

# OFFICIAL SERVICE NEWS

C6M  
Sept. 1930  
Vol. 3, # 11.

## AT BALTIMORE

THE United States Coast Guard will take a very prominent part in the 31st annual national encampment of the Veterans of Foreign Wars at Baltimore during the first week in September.

When America's true knighthood of Overseas fighting men stages its big national parade to be reviewed by President Hoover, the United States Coast Guard Band from New London will be in the line of march together with a battalion of Coast Guardsmen under arms.

Rear Admiral F. C. Billard, the Commandant of the Coast Guard will address the convention and a fleet of Destroyers will be anchored off Baltimore. The intention is to show the Veterans of Foreign Wars that the United States Coast Guard is very much in the picture of men who served their country overseas and under fire.

One of the finest features of the convention will be the athletic meet. Between 25,000 and 30,000 people are expected to attend this meeting. Men in uniform being admitted free. The winner of the Coast Guard championship bouts at New London on August 4 are expected to come to Baltimore to box on September 2 against contestants from the Army, Navy and Marine Corps. On the general committee of arranging affairs for the V. F. W. turnout Lieut.-Comdr. J. E. Whitbeck represents the Coast Guard.

The winners in the bouts will receive handsome merchandise prizes.

The program below shows the classes in which the various branches of the services will participate in boxing. The show would have been too lengthy to allow each branch of the service to send in eight entrants and the need of drawing classes in which they would be represented was accomplished by the simple expedient of picking ballots out of a hat.

## News Notes From Headquarters And From Vessels, Bases And Stations of the Coast Guard

The Meet is open to all men of the uniformed Services of the U. S. Army, U. S. Navy, U. S. Marines, U. S. Coast Guard, the National Guard of Maryland and the Police and Fire Departments of Baltimore City.

The track events will consist of a 440-yard dash, and Medley Relay Races of teams of four men each. In the Medley Relay Race, the first man will run 220 yards, the second man will run 440 yards, the third man will run 880 yards, and the fourth man will run one mile. Organizations may enter as many athletes as they desire in the 440-yard dash, but only four men from each organization may start. Eight men may be entered in the Medley Relay Race, but only four from each organization are to compete.

The Boxing Contests will consist of bouts between the Army, Navy, Marines, Coast Guard and National Guard, and a "Battle Royal" by a colored enlisted man from each of the five Armed forces, the Army, Navy, Marines, National Guard and Coast Guard. Boxing Bouts between Service men are to consist of three two-minute rounds, and in event of a draw, an extra round will be fought.

Contests between the Services, in the weight classes named below, will be arranged as follows:

- 115 lb. class—Army vs. Coast Guard.
- 125 lb. class—National Guard vs. Navy.
- 135 lb. class—Marines vs. National Guard.

- 145 lb. class—Marines vs. Coast Guard.
- 160 lb. class—Army vs. Navy.
- 175 lb. class—Army vs. Coast Guard.
- Unlimited class—Navy vs. Marines.
- "Battle Royal"—All Armed Services (colored only).
- First Prize—Track Events.

440-yard dash, silver trophy, and gold medal to the winner; medals to second and third.

Medley Relay Race, silver team trophy to winning team, and individual gold medals to members of team. Medals to individuals of second and third teams. Boxing Events.

Prizes of merchandise, valued at \$100 for each bout, to be divided, \$75.00 to the winner, and \$25.00 to the loser.

In the "Battle Royal," merchandise valued at \$30.00 to the winner, and \$20.00 each, to the four other entrants.

## ESCORT VICE-PRESIDENT

Coast Guard Section Base Nine participated in the celebration held on July 4th at Ocean City, N. J., in accordance with suggestions and requests of the committee in charge. A company of infantry with color guard, commanded by Lieut. (j.g.) E. Desses, with Gunner James Binckley and Boatswain (T) T. J. Lusk as platoon commanders, were sent to Ocean City in buses furnished by the committee, to act as a guard of honor for the Vice-President of the United States. Subsequent to the above request the First Engineer Battalion, U. S. Army, with headquarters at Ocean City, were invited by the committee to participate in the celebration and to act as a guard of honor for the Vice-President in conjunction with the Coast Guard detachment. At a conference with the commanding officer of the First Engineers, Major (CE) George Mayo, U. S. Army, plans for the parade and the rendering of honors were coordinated.

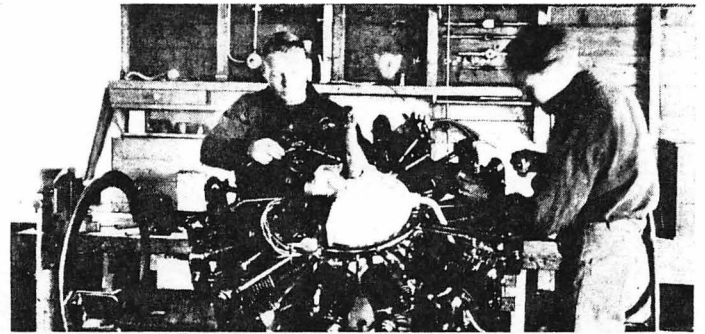
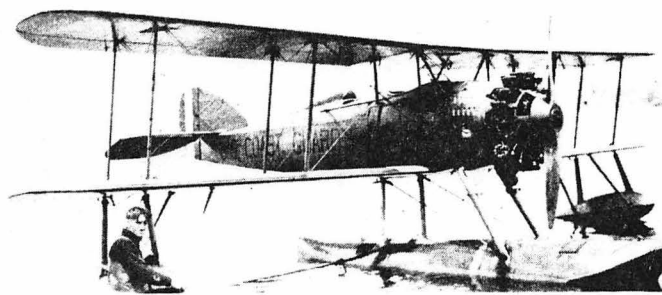


—Photo by E. F. Mashburn.

## TWO SNAPS FROM HISTORIC OLD GLOUCESTER

At the left is an excellent aerial view of the Coast Guard Air Station at Section Base Seven; U. S. Fisheries in the foreground. At the right is U. S. Coast Guard plane Laeunia No. 1, which crashed at New London several weeks ago.

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AT SECTION BASE SEVEN, GLOUCESTER, MASS.

—Photo by E. F. Mashburn.

At the right W. L. Sounders and H. O. Zettlemeyer are hard at work overhauling a Wright Whirlwind J-5. At the left U. S. Coast Guard seaplane No. 5, Vought UO-4, is shown

Boatswain Charles E. Swanson detached KICKAPOO, Rockland, Maine, and assigned CARRABASSET, Norfolk, Va.

Boatswain Samuel D. La Route detached CARRABASSET, Norfolk, Va., and assigned as officer in charge of a patrol boat in the Ninth District.

Machinist Arthur Anderson detached GRESHAM, New York, N. Y., and assigned as relief machinist for Division II, Destroyer Force.

Machinist (T) Edward A. Mason detached ERICSSON, New London, Conn., and assigned GRESHAM, New York, N. Y.

Machinist (T) Sidney A. Usher detached from duty as relief machinist for Division II, Destroyer Force, and assigned ERICSSON, New London, Conn.

Boatswain (T) Ira M. Cope detached PERRY, St. Petersburg, Fla., and assigned Section Base Twenty-one, St. Petersburg, Fla.

Boatswain (T) Olaf L. Laveson detached CG-203, Curtis Bay, Md., and assigned as officer-in-charge, PERRY, St. Petersburg, Fla.

Pay Clerk Russell A. Carroll detached Destroyer Force Pay and Supply Office, Section Base Four, New London, Conn., and assigned SEMINOLE, Sault Ste. Marie, Mich.

Pay Clerk Andrew E. Zanetti detached SEMINOLE, Sault Ste. Marie, Mich., effective September 20, 1930, and assigned Section Base 10, Pt. Townsend, Wash.

Pay Clerk Louis J. Armstrong detached Section Base Ten, effective about October 1, 1930, and assigned to duty as Recruiting Officer, Cleveland, Ohio.

Pay Clerk Raymond A. Gillette detached OSSIPPEE, Portland, Maine, about October 20, 1930, and assigned Section Base 9, Cape May, 1930, and assigned Section Base Nine, Cape May, N. J.

Pay Clerk Meyer Greenberg detached Section Base Nine, about October 25, 1930, and assigned Headquarters.

Pay Clerk (T) George F. Freed detached Headquarters, August 15, 1930, and assigned Coast Guard Depot, Curtis Bay, Md.

Pay Clerk (T) Thomas Zeller detached APACHE, Baltimore, Md., about August 16, 1930, and assigned Section Base 3, Charleston, S. C.

Pay Clerk (T) John C. Collins detached Headquarters, September 1, 1930, and assigned PAMLICO, New Bern, N. C.

Pay Clerk (T) James W. Davis detached PAMLICO, New Bern, N. C., about September 4, 1930, and assigned Destroyer Force Pay and Supply Office, New London, Conn.

Pay Clerk (T) James Blake detached as Recruiting Officer, Cleveland, Ohio, and assigned OSSIPPEE, Portland, Maine, effective about October 10, 1930.

Boatswain Peder M. Pedersen detached REDWING, Astoria, Oregon, and assigned UNALGA, Seattle, Wash.

Boatswain (T) Charles E. Kipste detached UNALGA, Seattle, Wash., and assigned REDWING, Astoria, Oregon.

Gunner (T) Robert L. Addy detached Headquarters (under instruction at Naval Gun Factory, Washington, D. C.) and assigned Ninth District, Buffalo, N. Y.

Gunner (T) Einar Kastrup detached Headquarters (under instruction at Naval Gun Factory, Washington, D. C. and assigned section Base Ten, Port Townsend, Wash.

Gunner (T) Ralph A. Taylor detached Headquarters (under instruction at Naval Gun Factory, Washington, D. C.) and assigned Section Base Eighteen, Woods Hole, Mass.

Boatswain D. F. Mallett detached Section Base Two, Stapleton, S. I., N. Y., effective August 1, 1930, and assigned Section Base Five, Boston, Mass.

Machinist Walter Robbins detached WOODBURY, St. Petersburg, Fla., effective July 24, 1930, and assigned TAMPA, Boston, Mass.

Machinist John W. Hollister detached Division Two, Destroyer Force, and assigned Section Base Five, Boston, Mass.

Radio Electrician Wm. B. Dawson detached Headquarters, and assigned to duty in connection with the development, maintenance and upkeep of sound equipment for the Coast Guard with headquarters at Boston, Mass.

Boatswain (T) Elmer J. Uebel detached MANING, Curtis Bay, Md., effective as of April 25, 1930, and assigned APACHE, Baltimore, Md.

Pay Clerk (T) Charles A. Zucker detached Division Two, Destroyer Force, and assigned GRESHAM, New York, N. Y.

Pay Clerk (T) Miller L. Nuckols detached GRESHAM, New York, N. Y., about August 16, 1930, and assigned Division Two, Destroyer Force.

Machinist Robert N. Williams, PORTER, New York, N. Y., commissioned a chief machinist.

Boatswain (T) Harvey P. Parry detached FREDERICK LEE, Section Base Five, Boston, Mass., and assigned Section Base Nine, Cape May, N. J.

Radio Electrician (T) John Brown detached Gulf Division, effective August 1, 1930, and assigned Destroyer Force, New London, Conn.

Machinist Wm. C. Dryden detached CUMMINGS, New London, Conn., and assigned Section Base Twenty-one, St. Petersburg, Fla., as base machinist.

Machinist Melvin L. Matson detached WOLCOTT, Pascagoula, Miss., effective August 1, 1930, and assigned WOODBURY, St. Petersburg, Fla.

Machinist Charles P. Moffett detached Section Base Two, effective August 1, 1930, and assigned WOLCOTT, Pascagoula, Miss.

Machinist James T. Rountree, Jr., detached duty with Division Eight, Offshore Patrol Force, and assigned PULASKI, Section Base Two, Stapleton, S. I., N. Y.

Boatswain John M. Reeder detached GRESHAM, New York, and assigned REDWING, Astoria, Oregon.

Boatswain (T) N. D. Scull detached Division Two, Destroyer Force, effective August 1, 1930, and assigned GRESHAM, New York, N. Y.

Pay Clerk (T) Carl W. Warmker detached Receiving Unit, Goat Island, San Francisco, Calif., and assigned duty with Chief Inspector, Hull Construction, Oakland, Calif., for further assignment to SEBAGO upon the commissioning of that vessel.

Carpenter John C. Urquhart detached duty with Chief Inspector, Hull Construction, Oakland, Calif., and assigned SEBAGO upon the commissioning of that vessel.

Machinist Edward A. Stanton detached duty with Chief Inspector, Hull Construction, Oakland, Calif., and assigned SEBAGO upon the commissioning of that vessel.

Boatswain (T) R. S. Johansson detached GRESHAM, New York, N. Y., and assigned duty with Chief Inspector, Hull Construction, Oakland, Calif., and for further assignment to SEBAGO upon the commissioning of that vessel.

Gunner Frank W. Sarnow detached REDWING, Astoria, Oregon, and assigned duty with Chief Inspector, Hull Construction, Oakland, Calif., and for further assignment to SEBAGO upon the commissioning of that vessel.

Pay Clerk (T) J. B. Kennedy detached Headquarters and assigned Receiving Unit, Goat Island, San Francisco, Calif.

Radio Electrician (T) Miles W. Hopkins detached Destroyer Force, New London, Conn., and assigned California Division.



—Photo by E. F. Mashburn.

AIR-MINDED COAST GUARD OFFICERS

At the left are Lieutenants Nelson and Scott, Coast Guard fliers, commanding and executive officers, respectively, of the Coast Guard Air Station, Section Base Seven, Gloucester, Mass. At the right is the hangar at Gloucester.

# MORE WINGS ARE NEEDED

*CGM  
Oct. 1930  
Vol. 3#12  
p-10.*

**T**HE aerial guardian of the sea-coast—the United States Coast Guard—has to be expanding to permit extension to aviation of all the activities which long have been related to marine transportation and at the same time afford greater efficiency in patrolling the coast and locating vessels in distress.

With over-water flying on the increase and aircraft manufacturers reporting heavy sales to air transport lines and private individuals of aircraft of the seaplane type, the necessity for expansion of the Coast Guard air force became apparent, and already recommendations have been made to Washington for additional equipment and trained personnel. It is the belief of the high officers in the Guard that it can render assistance to aircraft of a nature paralleling its service to marine shipping and also will provide greater efficiency in the combing of the waters for disabled vessels. It was pointed out that during the three years the Coast Guard has used aircraft this branch of the service had demonstrated its worth, not only to shipping, but also by blocking smugglers and enforcing the customs law.

## Varied Services Given

During the brief three years' existence of the service it has performed various duties, from aiding transatlantic flyers to hunting schools of fish for the local fishing fleets. Although the planes cannot tow a boat in to shore, they provide the eyes of the Coast Guard and easily locate the craft in distress, so that speedier rescues are made than before the inauguration of the air branch of the Service.

The planes are equipped with two-way radio sets, which are used to flash the location of the disabled vessel to the Coast Guard cutters, which in turn make the rescues. The planes also are able to circle the derelict and direct other ship-

## Progress of Aerial Travel Makes Expansion of Coast Guard Aviation Imperative

ping to the rescue. In the case of aircraft down on the water it will be possible to direct the cutters to the scene of the rescue or to land on the surface of the sea and pick up the survivors if the water is not too rough.

### Patrol Coast

After every storm it is routine for the air branch to patrol the coast, ever ready to lend a helping hand to damaged craft, locating small shipping in distress without means of communication or carrying lines out to stranded boats while the seas are running high.

Due to the safety of passenger air transport over water, several lines are being formed for operation along the coasts and across the Great Lakes, it was pointed out by aviation leaders, and the worth of a communication system between the present Coast Guard stations will be inestimable value in checking these large transport planes along the shore. Officers of the service contend that it must be prepared to meet any contingency, and that the planes it now has are inadequate for the service. Eight new planes, radio equipped and designed for heavy service, soon will be purchased by the Department, and other craft will be added as soon as Congress approves the expenditure.

During the last three years the Coast Guard has had the opportunity to study the service and has found that an airplane can efficiently patrol an area from 12 to 20 times as great as surface craft. Last year Guard planes made more than 400 flights and searched an area of more than a million square miles.

### Seacraft Used Generally

While several of the air transport lines are using land planes to cross the water, the service of this type is for the most part performed by seacraft, which is less dangerous in case of a forced landing. In the case of a forced landing with a land plane the lives of the passengers and crew are in immediate danger and their rescue depends upon the speed of the search.

In the search for craft floating low in the water the airplane has a decided advantage over surface craft because of the height and the better angle of vision. With several lines already established down the Atlantic seaboard and more soon to be placed in operation, the necessity for the expansion of the Coast Guard air branch has become apparent in Washington, where contracts are being drawn up for the purchase of additional equipment.

The personnel for this branch of the government service is trained at the Naval School at Pensacola, Fla. Generally they are graduates of the Coast Guard Academy with three years of sea experience prior to training in aviation.

## ON THE REDWING

On July 11th the REDWING assisted the Tug *Sea Lion*, towing a Benson log raft, which being unable to tow its raft against the tide grounded on Desdemona Sands, and fouling its hawser under the raft. After pulling on the raft for about an hour it came free of the sands. A Benson log raft is very unique, being of a cigar shape about 900 feet long and about 55 feet in diameter in the middle, these logs are bound together by tons of heavy chain cable. A Benson log raft comprises of about five million feet of lumber, draws from 25 to 30 feet of water and is valued at about \$100,000.

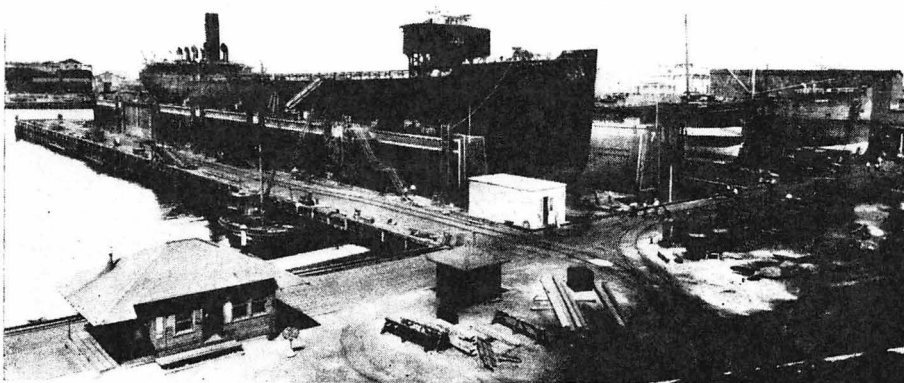
## ISLAND BEACH STATION

Mr. J. P. Pierpont of Trenton, N. J., out driving for pleasure and a stranger in the vicinity, ran off the hard-surfaced road into the sand. His Chevrolet refused to move. Surfmen from Island Beach Station pushed the car back on the road and when Mr. Pierpont tried to pay the surfmen he was very much astonished to learn that the government paid them for just such assistance. The purpose of the Coast Guard was explained to them, however, before they left.

