construction at Groton, Conn., shipyard. It has been under construction for over a year. ➤



ON THE BALL



★ ★ ★ ★ **A STRONG NAVY** calls for
alertness, skill and teamwork ★ ★ ★

KEEP FIT IN THE NAVY