## HILL DIESEL

It may interest our readers to learn about a recent performance of a Hill Diesel.

In crossing the bar at the mouth of the harbor, the boat hit the bottom and started leaking badly but this did not become evident for several hours, when the water finally got up over the cabin floor. Before the boat could reach port, the flywheel was completely submerged and was throwing water all over the engine, soaking the electrical apparatus, and yet the engine continued to run until it reached a dock and was put on the railways. Under similar conditions a gasoline engine would have stopped running as soon as a little water got into the electrical apparatus.



A COLLIER TRANSFORMED

Given a new calling by a complete transformation, the former Naval collier *Ulysses* now is ready for service as one of the largest and fastest oil tankers in the world. Converted at the Mariners Harbor, Staten Island Plant of United Dry Docks, Inc., the former coal carrier is now a thoroughly modern tanker in every respect.

In her new identity as the property of the American Tankers Corporation, she represents an outlay of approximately \$1,000,000 and was transformed in six months as against the fifteen or more months usually required for the construction of a new tanker.

The *Ulysses* is 514 feet long, 65.2 feet wide and 36.5 feet deep. Outwardly there is no indication that she is a converted tanker. Conforming to the conventional tanker design, her propelling machinery is located aft and the navigating bridge forward. Her interior bulkhead arrangement is in accordance with the most modern practice, the division of length with two longitudinal bulkheads instead of one serving to augment her structural strength. In the rebuilding more than 1,500 tons of new steel were used.

The *Ulysses* was built by the Navy in 1915 to carry coal to the Panama Canal and inasmuch as the Navy has other ships of a similar design plans for the conversion of the *Ulysses* were approved by the Navy with an idea that other colliers might be similarly transformed.

CGM  
Dec. 1930

# ARCHANGEL TO ARLINGTON

Vol. 4  
No. 2  
p. 6.

**Former Russian Imperial  
Flight Officer Laid to Rest  
Among the Brave As  
Coast Guard Chief  
Fetty Officer**

By E. F. CLARK

IT is a far cry from the frozen tundra of the Russia's and honor's service as a commissioned officer in the air forces of the Czar to the quiet slopes of historic Arlington Cemetery. That route was traveled by Victor V. Utgoff, a man born and bred to patriotic service. When the country of his birth—the country he loved—collapsed under him and men like him—he followed the path of so many from the old world and chose service in the land of his adoption. He died for his adopted country like a sailor and a gentleman.

The noblemen of Russia who came to this country and went to work like men is not merely a movie story.

Chief Boatswain's Mate Victor V. Utgoff, formerly a lieutenant-commander in the Imperial Russian Navy, who was killed in an airplane crash at Coast Guard Section Base 7, Gloucester, Mass., on October 11, 1930, was buried with full military honors in Arlington National Cemetery on October 16th. Mass was held at St. Nicholas Russian Orthodox Church at 11:00 a. m., followed by a funeral service at 12:30 and interment at 2:00 p. m. in Arlington Cemetery. Mr. Utgoff was a member of the Association of Former Russian Naval Officers in the United States, and a delegation from the organization attended the funeral.

*From St. Petersburg*

Mr. Utgoff was a graduate of the Russian Naval Academy at St. Petersburg. Following his service, during most of which he was detailed to the Black Sea Fleet, he came to the United States, and in 1915 and 1916 was an inspector of airplanes built by the Curtiss Airplane Company for the Russian Navy. He was an outstanding aviator and was one of the first officers in the World War to receive the Cross of St. George, which was awarded him for unusual valor in attacking and damaging the Turkish naval base at Trebizond.

In 1918, Mr. Utgoff returned to the United States and was attached to the office of the Naval Attache to the Russian Embassy in Washington. Later he was associated with Anton Sikorsky, and Sikorsky's first airplane built in the United States was constructed on Mr. Utgoff's farm on Long Island. In November, 1929, Mr. Utgoff enlisted in the Coast Guard as chief boatswain's mate and was assigned to the Coast Guard aviation unit at Section Base 7, Gloucester, Mass. He is survived by his widow, two sons and one daughter.

Admiral F. C. Billard, Commandant of the Coast Guard and several officers of his staff on duty at Headquarters attended the funeral at Arlington.

The following telegram was received on October 15th, from I. Sikorsky, the



—Photos E. F. Clark

## THE LAST PATROL

*A giant Russian Sikorsky plane roars tribute over historic Arlington as Chief Boatswain's Mate Victor V. Utgoff, U.S.C.G. ex-lieutenant-commander and flight officer in the Russian royal forces, is laid to his final rest.*

*Insert shows his son, Victor Utgoff, Jr., with his father's Russian naval sword and the high honors won in the Russian service. The medals shown are Russian Cross of St. George; Russian Wings, (Naval Academy.); French Legion of Honor; Cross of St. Stanislaus with Swords; Cross of St. Anne; Cross of St. Stanislaus (small); Centenary medals awarded by the Russian Royal Naval Academy.*

airplane ace and builder and I am quoting its verbatim for any use you may care to make of it in connection with an article you will undoubtedly write on the burial of Victor Utgoff, late of the Coast Guard.

"I MISHTOWT  
1837 R St.,  
Washington, D. C.

As class mate and friend since Russian Naval Academy and as early collaboration in aviation activities here and abroad, I hasten to express my great sorrow for the untimely loss of Lieut.-Comdr. Victor Utgoff. The numerous friends of Commander Utgoff in our company including myself would greatly appreciate if you could arrange with authorities in Washington for Commander Utgoff's funeral in accordance with his rank in the Russian Navy as Commander of one of the first bombing squadrons engaged in the war for his valor he was honored in addition to other decorations with Saint George's Cross of Russia. With Saint George's Gold Sword. With Legion of Honor of France. With Saint George's Cross of England. Unavoidable business will not allow me to be present at his funeral in Washington and we are sending a plane with Capt. Boris Sergievsky and two other officers who will represent the Russian Naval Association and the Sikorsky Aviation Corporation.

(Signed)

I. SIKORSKY."

## ARANSAS

Floated motorboat with two men aboard, and towed her into harbor.

## JACKSON PARK

Towed the motor cruiser named *Fear Naught* with six sea scout boys on board to her mooring buoy in Jackson Park Harbor.

## CITY POINT

Man on watch reported two men aboard a sloop about half a mile from station who were beckoning for assistance. On arrival it was found to be the sloop *Papoose* in a sinking condition due to striking a sunken object. Towed sloop to Columbia Yacht Club.

Man on watch reported that the Boston Police Boat *E. U. Curtis* was signaling for aid. Upon arrival it was found that police boat had lost her propeller. Towed boat to Station 8, Boston, Mass.

## CREED'S HILL STATION

Lookout reported that car was in quick sand on the bank of the beach about one mile northeast of station. Succeeded in getting her to safe road without damage.

## CUTTER SNOHOMISH

Towed disabled steamer *Dochet*, owned by the Redwood Line and carrying a general cargo consigned to the McCormick Steamship Line, valued at \$80,000, to Port Angeles, Wash.

# NEW COAST GUARD WINGS

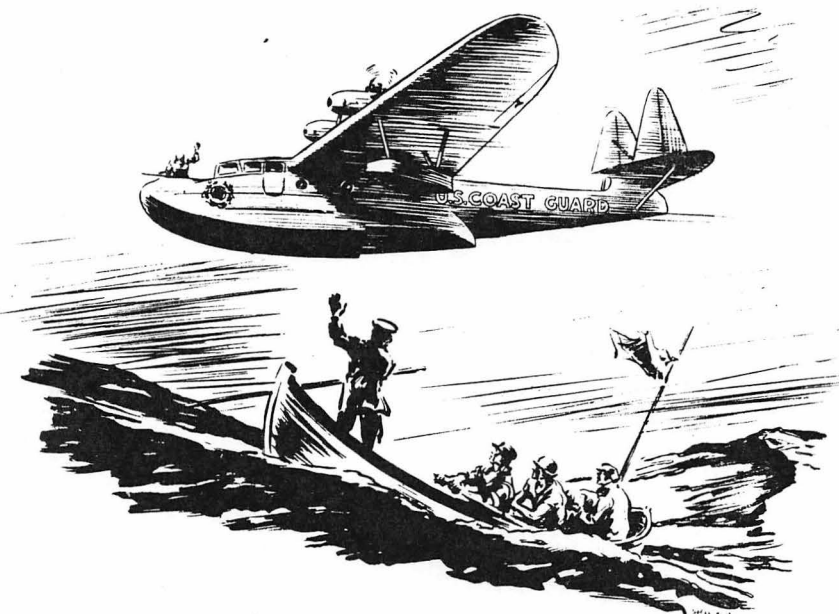
**Five New Fokker Sea Planes  
to soon be Commissioned  
for Service in the Var-  
ied Duties of the  
United States Coast  
Guard**

THE United States Coast Guard recently let a contract for some \$360,000 for five new seaplanes. The Coast Guard already has five seaplanes, but the new planes mean a distinct departure in Coast Guard Aviation. The present planes are only two place observation jobs, capable of landing in smooth water and carrying an inflatable rubber boat in which a surface craft can, under some conditions, be approached and boarded by one of the plane's crew. Under most conditions, however, the Service's present planes can do nothing more than observe and report.

But it is because these first planes in nearly three years of service have proven the high value of observing and reporting from the air that Rear Admiral Frederick C. Billard, Commandant of the Coast Guard, has decided on newer, more powerful and more seaworthy types in order that observation and report may be supplemented by action. When these new planes are delivered, during the coming months, Admiral Billard's aviators will be "semper paratus" to take action on the instant they see the need for it. Which fulfills the hundred and forty year tradition of the Service and carries out the motto of this Service, "Always ready."

#### A Sea-going Plane

The Fokker Aircraft Corporation of America has submitted a design which alone of many submitted fulfills the



#### AID FROM THE AIR

*The new Fokker planes can land on the water, pick up distressed mariners and take them at once to shore and safety*

specifications set forth by the Coast Guard engineers for a plane that can land on and take off from the water under practically any condition enabling a plane to fly along the ten thousand miles of the coast line of the United States and Alaska. Well above a strong, metal hull of thoroughly sea-going design rides a single, clean, cantilever wing covered with wood veneer. And mounted high above the wing, clear of sea and spray, ride the two 425 horsepower Wasp motors, each driving a three-bladed pusher propeller. The new plane is thus an adaptation

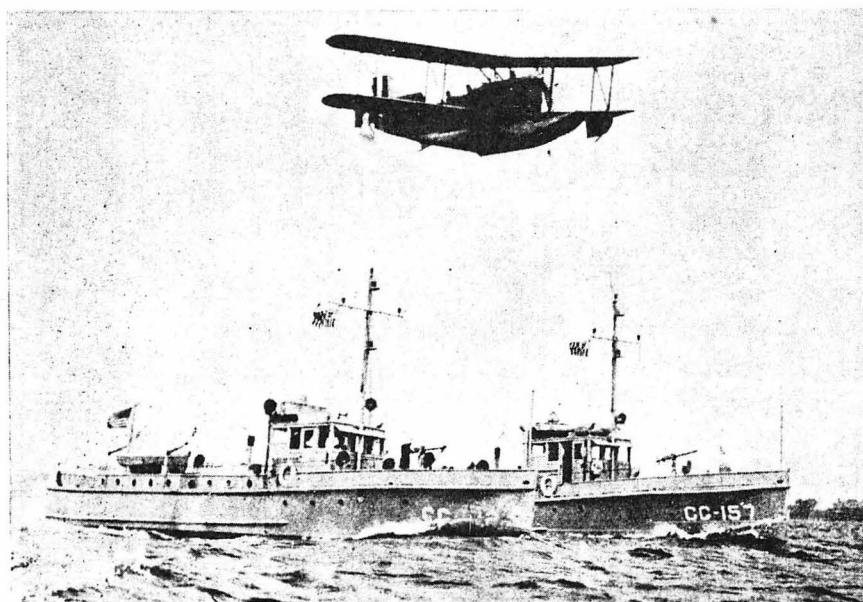
to the needs of the Coast Guard of the principles of design that have proven successful in so many Fokker land planes and amphibians. The high mounting of the motors and the placing of the propellers well astern leaves the whole fore part of the boat or fuselage, and, indeed, almost the whole wing, free and safe for the work of aid and rescue which is the chief function of the Coast Guard Service.

#### A Combatant Service

The Coast Guard forms a combatant Service. Their combat never ends, for their enemy is the immortal sea. They know it and they fight it and—yes, they love it as only men can who walk its every beach every night of the year and whose cutters bring aid and protection and comfort in every season from the iceberg infested steamer lanes of the North Atlantic to the often disease ridden villages of aborigine Alaska. So they look with a certain bitter scorn on those few tricky dodgers who still seek to circumvent them and sometimes succeed in doing so. They have been reduced from shameless squadrons lying file on file off every important harbor to a few lurking shadows making furtive contact with occasional small shore boats.

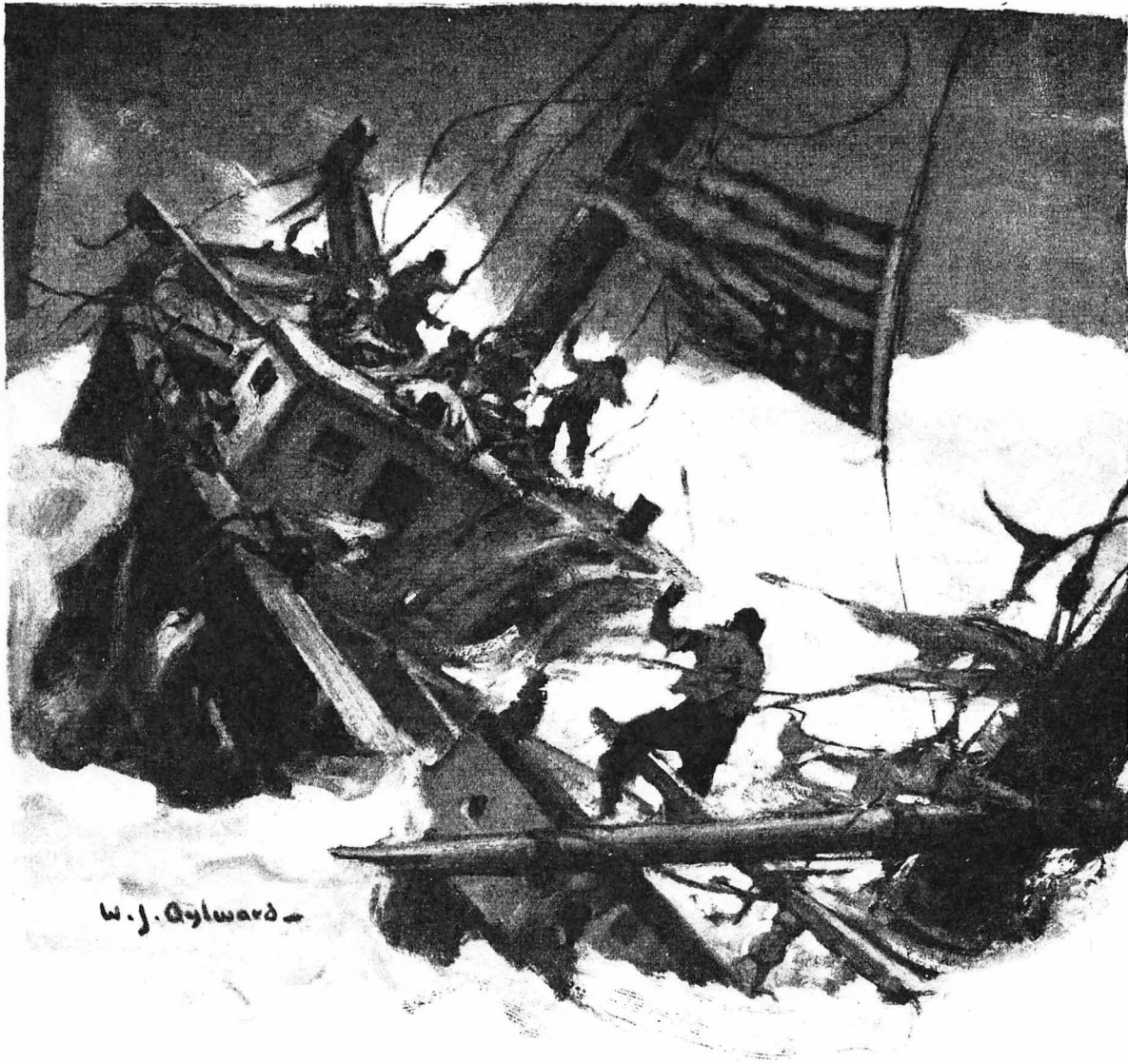
In general the duties of the Coast Guard may be classified as follows:

1. Rendering assistance to vessels in distress and saving life and property.
2. Destruction or removal of wrecks, derelicts, and other floating dangers to navigation.
3. Extending medical aid to American vessels engaged in deep sea fishing.
4. Protection of the customs revenue.
5. Operating as a part of the Navy in time of war or when the President shall so direct.



#### STANDING OUT ON PATROL

*The new Fokker planes will provide a great improvement over the two seater planes now in use in the Coast Guard. One of the older planes is shown above*



W. J. Gylward

**WHEN AID IS VITAL**

*It is easy to imagine the time a radio equipped sea-going plane can save in the case of a rapidly sinking ship*

- 6. Enforcement of law and regulations governing anchorage of vessels in navigable waters.
- 7. Enforcement of law relating to quarantine and neutrality.
- 8. Enforcement of navigation and other laws governing merchant vessels and motor boats.
- 9. Enforcement of law to provide for safety of life on navigable waters during regattas and marine parades.
- 10. Protection of game and the seal and other fisheries in Alaska, etc.
- 11. Enforcement of sponge fishing law.
- 12. International ice patrol in the vicinity of the Grand Banks off Newfoundland.

*And Many Other Jobs*

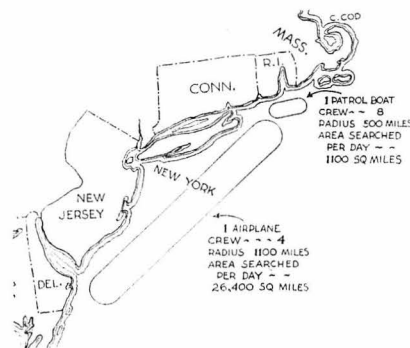
While the foregoing represent the principle duties, it is difficult to enumerate all the tasks that fall to the Service, for it is essentially an emergency service, and it seems to be generally recognized that all the great departments of the government should call upon the Coast Guard for any special work of a maritime nature for

which no other vessels are especially maintained. It is in these multifarious duties that the new seaplanes are to be used. And the chiefest of these duties, in the views of Coast Guard officers, are those involving the saving of life at sea. Last year alone the Coast Guard saved nearly 5,000 lives. Since 1915, nearly

50,000 lives have been saved and ships and cargoes to the value of more than half a billion dollars have been assisted out of danger. Last year alone nearly 20,000 persons were on board vessels aided by the Coast Guard in one way or another.

The superiority of the plane over the surface vessel in this work of search and rescue is graphically illustrated by charts in the Coast Guard headquarters. For instance, an ordinary surface patrol boat with a crew of eight and costing some \$65,000, can in one day patrol an area of about 1,100 square miles. A plane of approximately the same cost, but with a crew of but four, can in the same time patrol an area just 24 times as great—and do the job better, for it can see objects under water and objects hidden by headlands and banks wholly out of the vision of the surface craft. In other words, one plane with half the crew can do the work of 24 patrol boats.

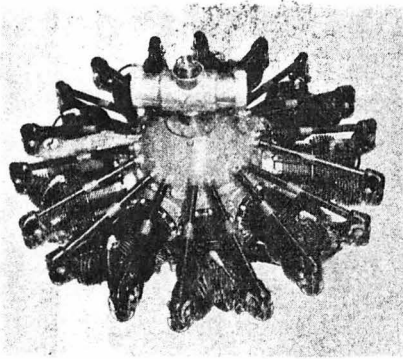
It is easy to imagine the time a radio-equipped sea-going plane can save in the case of a rapidly sinking ship when time in securing aid is vital. Coast Guard patrol boats can be notified



**GREAT IMPROVEMENT**

*Illustration shows the far greater radius made possible by planes over patrol boats*

# U. S. Coast Guard



## FOR THE NEW FOKKERS

Pratt Whitney Engineering Equipment will feature the New Coast Guard Planes

of the ship's exact location enabling them to proceed immediately and directly to the rescue of passengers and crew.

### Gunner Thrun's Achievement

The reports of the present Coast Guard planes are full of individual proof of the soundness of this theory. For instance, it is nothing for the planes based at Cape May to patrol the entire Jersey coast and back in a day. Were they to extend their patrol in a straight line they could range from the Capes of the Delaware to Montauk Point, Long Island, covering on the way all of the bays and inlets either side of New York harbor. If a surface vessel covers the eastern mouth of Long Island sound, or the waters between Sandy Hook and Fire Island in the same time it is a good day's patrol.

To prove the greater effectiveness of airplane flights one might cite the flight of Chief Gunner C. T. Thrun the end of last August. A boy had been drowned while bathing at South Ocean City. Five days later his father appealed to

the Coast Guard aviation unit to help find his boy's body when all other means of search had failed. In 55 minutes after taking off Thrun saw the body floating off Margate, signalled life guards on the beach and circled until they came out and picked the body up, when he returned to his station. Had he been flying one of the new planes now planned for him and his mates, he could have landed by the body and picked it up and brought it ashore in the plane.

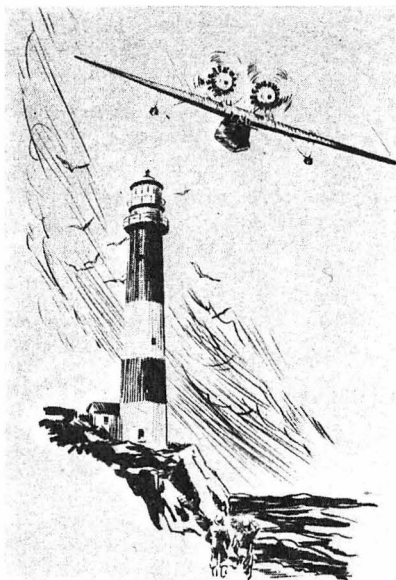
Of course less sorry services will also be performed. No one who has ever read James B. Connolly's epic story of the Gloucester fisherman, lost in his dory, who rowed for a week with his hands frozen to the oars, can but think of what an able seaplane might have done for that salty hero. A week's pull at the oars is less than an hour's flight. That man could have been safely resting on the folding bunk in one of the new seaplane's cabins before his



—Foto F. A. Miller

## FLIGHT OFFICER

Lieut.-Comdr. Carl Christian von Paulsen, U.S.C.G., at present on duty with the destroyer force at New London, will be supervisor of the construction of the new Fokker Coast Guard seaplanes. Commander von Paulsen is both a qualified aviator and engineer officer. He entered the service in 1910 as a cadet. He is a native of Montana, appointed from California.



## IN FULL FLIGHT

Artist's drawing shows how the new Fokkers will appear winging their way along the rock-bound New England shore line

fingers could have felt the nip of the Labrador Current's cold.

### Will Hold Four

The cabins of the new seaplanes, as a matter of fact, will be sufficiently commodious to hold three or four rescued mariners or three or four handcuffed malefactors, as the needs of the case may dictate. How seaplanes already aid in the capture of criminals is well illustrated from the report of Gunner Thrun for the third of last September. He was making a radio test flight with an observer and a radio man when, over Murder Kill Inlet, Delaware, came the report through the radio that a sloop had been stolen from the River-ton Yacht Club, way up the Delaware River, above Philadelphia. The radio furnished an accurate description of the stolen craft. Twenty-five minutes later the Coast Guard plane had found the fleeing sloop off New Castle, Del., a half day's sail from any Coast Guard surface vessel. Gunner Thrun's own report best tells the subsequent story.

"1.20 P. M.," he writes, "landed alongside stolen *Bronco* and ordered her to proceed to shallow water and anchor, as I intended to board her.

"1.30 P. M.—Anchored *Bronco* and sent Chief Machinist's Mate C. H. Harris, armed only with a Very pistol, in seaplane's rubber life boat with instructions to board the *Bronco* and place the crew under arrest.

"2.00 P. M.—Took off with seaplane No. 2 in order to get in communication with Section Base Nine by radio from the air, as Base Nine or patrol boats could not be raised while resting on the water.

"2.05 P. M.—Got into radio communication with Section Base Nine and received instructions to await arrival of CG-182.

"4.30 P. M.—Turned over sloop *Bronco*, with two (2) prisoners to CG-182."

Gunner Thrun got his man in twenty-five minutes. He had to wait three hours to turn him over. In one of the new planes he could have done the whole job in less than an hour.

As built by Fokker to the Coast Guard specifications the 72-foot wing monoplanes will have a gross weight of 10,000 lbs. They will have a top speed in excess of 115 miles per hour and a range at cruising speed of 100 miles per hour of a little better than 1,000 miles. They will be able to fly for an hour on either engine alone without losing altitude. They will be maneuverable on the water in winds up to 20 knots and must be able to land and take



—Foto F. A. Miller

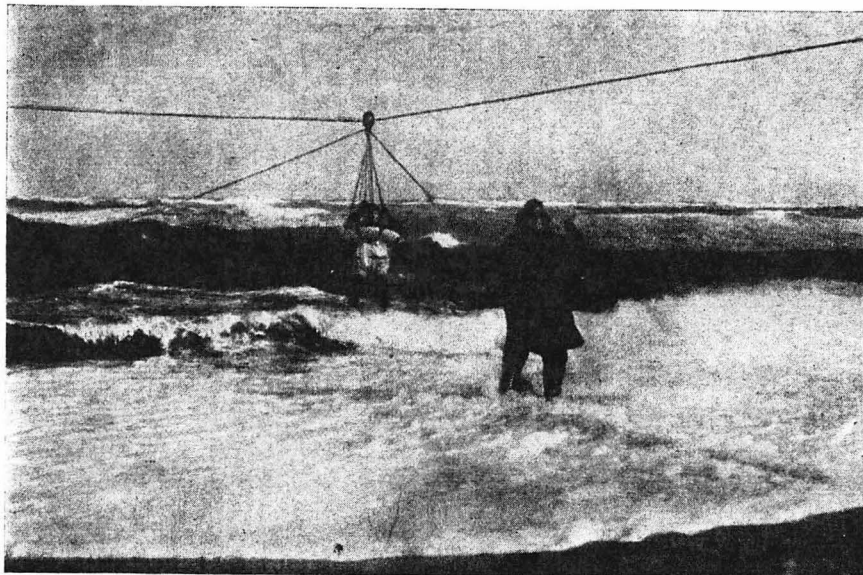
## FLEW ATLANTIC

Lieut.-Comdr. Elmer Fowler Stone, U.S.C.G., commanding the destroyer *CUMMINGS*, entered the Coast Guard in 1910, appointed from New York of which state he is a native. Before the days of great hullabaloo on trans-Atlantic flights, Commander Stone acted as pilot of the *NC-4*, the first ship to fly the Atlantic. Few aviation enthusiasts realize that a Coast Guard officer has that honor. For this achievement Commander Stone recently received from President Hoover the Congressional Medal of Honor. In addition to being a qualified aviator Commander Stone is a qualified engineer officer



## FINE PILOT

Lieut. L. M. Melka, one of the Coast Guard's most efficient and daring pilots



### RESCUE BY BREECHES BUOY

*Taking a breeches buoy line to a distressed vessel by plane has already been proven practicable. The new Fokker planes will further aid Coast Guard rescue work*

off without bumping under such conditions.

#### *For Coastal Patrol*

So far as aviation is concerned, however, the Coast Guard envisions an even more important use for these new Fokker planes. Few people realize that Coast Guardsmen walk the entire length of the coast of the United States every night. Their stations are generally not more than eight miles apart. All are connected by telephones. For a year and a half the Service has been experimenting with a system by which any airplane flying along the coast can be observed and reported actually from minute to minute. So close are the Coast Guard stations that in the case of some planes the reports of their passage over succeeding stations came in in fractions of minutes.

All that is necessary is for the owners of a plane planning a coastal flight to notify the Coast Guard and his plane will be reported to every station it flies over. Should the plane be forced down, hence, the Coast Guard would know it within ten minutes at the most, perhaps within less than a minute. With these big able seaplanes available at strategic points help or actual rescue can be provided for a plane in trouble in a matter of minutes or hours, rather than in a matter of days. As is easy to see, the difference means all the differences between life and death in a passenger plane down at sea.

The first planes to be delivered will operate, probably, from the seaplane base the Coast Guard inherited from its sister service, the Navy, at Cape May. They will be equipped with the very latest tricks in radio, including telegraph, telephone, long and short wave, and direction finding. The winter will be devoted to wind tunnel and model tank tests and to construction. Next spring and summer will see the Service that was founded by Act of Congress in 1790 playing an important part in the development and the safety of navigation by air as it has for so long played a part in the promotion of safety at sea. The Service that has given so many of its men in the nation's wars, as well as in its own unending

wars, will take in hand the newest, most modern and staunchest weapon against its own age-old enemy.

#### *The Engines*

The engines are Wasp motors developing 450 H. P. at 2100 r.p.m. and the enclosed motor pamphlet will give you somewhat of a story about them. I am also sending you a picture of the Wasp which you may reproduce in this connection if you so desire.

This same motor is used extensively by both the Army and Navy in pursuit and light plane ships. Its big brother, the Hornet, is used in heavier bombers and transports. The Wasp has powered ten ships which today hold ten world's records and is used most extensively in over ninety percent of the more important transport lines in this country and flies a little bit more than half of the Government air mail.

The engine is the Wasp (Series C) direct drive. Specifications follows:

Type, fixed radial air-cooled; number of cylinders, 9; bore, 5.75"; stroke, 5.75"; displacement, 1344 cubic inches; compression ratio, 5.25:1; military guaranteed H.P., at 2100 r.p.m. 450 (I.P.); commercial guaranteed H.P., at 2000 r.p.m. 420 H.P.; weight (without special equipment) approximately 695 lbs.; length over all, 42 $\frac{3}{8}$ "; diameter over all, 51 $\frac{1}{2}$ "; fuel consumption (lbs. per H.P. Hr.) not more than .55; oil consumption (lbs. per H.P. Hr.) not more than .035; shipping weight, 1175 lbs.; size of box, 56"x56"x50".

The Series C Wasp is the latest development of this well known engine which has flown millions of miles in Naval and Military service in addition to being used extensively—in many cases exclusively—on the important air transport lines both in the United States and in foreign countries. The superiority of the Wasp in economy, in maintenance, long life and day in and day out dependable operation is too well known to enlarge upon it here. The extensive dependable flying power of the Series C Wasp has served as an invaluable laboratory and made possible the incorporation of many improvements.

#### *A Geared Model*

In addition to being supplied as a direct drive engine, a geared model is available. The geared type incorporates a patented 2:1 reduction gear of low weight and extreme durability. This geared type has been flown for hundreds of hours in Service ships and has proven its practicability.

Pratt and Whitney products feature excellence in design and workmanship and have made possible an engine which in service of the most exacting nature has stood up longer and demonstrated its ability to operate more economically than any of its competitors.

The distinctive design features found only in Pratt and Whitney aircraft engines which have made the Wasp engines internationally famous are all retained and others added in this latest model.

Certain features which have contributed to a large extent to the success of the Pratt and Whitney engines follow:

The cylinders, built up of a forged steel barrel and cast aluminum head, with integral valve mechanism housings are largely responsible for the efficiency of the engines. The cylinder heads are provided with vertical fins which give the maximum cooling to the combustion chamber and to the valves. The integral rocker mechanism housings are a patented feature of all Pratt and Whitney engines and make possible the complete enclosure of the rocker mechanism in a tight compartment.

On the direct driv engines the crankcase is made up of a nose section, main section, blower section, and rear or accessory section. The geared engine is identical except that the nose section is made in two parts.

The nose cowl is of a more or less conventional design. It comes up quite high on the cylinders and in addition carries extensions between the pushrods to prevent air leaks at these points when the shutters are closed. Provision is made for a simple and clean attachment of inter-cylinder cowl. The nose cowl is ribbed for stiffness and is rigidly attached to the engine. The revolving shutter rollers operate on steel rings to eliminate wear.

#### *In Nine Sections*

The collector is an elliptical section, large enough to care for the engine exhaust under all conditions. Care has been taken to exclude any flat sections which would tend to give a diaphragm action. It is fabricated in nine sections, each attaching to a cylinder. When completely assembled, it makes a complete ring of about the same diameter as the engine. It carries a single outlet for the exhaust to escape either to a tail pipe or to the atmosphere as desired.

The fairing and hot stove is in nine sections, each section being attached to and part of a collector section. It was designed to decrease the drag of the engine and at the same time provide ample hot air for the carburetor under extremely cold operating conditions.

A compact control fitting is provided on the bottom of the carburetor. The simplicity and small size of this unit is a feature. It has ample capacity to handle all required quantities of air, provides for a cold air intake on the top of the fuselage, has only one short straight connection to the stove, embodies a control which allows accurate



adjustment of the carburetor air temperature for any condition of operation and yet is small enough so that it does not protrude from the fuselage.

A feature of the cowl and collector ring, built of the best grade material obtainable, is that it does not interfere with airplane design. It can be revolved to any of nine available positions and the outlet from the collector can be located wherever desired without any interference, or the use of special parts. All parts of the cowl and collector are very accessible and the location of the collector is such that the engine and accessories can be gotten at without interference. When desired, one or more cylinders may be removed from the engine without dismantling the cowl, collector or controls. Being in sections, damaged parts of the collector and stove can be replaced without replacing the entire unit.

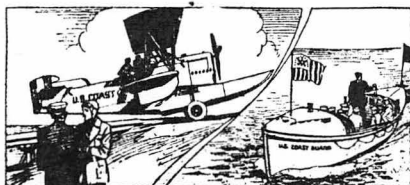
**ANOTHER DESTROYER**

The Coast Guard has acquired another destroyer from the U.S. Navy. This is the ABEL P. UPSHUR. Unlike the destroyers turned over to the Coast Guard after being tied up at the Philadelphia Navy Yard, the ABEL P. UPSHUR has been in commission as a training ship for the Naval Reservists of the District of Columbia, basing at the Navy Yard, Washington, D. C. The UPSHUR is 314 feet long and knocks out a speed of 35 knots.

The UPSHUR was named in memory of the former Secretary of the Navy, Abel P. Upshur, appointed Secretary of the Navy, September 13, 1841, and held that position until July 23, 1843, when he became Secretary of State. On February 2, 1844, he accompanied a party of distinguished persons down the Potomac River on the U.S.S. PRINCETON to witness some experiments in firing a new iron gun of unusual size. On the return trip the gun was fired a third time and burst, killing six and wounding a number on board.

**WITH THE HAIDA**

The Coast Guard cutter HAIDA, Commander T. A. Shanley, commanding with headquarters at Seattle, Wash., has been assigned to duty in connection with rendering assistance to the fishing fleet in the Gulf of Alaska at this season when the storms add to the hazards of the large fleet of vessels operating in that region. The HAIDA sailed from Seattle, Wash., October 27th, and will patrol the waters between Middleton Island and Cape Fairweather until the close of the season the latter part of November, when these waters are closed to halibut fishing under the provisions of the International Convention until next February. The fleet numbers around 200 craft, operating largely from Juneau, Sitka, Ketchikan, Alaska; Seattle, Wash., and Canadian ports. The HAIDA will be prepared to give medical and surgical aid to the fishermen, and she will cruise continuously over the fishing grounds to insure prompt aid in the event of mishap to any of the fishing vessels.



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Years of service with naval and military organizations throughout the world have proved the stamina of Pratt & Whitney engines under the most exacting conditions. In the most exacting of aviation service ranging from routine flying to record breaking, “Wasp” and “Hornet” engines

have won the high regard of pilots and maintenance engineers. And now the U. S. Coast Guard has specified “Wasp” engines to power its new Fokker flying boats. It is no coincidence that brings together an engine and a Service, both famous for absolute dependability.

**Wasp\* & Hornet\***

\*REGISTERED TRADE-MARK

*Engines*



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*Division of United Aircraft and Transport Corporation*

Manufactured in Canada by Canadian Pratt & Whitney Aircraft Co., Ltd., Longueuil, Quebec; in Continental Europe by Bavarian Motor Works, Munich; in Japan by Nakajima Aircraft Works, Tokyo.

CGM Apr. 1931  
Vol. 4, # 6, P. 5

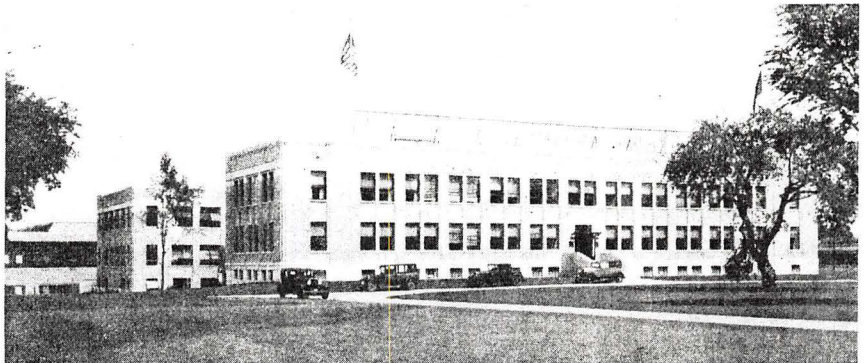
# NEW COAST GUARD WINGS

### Famous Wasp Engines Will Furnish Power for Five New U. S. Coast Guard Planes

J. E. HOWES, JR.

**W**ASP aeronautical engines, famous the world over, will power the five new specially designed and constructed Fokker flying boats which now are in the process of being completed for the United States Coast Guard.

For many years past the Coast Guard has supplemented their fleet of ships with airplanes—five in number—which proved so conclusively the advantage of air over water as a medium of coast control that early in October of last year it was decided to double the force of the air fleet. The experience gained from the use of the first planes proved extremely valuable in determining the type of ship needed to perform all the functions necessary to this branch of the service. From the trial and error method the Coast Guard engineers drew up specifications calling for a plane which could land and take off from the water under practically any condition, one which had the strongest all-metal hull possible, with four water tight compartments, and one which embodied a high cantilever wing with sufficient power to carry a large payload. They must have a cruising radius of more than 1,000 miles and must be able to carry at least a crew of four guards.



THE WASP'S NEST

The Pratt and Whitney Aircraft Company's general office and new plant at East Hartford, the most modern and up-to-date aeronautical engine plant in the world.

These specifications were submitted to eight airplane manufacturers and the design returned by the Fokker Aircraft Corporation was the one accepted by the engineers as embodying all the necessary requirements for their purpose.

When it came to the question of power for these huge ships the Pratt & Whitney 450 horsepower Wasp was selected because of its known dependability in service. Two motors, side by side, mounted above the 72 foot wing, each drive a three-bladed pusher type propeller. A rated horsepower for these two of 900 at 2100 rpm. was over-sufficient to insure the power needed to speed these Coast Guard ships along at a cruising speed of a little over 100 miles per hour, and a top speed of 115 miles per hour and to provide ample power

for quick take-off and rapid climb.

Wasps and Hornets have for many years been used almost exclusively by the United States Navy in their fighting, scouting, and observation planes. Their fine record of service spells praise for those who are responsible for their design and manufacture.

The United States Army also has come to use these engines extensively in their planes designed for the radial type of motor. Other branches as the Marine Corps and the National Guard flying units equip their ships with them. Their record in these units is marked with the same success as in the Army and Navy and through this success the Wasp and Hornet have built up a name of praise and dependability for themselves.

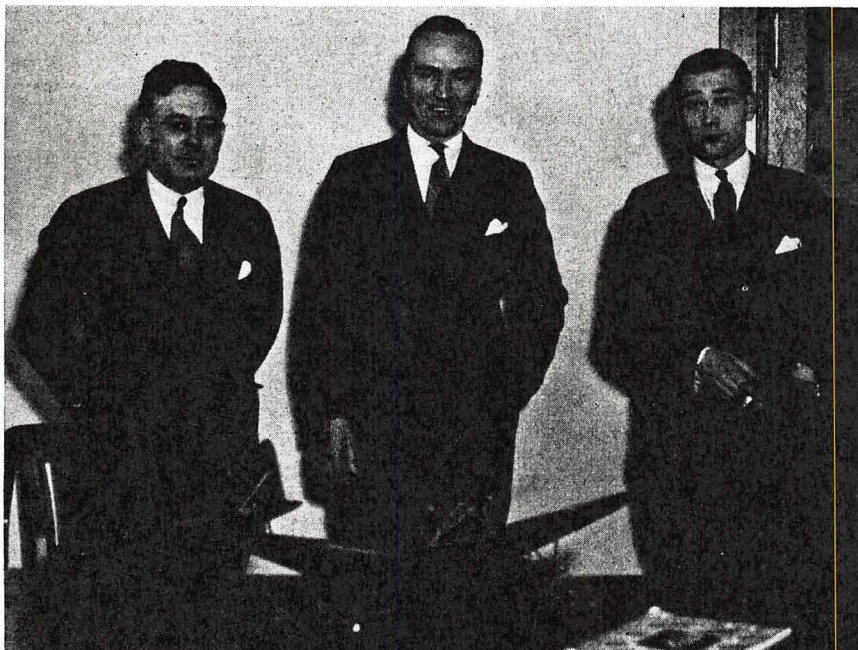
The prominence of these motors extends from the services far into the commercial fields. Scarcely a transport line in the United States cannot boast of one and more often many powering their regular passenger ships. Most often it is found that their complete flying equipment is pulled along through the air by either a Wasp or a Hornet. One of the largest passenger lines in the country boasts of flying eight and a quarter million miles in 1930 with Hornets giving perfect satisfaction.

#### The Air Mail

Over 50 per cent of the air mail in the country depends upon one of these motors to insure its delivery and so bear out the saying which in the last few years has become prominent—"Mail by air and speed it there."

The service of Wasps and Hornets spreads, too, into the governmental and commercial air operations of many foreign lands. Brazil, Chile, Argentina, Mexico, and China along with others equip their air forces with Wasps. Chinese and Canadian airlines use Wasp powered ships. Even into the remote jungle fastnesses of New Guinea go Hornet powered planes carrying into the interior of the island mining equipment and carrying out to the coast gold.

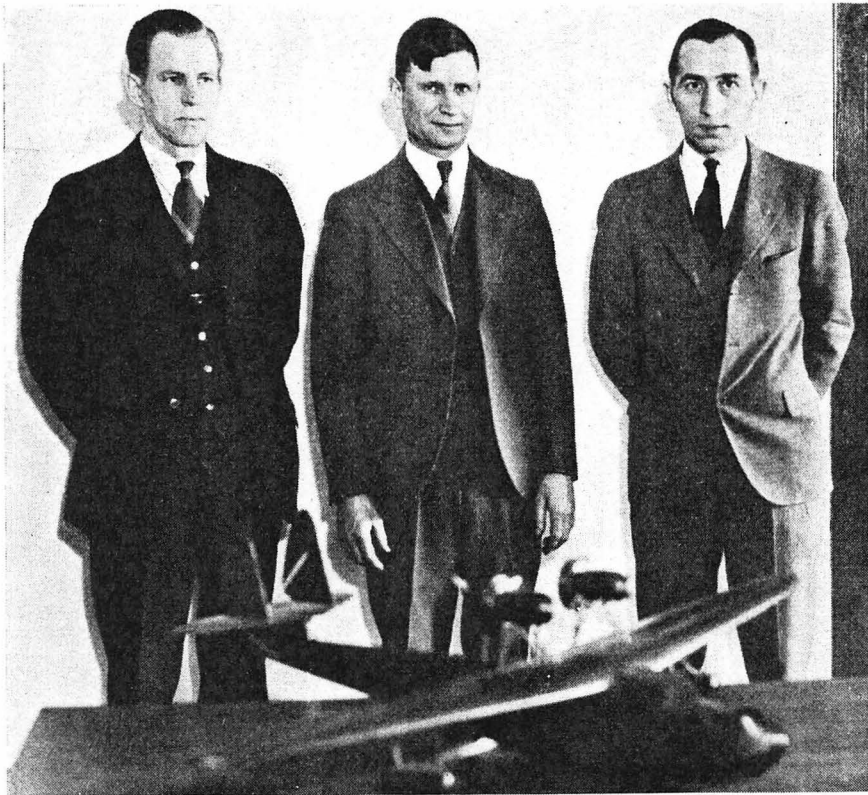
So it is not irregular or strange that these famous Wasps should be selected to perform the fatiguing duties of our Coast Guard ships. Their worth has been proven qualifying them for the tasks which they must be put to. Daily each must patrol an area of more than 1,100 square miles and their use in these special type Fokker planes makes possible the performance by a crew of four men of the patrol work which would otherwise require 24 boats at sea.



—Foto E. F. Clark.

#### AMERICA'S WAR ACE AT HEADQUARTERS

Captain E. V. Rickenbacker, vice-president of the Fokker Aircraft Corporation of America, accompanied by Mr. J. Fradiss, consulting engineer of the Fokker Corporation, visited Coast Guard Headquarters and submitted the final construction details for five new flying boats which the Fokker Corporation is building for the Coast Guard. Reading from left to right: Commander Norman B. Hall, U. S. Coast Guard; Captain E. V. Rickenbacker, and Mr. J. Fradiss. At the present time the Fokker Corporation are two months' ahead of their contract requirements in the construction of these new Coast Guard flying boats. It is expected that the first boat will be ready to take the air in the early part of August. These new flying-boats will measure 74 feet wing span; monoplane type; all-metal boat; and equipped with two Pratt and Whitney air-cooled engines. They are especially designed for offshore cruising and rescue work at sea, having a cruising radius of 1,000 miles. They will be equipped with radio capable of communicating by voice telephone with all classes of Naval and commercial radio systems.



—Foto E. F. Clark.

IN THE ENGINEERING OFFICE, HEADQUARTERS

Left to right, Chief Machinist Willard L. Jones, Machinist William R. Kenly, Pay Clerk Leo T. Robbins.

SEA MEMORIAL

The Navy and Marine Memorial Association is about to erect in Washington a beautiful and stately monument of sea-green bronze, as a memorial to the men of the sea and dedicated to those who have been lost.

There is no such monument anywhere in the world. There is no monument that attests any appreciation by men and women of the dangers which the men of the sea have braved or the conquests of those dangers which they have achieved. There is no visible reminder of our debt to the men of the sea for securing that safe passage of the sea which has welded widely separated countries into a coherent world. Though monuments to military commanders adorn selective spots in all civilized countries of the earth, only a few monuments to naval men exist and virtually all of these commemorate war achievements only.

The long and hazardous voyages of the naval and merchant seamen who made the ocean safe for commerce and spread civilization over the earth, though told in song and story, have never received the recognition which all men know to be the highest; that of an enduring monument erected on some exalted spot where it can be seen of men. Such a tribute it is the intent of the Navy and Marine Memorial Association to render to men of the sea; to the men of the sea of all nations and all times, but especially to those of our own nation and our own time.

The design of this beautiful monu-

ment has been officially accepted by the National Commission of Fine Arts and Congress has unanimously assigned to it a most beautiful site in the Capital on the banks of the Potomac.

The total cost of this great master memorial is \$500,000 which is being raised by public contributions, and at this time there is needed only \$18,000 to complete the building fund.

AIDING SMUGGLERS

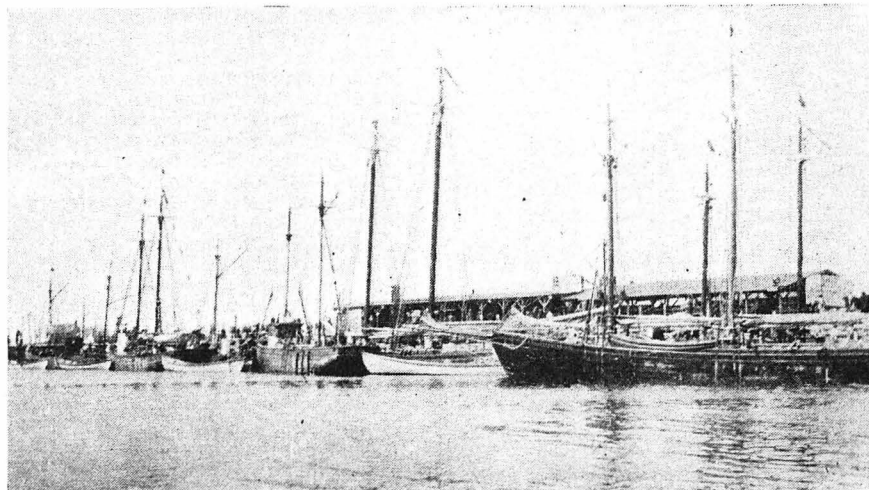
Certain notorious rum runner was under trail by a Coast Guard patrol boat. The rum runner cracked an engine cylinder, became caught in a rapidly running tide, and would have piled up on the rocks if the trailing vessel hadn't thrown her a line and towed her to safer waters. An extract is herewith taken from an official letter reproving the officer in charge of the trailing for his action:

"You are further directed to again instruct the responsible officers in charge of patrol boats at \* \* \* \* \* that the only assistance that they are authorized to give to rum running vessels of any description, is that assistance that is demanded by human requirements. They are authorized to take off the crew of any such boat, should they be requested to do so. No assistance whatever will be rendered the property in question, other than maintaining guard on such property in order to protect our own interest, should there be liquor on board. You will advise such officers that the Division Commander undertakes to accept the burden of all criticism from the newspaper or otherwise, that may possibly result from compliance with these orders."

LIGHTSHIP MOVED

The Cornfield Point lightship has been moved about one mile 165 1/4 degrees into 110 feet of water. Plum Island lighted bell buoy has been established about three miles, 1,275 yards 271 degrees from Little Gull Island light house, in about 178 feet of water. It now has black and white vertical stripes, skeleton superstructure and shows a flashing green light every 1.5 seconds, the flash being five-tenths of a second duration. A second class tall type nun buoy is now maintained on station to the westward.

Cornfield lighted whistle buoy and Cornfield bell buoy have been moved one mile 167 degrees into 115 feet of water.



AT CAPE MAY, N. J.

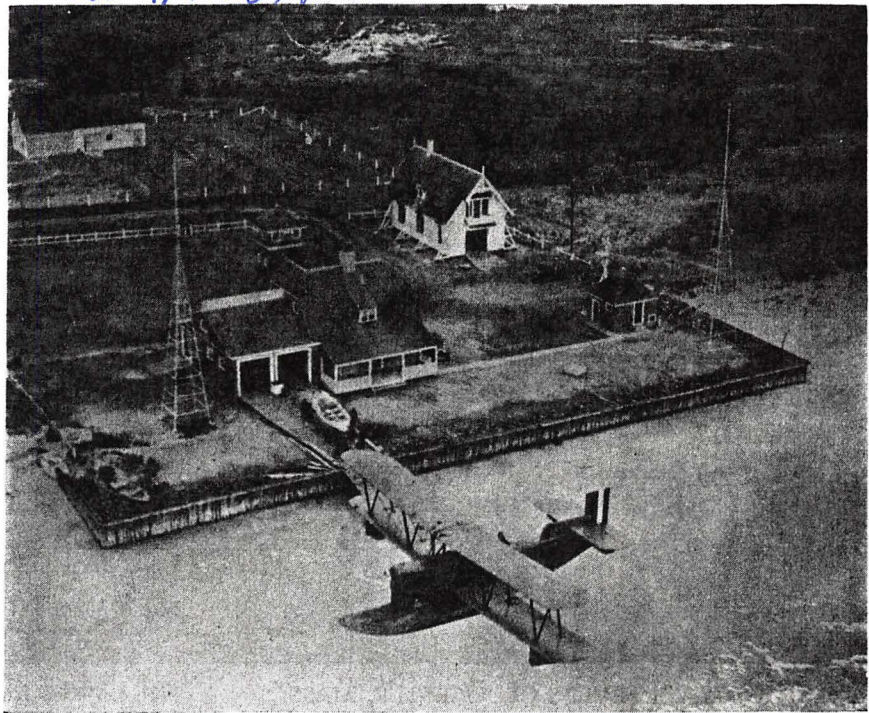
Established in 1921, the wharfage and supply service of Clarence Schellenger and Harry W. Bell furnishes one of the most interesting industries at Cape May. The illustration shows the wharfage. Fish brought into these wharfs are distributed to New York, Philadelphia and Boston. The equipment on the wharf included a marine railway. Schellenger and Company are also equipped to furnish ice, gasoline, oil, coal, fuel oil, fresh water, groceries, shipping barrels, and other necessary sea going commodities. This is the only fuel oil and coaling station between Norfolk and New York City. These ship chandlers enjoy direct railroad connection with their wharf. The Schellenger wharfage is a great stopping place for yachtsmen in need of supplies.

CGM, June, 1931  
Vol. 4, No. 8, p. 22

Wholesale  
**FISH**  
Dealer

**John  
Chianciola**

New England Wharf  
**GLOUCESTER  
MASS.**



—Official Coast Guard Photo.

**CAPE MAY POINT COAST GUARD STATION**

The Coast Guard's Loening Amphibian plane is shown passing on patrol before Cape May Point Coast Guard Station. Boatswain Charles E. McCoy is in charge of the station.

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*Courteous Treatment and Best of Service*

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GLOUCESTER, MASS.**

1885 1930

**CG-801**

The gas screw *Slojita* from Oakland, California, became disabled recently when chips of wood and shavings clogged her gasoline. Machinist Hulbert and Seaman Mahoney worked on the *Slojita* and sent her on her way running smoothly.

**THE ITASCA**

One of six Army planes, which had been escorting the U.S.A.T. CAMBRAI out to sea, failed to come out of a loop and crashed into the sea. The plane sank immediately, but the seat to which the pilot, 2nd Lieutenant George C. Baker, was strapped, was torn off and floated with the body. With the aid of a nearby speed boat the body was recovered and death was said by Dr. Meyer, of the ITASCA, to have been instantaneous. The body was turned over to the Tripler General Hospital at Honolulu.

**IN MICHIGAN**

Though Spring came with April, but Boatswain P. Liedthe way out west in Michigan reports that he and four of his surfmen journeyed on snowshoes looking for a lost child that had wandered into the woods near Deer Park Station. It was found after a two hour trek.

**BASE TWENTY-ONE WINS**

The small bore rifle team of Base 21, St. Petersburg, Fla., consisting of Lieut. H. E. Grogan, A. J. Treaster (C.G.M.), Robert Wolf (B.M.1c.), and W. J. Dudley (B.M.1c.), defeated a team from the rifle team at Egmont Key, and a team from the Sunshine Rifle and Pistol Club of St. Petersburg, Fla. The scores of the teams are as follows:

|                             |     |
|-----------------------------|-----|
| Base 21 .....               | 708 |
| Sunshine R. & P. Club.....  | 701 |
| Coast Guard Rifle Team..... | 697 |

**RUM AND BOAT CAUGHT**

The speedboat *Hither* sank at Woods Hole, Mass., after being chased and fired upon by Coast Guardsmen. Her crew of five and some liquor were captured.

Comdr. R. S. Patch expressed the opinion that the *Hither* had been scuttled by her crew. The Coast Guardsmen estimated that the *Hither* was carrying 800 cases of liquor.

Although blank cartridges were fired as a warning to stop, the boat crew reported, the *Hither* continued its course, and the Government craft started in pursuit. The men said they fired two rounds from a machine gun before the *Hither* stopped and was overhauled, and that it was then beginning to settle by the bow. They said the *Hither* was too large to have been sunk by the machine gun shots.

**THE PERRY**

The oil crew *Charles D. Leffler* blew a cylinder head gasket, disabling her engines. The Cutter PERRY towed the vessel to the Gulf Refining Dock at Miami Beach, Florida.

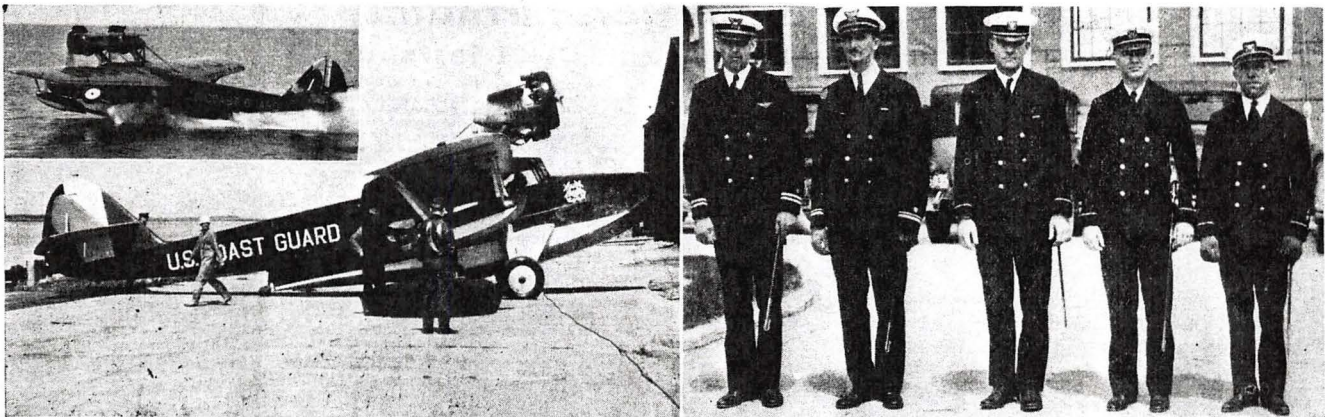
**SAND DUNES DOOMED**

*(Editorial in New London Day)*

Are the historical sand dunes of Lake Michigan, which belong to the natural wonders of the world, to give way to the demands of industry? This is a question which is worrying the residents of western Michigan and thousands of nature lovers who make annual pilgrimages to enjoy the beauties of the dunes. The invasion of industry into the dunes started several years ago, unnoticed and unprotested. However, today more and more of these great dunes are being attacked by the steam shovels, and boatload by boatload, carload by carload, are being carted away to distant cities, where the sand is being used in industrial enterprises.

CGM Aug 1931  
Vol. 4, No. 10 pp. 10-12

# COAST GUARDING THE AIR



—Foto by Mashburne

## COAST GUARD AVIATION AT SECTION BASE NINE, CAPE MAY, N. J.

At the left are two views of Coast Guard's new Douglas Amphibian T-7. At the right is a group of Coast Guard aviation officers. Left to right: Lieut. N. M. Nelson, Lieut. C. F. Edge, Radio Electrician D. G. Clementson, Pay Clerk W. M. Stephens, Machinist F. F. Crump, U.S.C.G.

**T**HERE are two men; one at an isolated Coast Guard station, the other—a pilot—roaring north with the mail. They have never met, would not recognize each other if they passed on the street, yet they have become friends.

From their daily, momentary contact each receives something from the other. The pilot receives assurance that his passing is noted and that other lonely Coast Guardsmen across the "water jump" will be informed and will expect him. The man on the beach loses the monotonous crash of the surf in the roar of modern life; for a few seconds he becomes a part of that life. Each gives the other the extended arm and their meeting is over for that day—the mail goes south at night and the pilot sees only the gleam of a flash-light.

For nearly a century these men of the Coast Guard have watched the gradual change in our commerce along the coast—first the sailing ships, then the steamers, now planes. The safety of the sailing ship required the master to lay his courses well off the coast, so that changing winds or strange currents would not set him on shore, these ships usually passed "hull down" and the station crews noted that a certain number of barks, brigs and schooners passed north or south. The steamer brought the path of commerce closer and these vessels were frequently recognized by the funnel marks; the path of the coast-wise plane lies directly over the station and the station crew makes a record of the type, color, number of the plane and the time and direction of passage.

### Old Order Changeth

This change in the character of the commerce has been reflected in the changing character of the methods and equipment of the Coast Guard station; boats propelled by oars gave way to powerful motor boats and now airplanes are supplementing the surface craft. On y one thing has remained constant—the instant readiness to serve and assist any seafarer who may be in trouble. To be of immediate assistance requires close observation of the passing ships so

## Emphasizing the Need of Adequate Air Forces for United States Coast Guard

By Commander  
NORMAN B. HALL, U.S.C.G.

In "U. S. Air Services"

that in case of accident the crew may go into action without delay.

The words accident or crash are most unpopular in connection with aviation and it is possible that this aversion to the thought may be in some measure responsible for the record. About one hundred and seven years ago, Sir William Hilliary, founder of the Royal National Life Boat Institution, said:

So long as men shall continue to

navigate the ocean and the tempests shall hold their course over its surface, in every age and on every coast, disaster by shipwreck and peril to human life must inevitably take place.

No one can well dispute the accuracy of this statement nor prove that this for going appraisal of the dangers to be expected either delayed or prevented the growth of the British Merchant Marine, and facing the facts will not retard the development of air travel in the United States.

Throughout history, all voyages and expeditions have been started with a firm belief in safe return or ultimate arrival at the destination, even the suicide tasks of the war afforded some hope of success and safety, and the greater the danger, the more complete and thorough were the preparations and precautions. And these preparations and precautions are the only things that will reduce the perils described in Sir William's gloomy prophecy.

### Passenger Carrying Records

The passenger carrying record of the air lines in the United States for the past year is ample proof that proper precautions will bring airline travel close to the safety of other transportation systems. In passing it may be noted that if the published record could be based on "hours in transit per passenger" instead of "passenger miles flown," the record would be a more accurate indication of the risk involved because the time of exposure to a risk is the important factor in any calculation of this character. This time element is of vital importance when a disabled plane comes down at sea; then no passenger miles are being flown and the risk of complete loss is maximum unless the failure of the plane to arrive at a predetermined point automatically starts the machine that has been provided for the assistance of seafarers.

During the calendar year 1930, 1,861 planes landed in or out of Sandy Hook, N. J. A considerable number of south-bound planes requested that they be "reported." Before taking off from the Coast Guard of their



—Harris & Ewing Foto

### COMMANDER HALL

Commander (E) Norman B. Hall, U.S.C.G., stationed at Headquarters, U.S. Coast Guard, as officer in charge of Coast Guard Aviation. Commander Hall entered the Coast Guard in October of 1901 as acting Ensign (Engineering), appointed from New York, his native state.

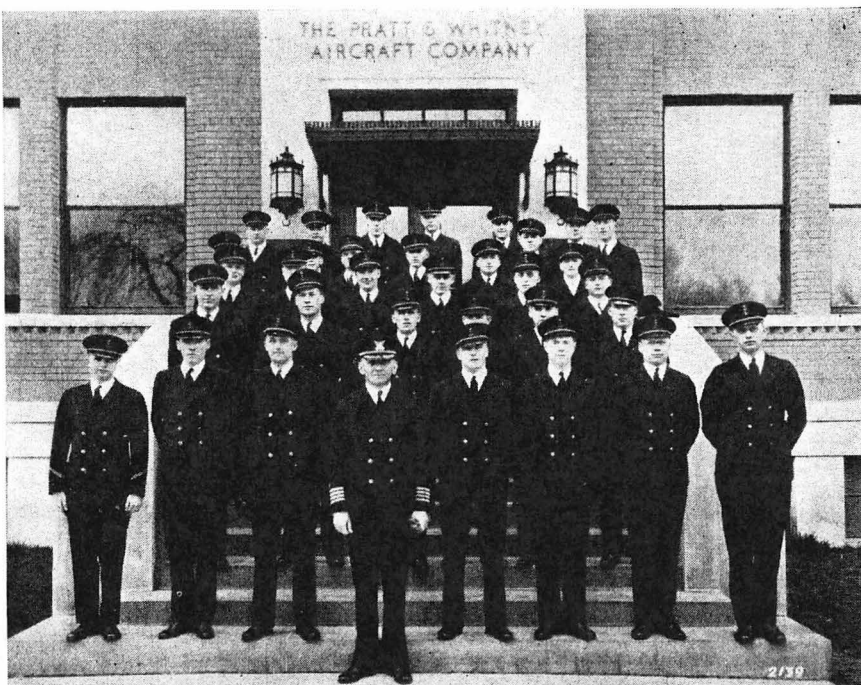
destination, and the pilots who passed close enough to the reporting stations to be identified on their passage down the coast were under almost constant observation. Following the tradition of years, all passing planes are recorded but this is simply to localize and reduce the area that must be searched when a plane becomes overdue; however, unless the Coast Guard station crews expect the plane at a certain time the search is delayed until long after owners or friends become worried and make frantic appeals for searching vessels.

All of this discussion of accidents and searches may seem to indicate that coast-wise routes are more dangerous than inland routes. Actually the over-water flight has the advantage of practically continuous landing area, more uniform weather and wind conditions, fewer built-up areas, absence of transmission lines, smoke, trees, and other hazards. Most of these are of interest only in case of a forced landing and these emergencies will no doubt become less frequent from year to year. The forced landing on shore is simply an unconventional arrival, while at sea the result depends on the type of plane, state of weather and sea, and the possibility of prompt assistance.

*Along The Coast*

Few persons realize that between Eastport, Maine, and Key West, Florida, the United States Government has established a chain of two hundred stations equipped with adequate boats, manned by experienced men and interconnected through an extensive telephone communication system. The location of these stations is shown on all Navy aviation charts and nearly all of them are on the direct coastwise route along the coast. Application may be made to any of these stations by telephone for aircraft reporting service.

When the Wright brothers were working on their plane at Kitty Hawk, North Carolina, the men of the nearby Coast Guard Stations furnished the unobtrusive assistance that was sorely needed and, though the crews of two stations knew of the operations and the subsequent successful flight, the confidence of the Wrights was held inviolate to such an extent that not one word concerning the work can be found in the official daily logs of these stations. While the Wrights were at Kitty Hawk, the daily routine, passing of vessels, the



**INSPECT AIRPLANE CONSTRUCTION**

*Capt. Q. B. Newman, Coast Guard engineering expert, with class of Coast Guard cadets inspecting the Pratt-Whitney plant, where new Coast Guard Fokker planes are being constructed.*

sickness and death of persons in the community are recorded with infinite detail; but not one word relative to the men they were assisting daily.

It is very appropriate, therefore, that the Service that assisted at the first airplane flight should continue to offer without advertisement the quiet, unassuming assistance that every coastwise traveler may request.

*The New Coast Guard Seaplanes*

All airplanes are designed to fly—some with light loads, others with heavy loads, but superb well-balanced flight is the designer's chief ambition. Landing gears are a necessary evil; they contribute only weight and parasite drag and boat-type landing gears are never selected when wheels or pontoons will serve, because of their excessive weight and drag.

The longest over-water jumps have been made with land planes, relying

solely on the excellence of the engine performance, and when the aeronautical engineer is asked to design a boat that can land on the rough open sea he very properly asks, "What do you want to do that for?"

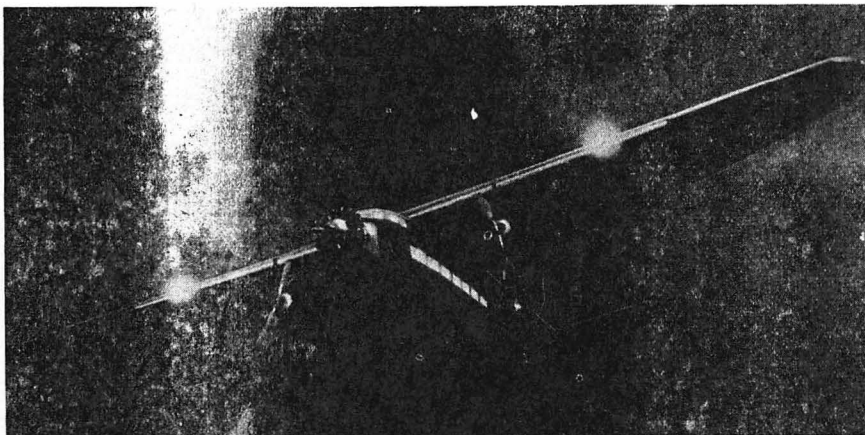
It does seem to be a silly trick even if you get away with it. Most air-minded people want to go some particular place—fast, and the surface of the ocean ten to one hundreds miles offshore is not one of the popular destinations.

The Coast Guard Air Service received eighteen calls during 1929 for this particular service, not from persons who wanted to go out there and land on the ocean, but from persons who wanted something done out there. When a father asks the Coast Guard to search the sea for his fifteen-year-old son overdue in a small sail boat, his request becomes "urgent business."

*The Loening Plane*

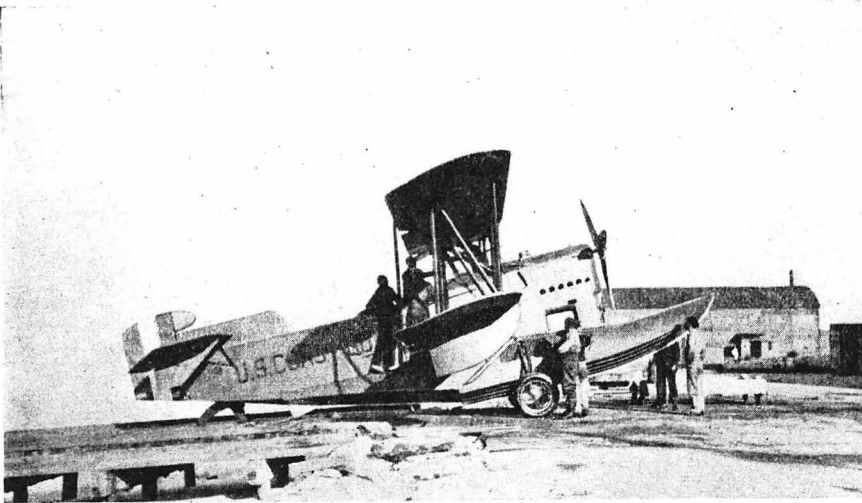
The pilots who have been making these search flights in *Loening OL5s* with inverted Liberty engines during the past four years have been very patient; they have, at times, suggested that the planes were getting old and, as pilots are wont to do, made some wisecracks about fifty or sixty miles being a long swim. They also, very probably, have made caustic comment during mess table flight time about flying old crates, but when a search is requested they seem to remember the unofficial motto of the Service—"Don't worry about getting back—all you've got to do is go."

To increase their chances of getting back and to give the pilots a plane that can do more than fly, are the reasons for the unusual design of the new Coast Guard flying boats. Some sacrifice of top speed, aerodynamic efficiency, and maneuverability may be involved and the finished plane may be inferior in these qualities to other planes of similar size, power and weight, but these inferiorities will be of small consequence to the seaplane crew if the hull is



**LIKE A HAWK OF THE NIGHT**

*This beautiful night aerial photograph pictures a Ford transport plane, equipped with Pratt-Whitney motors and comes to these pages through the courtesy of the Pratt-Whitney Company. The new Coast Guard Fokkers are Pratt-Whitney motored.*



**THE LOENING AMPHIBIAN**  
*One of the Older Coast Guard Planes*

staunch and rugged enough to land on the sea and remain intact. The lost New England fisherman who has been adrift in a dory for a few days in December will always believe that he was found and picked up by the finest seaplane in the world, aeronautic engineers to the contrary notwithstanding.

Eight airplane manufacturers submitted designs for these new planes, and all were sincere efforts to furnish equipment in accordance with specifications; however any design is a compromise and the design selected seems to embody the greatest number of desirable characteristics.

The design calls for one of the heaviest all-metal seaplane hulls ever built in this country with four water-tight compartments. Mounted on the hull is a typical Fokker wing, of wood, because wooden wing structures have given complete satisfaction in the Coast Guard and because economy of maintenance is an important consideration. Mounted high above this wing are two Pratt and Whitney *Wasp* engines; high enough up and far enough back to be operable on the surface in bad weather.

**115 Miles Per Hour**

The performance guarantees require a high speed of not less than 115 land miles an hour and a landing speed of not more than 60 land miles an hour.

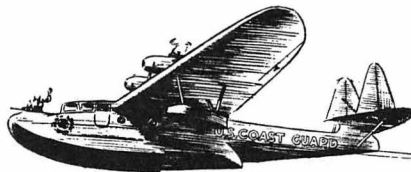
Four hundred forty gallons of fuel is carried in four tanks in the wing outboard of the hull and any portion of this fuel can be dumped overboard almost instantaneously.

Search work at sea to be successful frequently requires reliable communication, and the planes will be equipped with the most complete radio systems obtainable, telephone and code being available on all the usual wave lengths. The weight allowance for this apparatus alone being 250 pounds, exclusive of generators and batteries.

Each one of these five Fokker seaplanes will cost \$61,580 without engines and without radio equipment.

The mission of these flying boats—saving life at sea—is a worthy mission. It is a mission that yields its place of honor to no other duty an airplane can perform. That these planes may perform their mission without failure must

be the hope of every man who has ever "gone down to the sea."



**SAVED BY AIR**

*The new Coast Guard Fokkers are built to effect rescues at sea.*

**NEW PARACHUTE**

Development of a type of parachute which need not be worn until needed, but which may be snapped into place

in an instant with a single motion is being studied by the Service aeronautic officials to meet the need for "aerial life preservers" for passengers in cabin planes, machine gunners and others who would be handicapped by the continuous wearing of chutes.

Officials are also studying a type of instantaneous release which will permit the parachute jumper to discard chute and harness instantly in case of landing in water to prevent becoming entangled in the device or dragged under and drowned, or in case of landing in high winds, to prevent injury by being dragged before the parachute can be collapsed.

*Better Fabric*

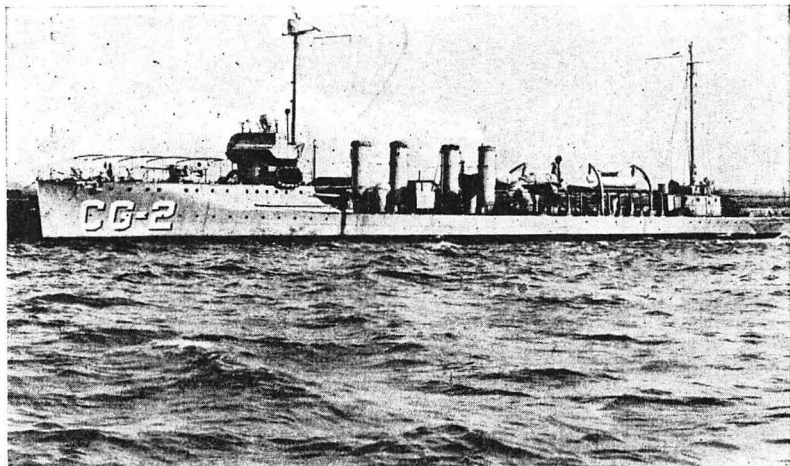
Parachute development in general is being concentrated upon general refinement of the "sail" or silk canopy of the parachute, both in method of construction and material; better containers for the sail, providing more compact stowage and improved protection of the silk; means of attaching the pack to the wearer while in the plane to provide added comfort without restricted movement, and an adjustable, safer and more comfortable harness for the descent.

While silk is recognized as the most suitable material for use in the sail, attempts are being made to develop other fabrics which will possess silk's desirable qualities of low weight, high strength and compactness when packed. This is necessary in case the country should be cut off from its silk supply for any reason, it was pointed out.

Investigation is being made of various types of quick-connector harness which requires the wearing of the harness only, the parachute being stored close at hand, as are life preservers in water craft. In case of emergency a single motion is required to snap the parachute into position on the wearer after which it functions in the same manner as a regular parachute.

**JUNIOR NAVAL MILITIA**

The Junior Naval militia, encamped at Fort Trumbull, passed in review for Capt. Q. B. Newman, acting superintendent of the Coast Guard academy, and Capt. T. G. Crapster, commanding the Coast Guard destroyer force. Officers on the staffs of the two captains were in attendance.

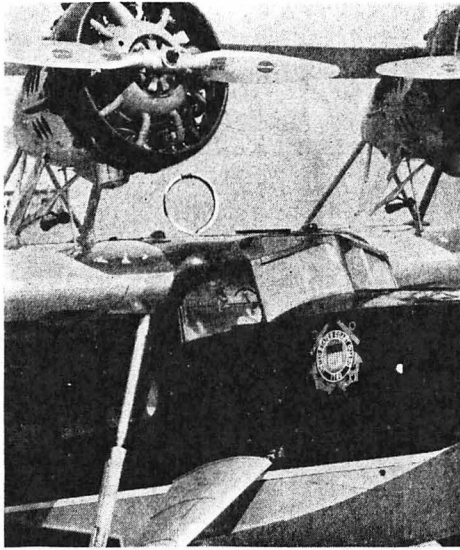


**THE DESTROYER CONYNGHAM**

*Lieut.-Comdr. G. U. Stewart, U.S.C.G., Commanding*



# We are now at Camden, N.J.



Coast Guard Amphibian equipped with  
RCA Victor Direction Finder.

Inquiries concerning all types of apparatus previously manufactured by RCA Victor Company (Mass.) successors to Wireless Specialty Apparatus Company, should now be addressed to

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*A Radio Corporation of America Subsidiary*

Camden, N. J.



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## MERRITT - CHAPMAN & SCOTT CORPORATION

SEA SALVORS SINCE 1860

### SALVAGE STATIONS MAINTAINED AT

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| KEY WEST,   | Merritt, Key West,<br>Florida, U. S. A.       |
| KINGSTON,   | Merritt, Kingston,<br>Jamaica, B. W. I.       |
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Ocean-going Steamers, especially equipped for salvage operation, are maintained in constant readiness at strategic ports. They are prepared to render prompt assistance to distressed shipping along the entire seaboard of the United States, the Gulf of Mexico, Caribbean waters, the Bahamas, the Windward and Leeward Islands, British West Indies, and the South and Central American seaboard. The personnel of these vessels is thoroughly skilled in salvage work.

Floating Derricks of large lifting capacity are maintained at a number of ports in the United States for the loading and discharge of heavy or bulky materials, as well as for transportation, harbor and coastwise.

Shorefront and Submarine Construction of every description is undertaken along the entire seaboard of the United States, as well as Marine and General Contracting inland. Large corps of expert divers available for Repair Work, Surveys, Underwater Metal Cutting and general service.

**Executive Offices, 17 Battery Place, New York, N. Y., U. S. A.**

**Managers for Merritt-Chapman Lindsay, Ltd., Kingston, Jamaica, B. W. I.**

## NEW LONDON SAVINGS

The Savings Bank of New London has paid over slightly more than \$30,000 and the Mariners Savings Bank will pay \$810.57 to the state under a new law which provides that all savings banks of the state turn over all unclaimed deposits of more than 30 years by Nov. 1 of each year hereafter.

The amount turned over by the Savings bank represents 78 unclaimed accounts to which the bank has been unable to trace undisputed ownership. About half the amount is represented in two accounts which were more than 90 years old.

The Mariners' bank amount represents 33 unclaimed deposits, practically all being for small amounts.

Of the two oldest accounts turned over to the State by the Savings Bank of New London one represents a deposit of \$50 made in 1836 which grew to \$5,308.97 and the other represents a deposit of \$80 in the same year which has now accumulated \$8,996.21 in interest.

Insofar as the bank has been able to learn these accounts were opened by soldiers of the United States army. All trace of them has been lost and it is believed that they were sent to some other section of the country to carry out the general duty of soldiers of that day, fighting Indians. It is thought quite likely that they were killed.

Another account for \$60 was opened in 1848 has now grown to \$3,219.54. Absolutely no trace or means of identification of the owner of this account could be found and it is thought possible that he was a sailor and may possibly have been lost at sea.

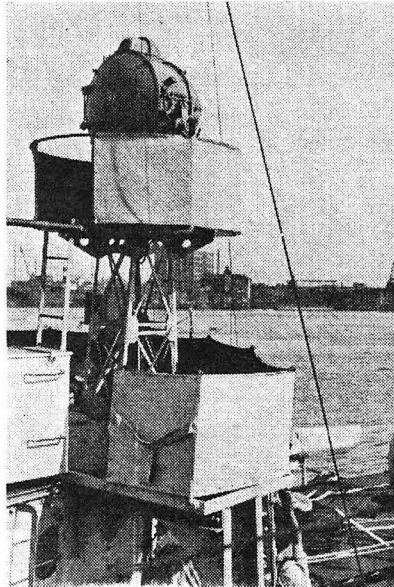
As a matter of fact a great many of the small accounts included in those of the Savings Bank of New London, which have now been outlawed are believed to have been opened by sailors on whaling ships, who were either lost

at sea or went away from New London and never came back.

In the early banking days of this country bookkeeping was kept at a minimum and as a rule little effort was made when accounts were opened to get very much information about the depositor. Things have changed considerably now and under the modern system it will be very rarely that any accounts will become outlawed through failure to trace the owner or a rightful heir.

## REAL BOKAY

"Please renew my subscription to the U. S. COAST GUARD Magazine," writes Boatswain Matthew Hoar, Dorchester, Mass., "as I do not want to miss an issue and I am lost without the news the magazine contains."



## LARGEST SEARCHLIGHT

The largest, most powerful searchlight in the Coast Guard is mounted on the Destroyer WAINWRIGHT, Lieut. Henry Coyle, U.S.C.G., commanding. It is on trial in comparison with 24" lights to determine its efficiency in trailing and pursuit of vessels under suspicion. This is a 36" Sperry light, height above base—7'4", range 3-mile, candle power—324,000,000.

Boatswain Hoar is very well-known in the Service. He joined the Life-Saving Service on September 1, 1891 at Hull, Mass., when that station was in command of that famous old Life Saver, Captain Joshua James. In 1898 Boatswain Hoar was transferred to Scituate, Mass., where he served until May, 1918, when that station was destroyed by fire and he was transferred to Peaked Hill Base. On December 1, 1921, after serving over thirty years Boatswain Hoar retired. After four years on the retired list he again answered the call of the Coast Guard acting as watchman at the New London Gate from 1925 to November 1 of this year.

Forty years in the service and the holder of a silver Life-Saving medal and numerous letters of commendation, a complimentary letter regarding the magazine from such a veteran as Boatswain Hoar is highly appreciated by this publication.



## IN NORTHWEST

Capt. H. D. Hinckley, U.S.C.G., Commander, Northwestern Division, United States Coast Guard, Seattle, Washington.

He entered the service as a cadet August 16, 1877 from Massachusetts.

Captain Hinckley is a graduate of the Naval War College.

## FIGHT ANIMAL TRAPS

Started in 1925 as a humane movement to end torturing methods of capturing fur-bearing animals, the National Anti-Steel Trap League, Inc., founded in Washington by the late Edward Breck, author, editor, sportsman and a lieutenant commander in the Navy, has not only established divisions throughout this country, but has been the means of fostering similar societies in Great Britain.

Announcement was made by the league last week that it will award \$500 in cash prizes, as during other years, for the best new humane inventions for the capture of fur-bearing animals. Devices or working models must be delivered at the offices of the league, 1731 K street, Washington, D. C., not later than December 1 of 1932.

The prizes, which are known as the Breck awards, are for two classes of devices, those which kill immediately and those which take animals alive without injury.

On the Pacific coast one of the leaders of the movement to reduce cruelty to fur-bearing animals is Capt. P. W. Thompson, U. S. C. G., retired.

Sea-faring men have been known for generations as traditionally kind to dumb animals.

## FOR ACADEMY

Bids for the construction of two additional buildings at the site of the new Coast Guard academy in Mohegan Avenue which will provide residences for four officers are being asked by the treasury department. These bids, together with bids for the construction of tennis courts, which will include a large retaining wall, and fences around the reservation will be opened at Washington, Dec. 14.



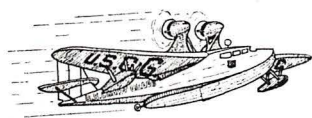
## TO AVIATION DUTY

Lieut.-Comdr. E. F. Stone, U.S.C.G., Commanding Officer of Destroyer CUMMINGS.

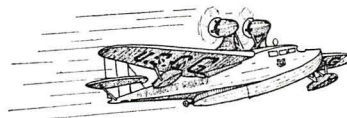
The CUMMINGS is to be decommissioned soon. Lieutenant Commander Stone will be assigned to duty with the General Aviation Manufacturing Company, Baltimore, Maryland as senior member of the Trial Board of the new Coast Guard planes being built there.

Lieutenant Commander Stone entered the service as a cadet April 30, 1910 from New York. He was Pilot of the U. S. naval seaplane NC-4 on first crossing of Atlantic by aircraft. He is also a qualified engineer.

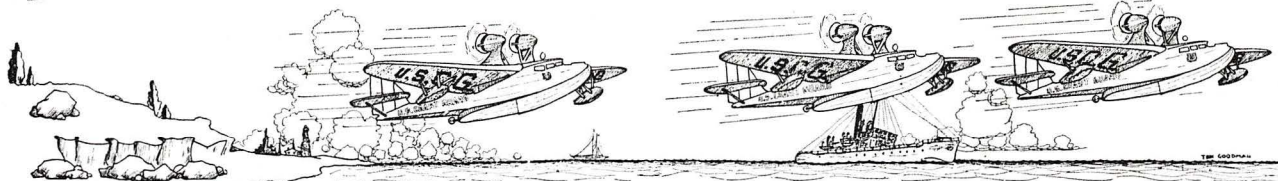
# The Coast Guard's Flying Life Boat Antares



Artist's conception of the ANTARES, ALTAIR, ACRUX, ACAMAR and ARCTURUS.



Standing out to Sea.



## Detailed Description of Coast Guard's New Flying Boats, Built to Save Lives at Sea Via the Air; Most Modern in Service.

By H. V. THADEN  
Factory Manager, General Aviation Mfg. Corp.

**D**ELIVERY of the "ANTARES" to the late Admiral Frederick C. Billard of the U. S. Coast Guard on April 16, 1932, must have been gratifying to the aviation personnel of the U. S. Coast Guard, as satisfactory evidence of their several years effort to develop a specialized craft for their own unique requirements.

The consummation of this project through the offices of the General Aviation Manufacturing Corporation, was predicated on satisfying the following requirements of typical Coast Guard operating situations:

### Situation "A"

S. S. Madison, radios ship sinking; passengers taking to life boats. Approximately 400 miles off shore. All available neighboring ships set courses to trouble area. Stated D. R. position in question because of preceding storm conditions.

### Requirement:

Aerial "eye" capable of extended search and scanning of the trouble area; radioing its observations to surface rescue ships thus saving hours and possibly days of delay to surface search. Aerial "eye" to be capable of an all day search three to four miles off shore.

### Situation "B"

S. S. Madison, three days outbound New York to Buenos Aires, requires urgent shore medical hospitalization for member of crew; requests immediate transfer of man at sea as competent medical aid is lacking aboard.

### Requirement:

Ambulance capable of speed per hour; landable on patches large enough and so pass a man fastened to a life take off rough water and re-land base.

### Situation "C"

S. Madison, 300 miles off shore in heavy sea reports just missing serious hazard to navigation in the form of large floating debris and a wooden sailing ves-

sel hull floating just awash. Estimated floating in a four mile per hour current from stated position.

### Requirement:

Immediate and inexpensive destruction of hazard by blasting; an aerial wrecking crew able to reach observed position within few hours after report; landable in a heavy sea; able to transfer wrecking tools and blasting equipment to obstruction; returnable to base.

### Situation "D"

Typical Summer seaside situation, distressed pleasure, sailing or motor craft, floating off shore with inexperienced seamen.

### Requirement:

Relatively high speed patrol capable of observing, landing and returning with rescued crew of distressed craft and/or capable of landing, taking aboard fifteen or more passengers and standing by for lengthy periods on surface until rescued members can be transferred to surface craft.

The accomplishment of the above obviously could only be done by aircraft. War time land, as well as water operation, demonstrated this. However, the limitation of contemporary aircraft was recognized, and, as it was no fair weather operation which faced the Coast Guard, it became necessary to formulate considerably more rigid specifications to meet such requirements. This led to the formulation of the following specification in the invitation for bids by the Coast Guard:

"The severe service conditions of the Coast Guard due to the necessity of operating these seaplanes irrespective of weather conditions, make it essential that the entire structure be of the strongest and most durable design."

### Mutual Co-operation

The outgrowth of this specification, through the mutual cooperation of the Engineering and operating staffs of the Coast Guard and the Engineering staff of the General Aviation Corporation, developed into the creation of the FLB-50 series of flying boats of which the "ANTARES" is the first to be delivered.

Of equal importance to the aircraft's flying and seaworthiness was the importance of obtaining a super radio. If aircraft functions as the "eyes" of surface craft and shore stations, then the aircraft's radio is assuredly its "vocal chord." Ability to communicate observations, and advice of its own operations, was a prime requirement.

Early decision dictated the use of a monoplane because of simplicity and aerodynamic qualities; the use of twin engines for reliability of operation; the use of metal for the hull and outboard wing tip floats subject to direct contact with sea water; the use of wooden wings because of their rigidity and water tightness as well as their floatational qualities; and the use of conventional welded steel, fabric covered, tail surfaces because of the experience of the operating maintenance personnel. Operational requirements dictated the desirability both from a serviceability standpoint, as well as invulnerability from heavy seas, of the top engine nacelles and pusher propellers.

### Severe Requirements

The severe requirements of beaching the aircraft in rough weather necessitated considerable study as it was desired to be able to shove off or land on sandy beaches as well as off of smooth landing ramps without the necessity of a

(Continued on page 32).

Volume 5 July, 1932 Number 9

**U.S. Coast Guard**  
SEMPER PARATUS

"The Nation's Oldest Uniformed Service"  
1790 to 1932

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of the Coast Guard in all its branches and  
kindred maritime services and industries

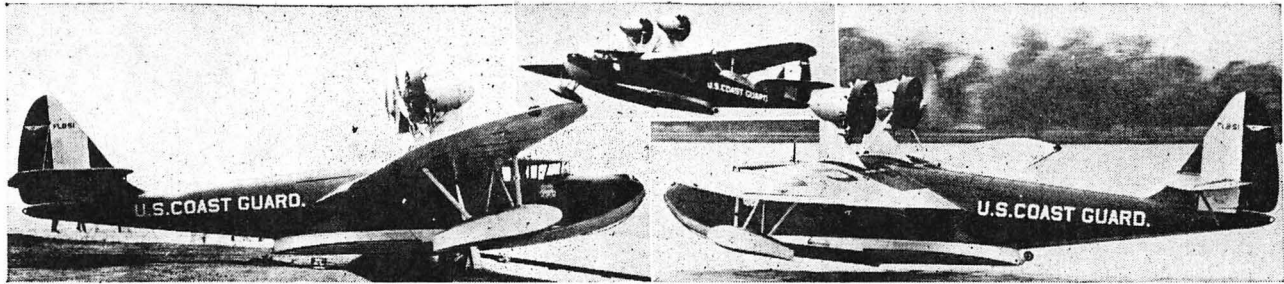
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### NEW COAST GUARD SEA PLANE MAKES THRILLING RESCUE

While still undergoing acceptance trials the Coast Guard Plane ANTARES, pictured above, delivered the goods in no uncertain manner, true to the highest life saving traditions of the Coast Guard.

Effecting a thrilling sea rescue of two seriously burned sailors off Cape May, N. J., the Coast Guard's new flying patrol boat received its first test and definitely proved its practicability.

Receiving an emergency radio call at 8 a. m. from the American tanker Samuel Q. Brown, the giant boat, under the command of Lieut. Comdr. C. C. von Paulsen, immediately left the Cape May station and 30 minutes later landed 50 miles at sea beside the ship despite the fact that a very high sea was running.

The two sailors, Leonard M. Ambrose, first assistant engineer of the Samuel Q. Brown, and Hans Schweiger, an oiler, both seriously burned in an accident, were lowered in the cots through the

hatch of the flying boat. Thirty minutes later they were landed at Cape May, where a doctor ordered their immediate removal to St. Agnes' Hospital in Philadelphia.

The flying boat took off again on its errand of mercy and 45 minutes later the ship landed at the naval aircraft factory in Philadelphia.

A waiting hospital ambulance rushed the men to the emergency ward, where they were received at 10:15 a. m., 125 miles distant from the scene of the accident and an hour and fifteen minutes after they had been taken from the boat.

Commenting upon the rescue, Lieut. Comdr. Norman B. Hall, Coast Guard

officer in charge of aviation, said: "I have just talked with von Paulsen, and of course we are very pleased with the performance of the new boat. The men were so seriously injured that it was necessary to lower them on their cots into the place, which is designed for such an emergency. The whole rescue was made in approximately two hours after the captain sent in his call. Had it been necessary to dispatch a boat it would have taken at least twelve hours to bring the men in."

The illustrations above show, at the left, the plane with beaching gear extended. At the right the plane taking off. Insert center shows the plane high in the air.

### FLYING BOAT ANTARES

(Continued from page 3).

beaching crew. On the other hand, it was not desired to make the craft amphibious in the usual sense because of the decrease in performance owing to the weight and drag of such amphibious gear. A light weight beaching gear was, therefore, developed which in flight practically submerges into the lines of the flying boat.

#### Specifications and Performance

The following is a brief specification of the boat:

|                               |              |
|-------------------------------|--------------|
| Gross Area                    | 754 sq. ft.  |
| Power (2 P. & W. 420 at 1900) | 840 H.P.     |
| Weight Empty                  | 7000 lbs.    |
| Disposable Load               | 4200 lbs.    |
| Gross Weight                  | 11200 lbs.   |
| Span                          | 74 ft. 2 in. |
| Length                        | 53 ft. 6 in. |
| Overall Height                | 15 ft. 6 in. |
| Beam of Hull                  | 7 ft. 2 in.  |
| Range                         | 1100 miles   |

The boat trims at 2° by the stern while it rests on the water. All taxiing qualities in choppy water during winds up to 25 knots have proven satisfactory. Full loads have been taken off with tail winds in less than 700 yards. The hull lines are such that the boat may be "planed off" before flying speed is attained. The lack of protuberances and simplicity of structural members as well as the external stringers of the hull bottom all contribute to a remarkably "dry" take off. Maximum spray occurs as the plane settles "off" the step.

Mooring is accomplished by lines from either a mooring pintel just forward of the bow cockpit or by means of a pendant secured to the keel. As the bow is particularly free of spray, this mooring operation is quite easily accomplished.

Beaching operation from water borne to land borne is accomplished by the dropping of the two light aluminum al-

loy legs pivotly secured at their upper ends to the forward spars and having low pressure tires secured to their lower ends. These are normally carried longitudinally under and partially submerged into the wing. As these are dropped and swung forward they are engaged and supported by side levers which are projected out from the right and left chines respectively. A tail wheel which is retracted into the lines of the after step is rotated 180° and locked so that it projects below the keel. In this condition the ship can be easily taxied in the water and beached under its own power.

This beaching gear development eliminated considerable risk as well as need of personnel to accomplish what is normally a bothersome and at times a hazardous operation.

From a performance standpoint, the boat combines good stability with maneuverability in flight. A ceiling of 9000 feet more than suffices for water work and the range of 1100 miles provides a

patrol radius that complements the ability of many surface patrol boats. A three hour range on one engine gives a considerable measure of safety in case of disability of one of the engines. A maximum speed of 112 knots per hour is obtainable with a landing speed of approximately 56 knots per hour.

A large reserve space in the hull may be utilized under proper conditions for excess useful load since the plane has a large reserve power with twin engine operation. This reserve space provides amply for the contemplated life saving operations. There is approximately 400% reserve buoyancy in the hull.

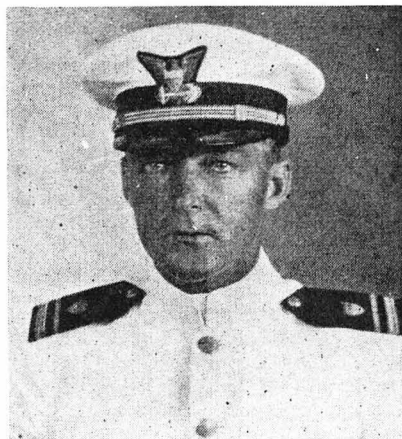
The visibility from the pilots standpoint is unexcelled. A clear, unobstructed view is had forward, to the sides and upwards and the presence of the engines above the wing and aft removes all difficulties of oil and grease obscuring the wind shields.

Probably the most striking feature about the airplane, from a technical viewpoint, is the high factor of safety built into the plane. The hull is designed for a landing factor of ten times normal gross load. The bottom skin amidship is one-tenth of an inch thick. This high factor has been carried through the hull to the wing and nacelles. The wooden wings outboard likewise have a higher factor than any previous ones of this type, all with a view to meeting the requirement of sturdiness.

The welded steel fabric covered tail surfaces have been actually static tested to carry three to four times the loading required for comparable size patrol planes, the ailerons carrying some 300% of design load.

#### Materials

In the production of these planes every effort has been made to keep the kinds of materials down to a minimum. However, a design which employs slight alloy metal for hull and floats, wood for wings and steel tubing for nacelles and tail surfaces, requires careful selection and workmanship.



#### AT BASE SEVEN

Lieutenant Richard L. Burke, Coast Guard Flight Officer stationed at Coast Guard Section Base Seven, Gloucester, Massachusetts.

The woods used in the order of amounts used per plane, are as follows: birch plywood for spars, ribs and wing covering; spruce for spars, ribs and blocks; maple for blocks; ash for ribs.

Chrome Molybdenum sheet steel is used for all wing fittings, tail surfaces and nacelles. Chrome Molybdenum steel tubing, both round and streamlined is used in nacelle and tail surfaces and in welded frame work. Steel bar material is either Chrome Molybdenum of 3 1/2% nickel. Where magnetic characteristics are objectionable because of compass interference, non-magnetic steel is used throughout. The same material is also used in places for salt water corrosion resistance. Impregnated phenal fibre fabric is used for blocks, bearings, pulleys, etc.

The largest unit weight of material in the boat is made up of aluminum alloy, both wrought and cast. Aluminum sheet is only used for gas tanks all of which have welded joints reinforced by rivets. Practically all the remainder is aluminum alloy in sheet form called "Alclad," while the extruded tubes, shapes and bar stock is wrought duralumin.

#### Real Protection

To preserve the plane against corrosion, one of the most serious problems confronting the Coast Guard, a careful finish program was developed, using Navy practice as the basic specification except where modification of these specifications seemed advisable to meet the unique Coast Guard conditions. All aluminum and duralumin parts are anodically treated, primed with red oxide and then coated with two to three coats of pigmented varnish. All joints have fabric, impregnated with bitumastic finish assembled between the sheets. Interior finish of such structural parts are coated with aluminum powder pigmented bitumastic paint. All steel parts are cadmium plated, primed and painted. Interior of steel parts are oiled with linseed oil. The wood protective finish is carried to even greater care and number of coats, varnish, clear and pigmented being used for this purpose. The outside wing cover has each joint taped with a fabric strip before application of finish and coated with seven coats.

A more detailed picture of the plane may be gotten by description of the main structural components and the equipment. From the statement of materials used, some appreciation will be obtained of the variety of structural design required to resist the high stresses and yet retain light weight.

#### Hull

The hull and float structures are composed of aluminum alloy with Alclad skin sheets. The hull is 54' long, 104" high, and 86" maximum beam. This gives a displacement of 57,000 pounds, or approximately 400% reserve buoyancy. The body is divided roughly into two parts: the hull proper with three compartments which provides the flotation, cargo space and support of the wings, and an after portion, monocoque in design, which has as its primary function the support of the tail surfaces. This after portion because of its static balance relation to the center of gravity of the ship cannot be used for cargo stowage. The body is divided by three water tight bulkheads into four separate compartments, access from one to the other being made through water tight doorways.

The forward one being comparatively small is limited to a few simple uses



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such as anchor and anchor rope stowage, handling lines, fire fighting equipment and stowage for a machine gun. A water tight metal hatch cover is provided for this cockpit and it is through this hatch that the mooring operations are made. Forward of this hatch is the mooring mast or pintel, and accessible from the hatch is the mooring or towing pendant which runs below the water line to a forward point on the keel.



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Typical boat construction practice is used for the main hull. A series of transverse frames spaced by intercostals, chine and keel angles and covered with a riveted flat skin. The transverse frames are "Z" shaped, built of sheet stock and the free edges reinforced by bulbous shapes. In general, the hull lines are basically similar to those in the Navy N.C. boats. Some modifications forward and the addition of external extruded "T" sections as external stringers has greatly improved the spray characteristics. The dead rise is  $22\frac{1}{2}^\circ$  and the after angle of the keel is  $5^\circ$ . Access plates are provided for accessibility to all parts of the hull and floats for cleaning and maintenance.

#### Wing

The wooden monoplane wing is tapered in plan and chord with a slight sweep-back and dihedral built into its one piece span of 74' 2". Basically, the wing is of two spar construction in which the beams take practically all the bending moments. The wooden laminated cover skin is designed to take the torsional stresses as well as the shear imposed by the drag forces. Spruce, birch and ash are the materials used and these are built up and joined by casein glue and nails. Inspection holes are provided frequently throughout the wing span for maintenance of the interior, examination of the nacelle and hull connection fittings. The ailerons are sheet Alclad corrugated for stiffness and so designed that internal inspection can be readily accomplished by opening the trailing edge.

#### Power Plant

The power plants are located in two nacelles above the wing side by side. Pusher propellers are used which gives



**AT BASE SEVEN**

Lieutenant W. L. Anderson, Coast Guard Flight Pilot stationed at Coast Guard Section Base Seven, Gloucester Massachusetts

an ideal location from a standpoint of spray reduction. The nacelles are of Chrome Molybdenum welded steel construction and of a unique design which reduces their drag to an unusual degree and yet retains exceptional rigidity. The oil tanks are enclosed within the bulbous nacelles in front of the engines. The nacelles have adjustable louvres at the front side to control oil temperatures. All of the electrical, gas, oil, and control lines are readily accessible and inspectable by the removal of a few pieces of cowling. The nacelles are designed to take engines from 400 to 600 horsepower and the nacelles are interchangeable right and left. Anti-draw rings complete the cowling. The gasoline fuel system consists of four 110 gallon tanks built into the wings. Fuel is drawn to the engines by Romec pumps which can be primed by a hand pump from the pilots seat. Remotely controlled valves provide selectivity and interchange of gas between any of the four tanks and to either of the engines. Except for the priming system no gasoline lines are brought into the hull



**FLYING GUNNER**

Chief Gunner Charles T. Thrum, Coast Guard air pilot stationed at Section Base Nine, Cape May, New Jersey.

cabin. Gasoline may be dumped in toto or by individual tanks but a 60 gallon reserve remains after dumping if so desired.

Scintilla ignition with specially shielded magnetos are used. The starters are arranged for both hand or electrical inertia. Control for the electrical starters is from the pilots instrument board which is a very decided advantage from an operational standpoint.

Throttle controls are located on each side for the two pilots with the mixture control centrally located between them. Throttle cable controls are used and they are passed through the wing and nacelle where they are easily inspected, adjusted and completely covered.

#### Empennage

Tail surfaces are built up of Chrome Molybdenum steel tubes fabric covered. The camber and size of the surfaces permits the use of spars composed of steel tube booms with welded steel tube shear webbing. The rudder is balanced by two paddles while the elevators are partially balanced by a set-back hinge. The stabilizer is adjustable through  $5^\circ$  of movement.



**AT BASE NINE**

Lieutenant C. F. Edge, Coast Guard air pilot stationed at Aviation Base, Section Base Nine, Cape May, New Jersey.

#### Equipment

Utility was the prime objective in the installation of equipment. The ship is fitted out as a work craft. An enclosed cabin having been decided upon, this was made a definite part of the hull design rather than the placing of a cabin on the finished hull. The forward windows are fixed and are sufficiently high and wide so as to give excellent visibility. A small fixed window is provided above each pilot to give forward, upward, and, with the aid of a reflecting mirror, rearward visibility. The side windows are adjustable for ventilation and emergency exits if needed. Electric window wipers provide for the cleaning of the forward windows.

The pilots and co-pilots seats are placed side-by-side with a gangway between them. They are adjustable vertically while the rudder pedals are adjustable horizontally to take care of variation in pilots size. The instrument boards are variably, individually and indirectly lighted. All of the engine instruments are electrical including the tachometers. Electrical pressure gauges for oil and fuel have an advantage over the hydraulic type in that a true measure of pressure is given. Navigating instruments are of a high order of quality. The mark VI compass is supplemented by a directional gyro and an artificial horizon. The quality of these instruments has been surpassed, if anything, by the flexibility, bonding and shielding made in the electrical system connecting them. The high quality of this work was required to obtain the perfection of radio communication desired.

The electrical supply is obtained from an engine driven generator charging through a 65 ampere hour 12 volt storage battery. This supply is used for lighting, starting, and landing lights as well as the engine instruments which also tap off the battery for the balancing circuit. Lighting accommodations include dome lights through the hull, trouble lights and numerous instrument board lights. The electrical starters are of the Eclipse type with the usual solenoid device for starting and meshing. General Electric landing lights are built into the leading edge of the wing with



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pyrex glass enclosures molded to fit the contour of the wing. The shielding of the entire electrical system is especially elaborate and all electrical lines are run through solid or flexible metal conduits with the conduits grounded about twice as frequently as has been common in commercial practice. Each conduit is thoroughly tied electrically to the pull boxes and between connectors.

The flying controls are in duplicate, the pilot and co-pilot being arranged side by side. The conventional wheel controls are used for elevator and ailerons with the respective control wheels being fastened to a tubular dural bridge spanning the two pilots legs. All cables in the pilots cockpit are of stainless steel utilized for its non-magnetic qualities. The aileron is given differential action (of 10° down and 25° up movement) by a quadrant in the aileron system while the elevator and rudder connections run direct to their respective surfaces.

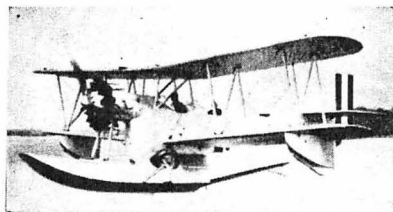
#### Beaching Gear

The beaching gear provides a very flexible operating feature without the penalty of weight and drag of conventional amphibious landing gear. The two main struts are built up of horseshoe shaped light aluminum alloy legs tapered to enclose a 22x10 inch Goodyear airwheel at the bottom. These are hinged to the front spar and supported against lateral and longitudinal forces by a built up lever which unfolds from the side of the hull at the chine to engage these main struts. In flight, these struts are retracted and partially submerged into the bottom of the wing, while the chine levers submerge into the hull.

#### Radio

It is no exaggeration to say that the airplane has been built around the radio system. The radio room is just back of the pilot seats and extends along one entire side of the cabin for about six feet. A trailing antenna is suspended from the rigid wing. A direction finding loop is mounted over this radio compartment and operable by the radio man from his seated position. Emergency radio masts are provided for operation when on the surface of the water. The main power supply for the radio is supplied by an engine driven twelve voltage generator. Provision is included for attaching a wind driven generator for an alternate supply. The short wave radio set is supplied from a special battery installation. This development is the Coast Guard radio personnel's most recent and as radio communication and navigation has been one of their most important considerations their success with the FLB-50 installations must be very gratifying.

In summing up these various features of the FLB-50 series of craft, it is further felt that the U. S. Coast Guard's aviation personnel can sincerely feel proud of the results of their first attempt to lay down specifications, supervise inspection and generally control the procurement of these flying boats.



## U. S. Air Services

Feature  
Aeronautical Magazine  
of America

Established February, 1919

THIS publication wishes to extend to the United States Coast Guard its heartiest congratulations on obtaining the first of a new series of flying boats to assist in the splendid work it is performing daily.

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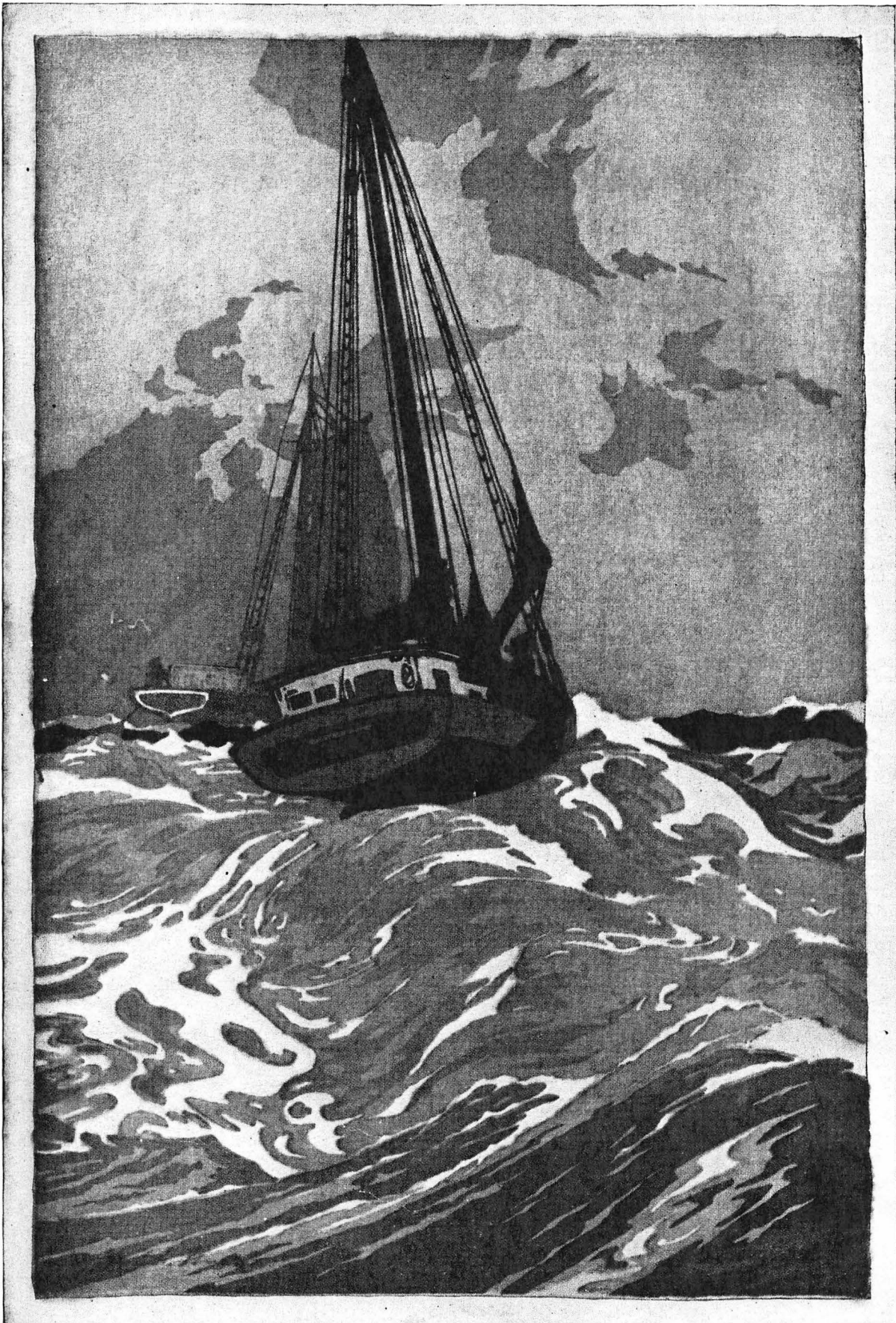
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AVIATION AIDS FISHERMEN

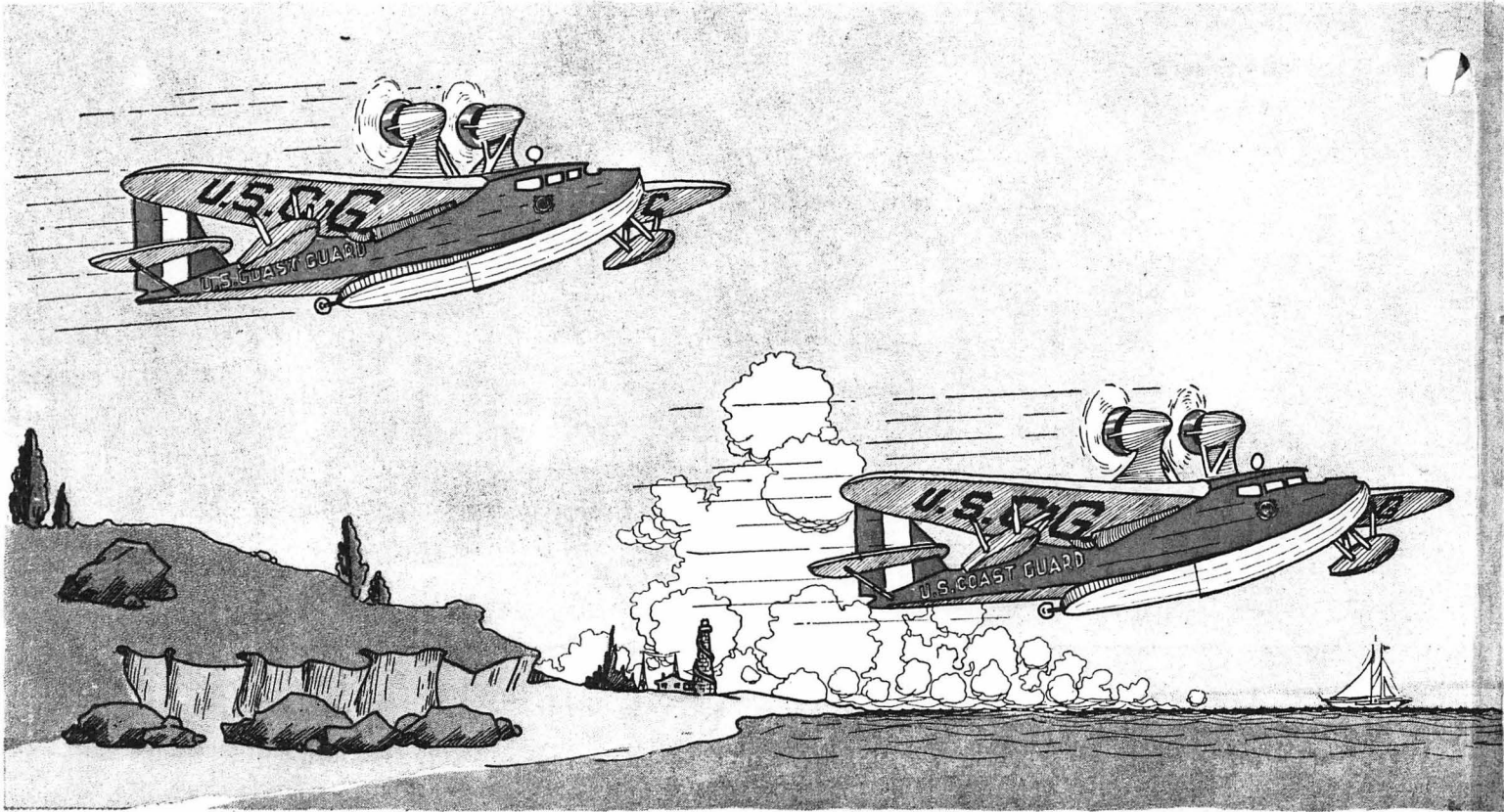
Vacuum Oil Co. Illustration.

On numerous occasions Coast Guard aviation has aided fishermen. From great heights the planes can easily see schools of fish. Thus valuable information is sent to the fishermen by radio.





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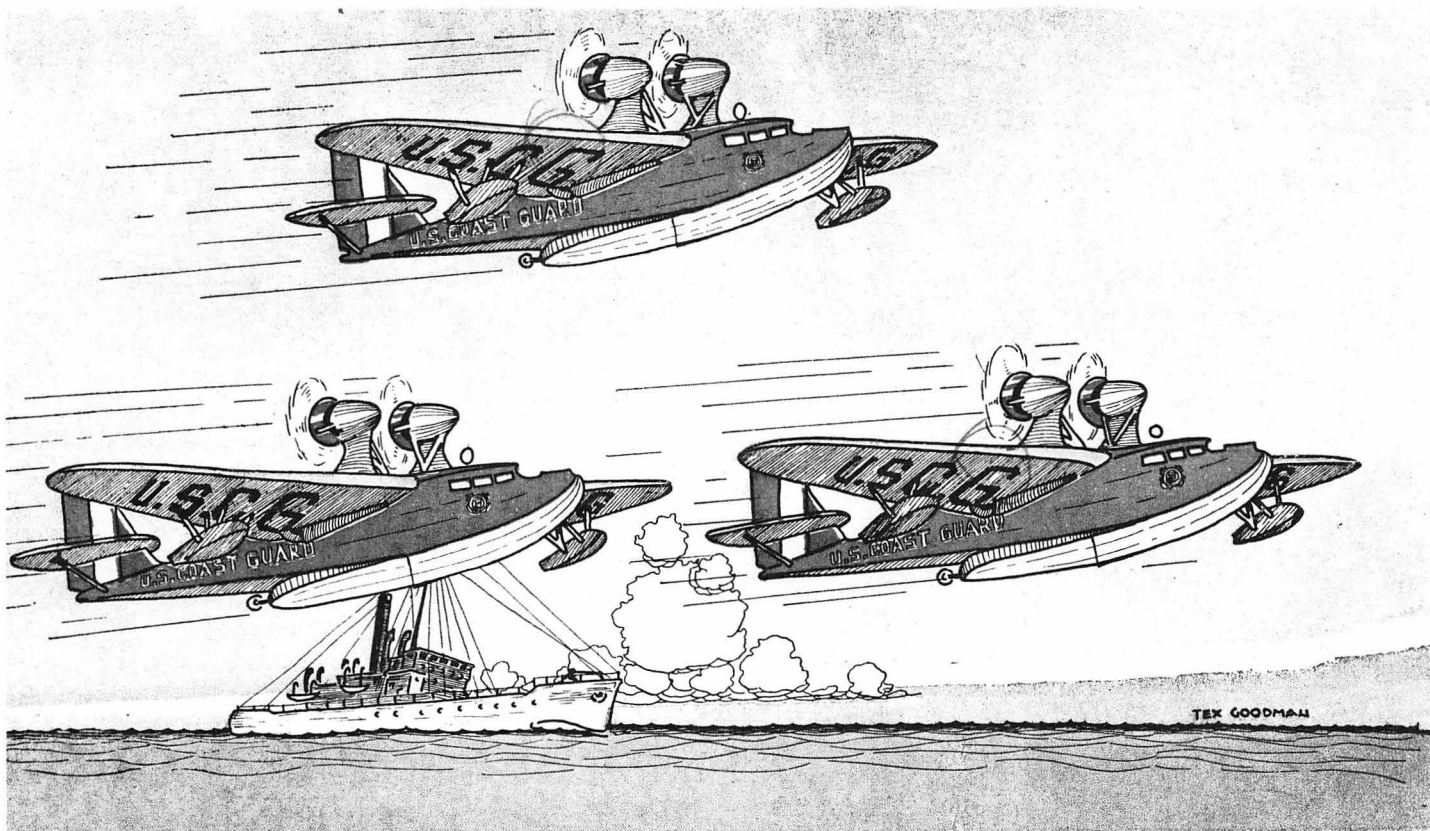
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*Of these boats in the accompanying article by H. V. Thaden, Factory Manager, General Aviation Manufacturing Corporation, starting on Page Three.*

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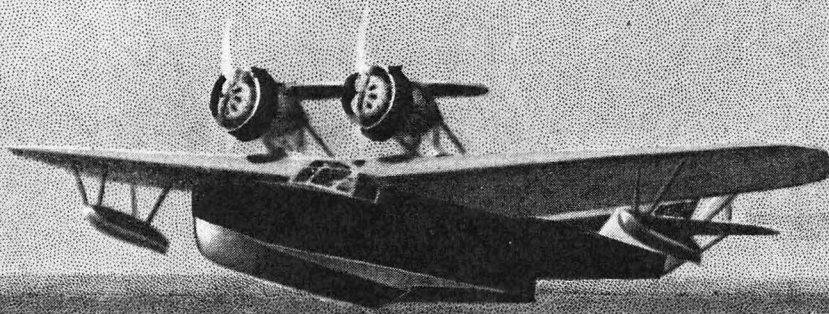
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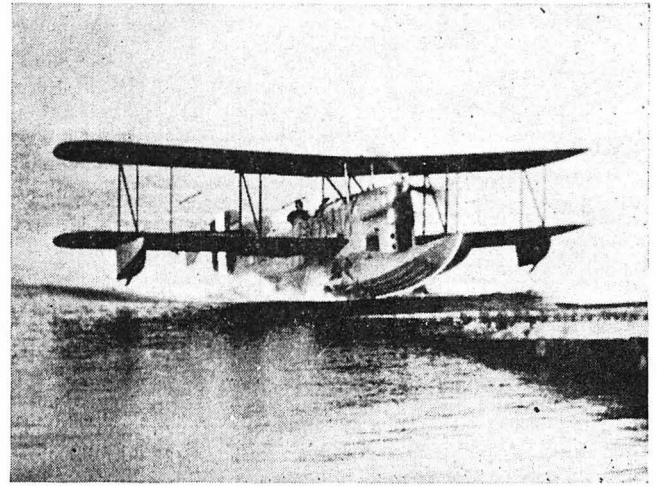
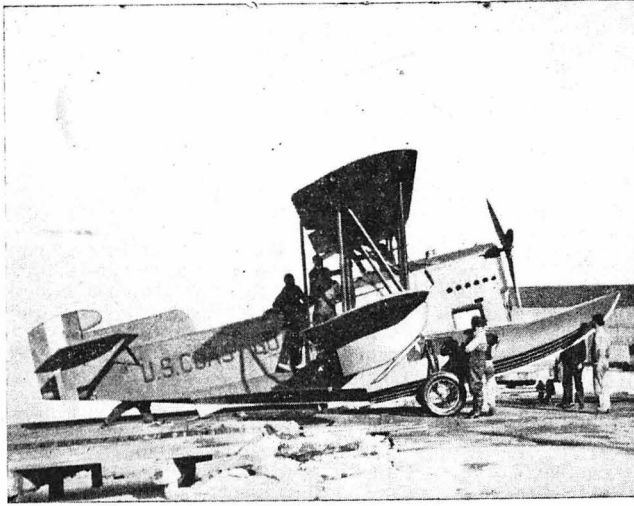
DOUGLAS

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# Flying Boat Design Related To Its Uses

The author is the General Inspector of Naval Aircraft for the Eastern District, with headquarters in New York, a member of the Naval Construction Corps, and for many years a member of the engineering staff of the Naval Aircraft Factory, at Philadelphia.



## A WORTHY COAST GUARD VETERAN OF THE AIR

Illustrations show the Loening Amphibian OL-2, still carrying on in the Coast Guard after almost six years of daily operation.

**W**ITH four-fifths of the earth's surface covered with water and with overseas transportation a practical necessity, the full development of flying boats is a matter that can hardly be conceived even in the wildest dreams of the most imaginative. As a mode of coastal or overseas transportation the flying boat has advantages that assure it to be a definite competitor to boats and ships, to automobiles and trains, and to other types of aircraft. The only limiting features that it now presents are high costs of operation and a limited radius of action. Experience is a fundamental in reducing costs and the radius of action or range will have to be accepted until invention can provide a way for the desired increases.

### For Coastal Defense

As a part of the military organization every country possessing a coast line will require the added protection given by the flying boat as a patrol, as a scout, as a torpedo carrier, and as a bomber. And every country having overseas colonies can hardly neglect the transportation presented by the flying boat. As a part of the coastal guard in its peacetime pursuits and as a part of the coastal defense in a country's wartime pursuits the flying boat meets a featured need. Only in the sense that a seaplane cannot become a fighter and that it cannot be adequately protected inherently against fighter attacks is the flying boat sufficient unto itself as an all around war machine. Its use to and from aircraft carriers and other surface vessels will very likely come about through the development of light weight and simple amphibian gears.

The flying boat is not as out of place overland as the landplane is when it is over the water. There have been several cases where seaplanes have had to make emergency landings on fields and in no case has the damage been equivalent to that done when a landplane has had to land in the water. The reliability of aircraft is generally on the increase so emergency landings are relatively downward. However, with seaplanes a landing field always exists when the ship is over the water and conditions for an emergency landing while over the land are almost equal to those existing for a landplane. Accordingly it can be reasoned that flying boats meet a variety of desires wherever the terminals are situated near a body of water or where most of the operation is an over-water route. It is not difficult to point out that a seaplane base exists near every large city and that a seaplane base is by far less costly than an airport. And that operation between our largest ports and cities is over-water transportation.

## Flying Boat Authority Tells of Adaptability of This Type of Aircraft. An Article Worth While for All Interested in Aviation.

By Lieut.-Comdr.  
WILLIAM NELSON (C.C.), U. S. Navy  
(In the U. S. Air Service Magazine)

Up to the present time comparatively few flying boats have been built. And those that have been constructed have been produced at the instance of the military organizations of the various governments. Several factors have been responsible for this condition, the most important being the complete and concentrated interest of the aircraft constructors and operators in the rapid development of the landplane. The advance of the landplane in the last few years has required considerably more attention than has been available in the form of trained individuals, but this advance has tempered and the personnel has been trained so it appears that the broadening of interest in the boat type of aircraft is practicable, desirable, and hardly to be avoided. The construction of flying boats, however, does have an interesting history of steady progress behind it in spite of the lack of a popular demand. This history dates back to the World War when the production of patrol planes on a large scale was an actuality, and since then flying boats have served in many capacities in many parts of the world with a general satisfaction that makes it an outstanding peculiarity that their value has not heretofore been fully realized.

### Design No Simple Matter

The design and construction of flying boats is no simple matter, involving as it does the full capacities of naval architects as well as aeronautical engineers. The naval architect is necessary to evolve a hull which is typically seagoing, thereby giving seaworthiness in all its ramifications. And also, it is a matter of great concern to incorporate in the hull those features essential for the high speed that the seaplane undergoes when taking-off. Every hull which has lines peculiar to itself must be run for complete tests in a model basin if the expectations of the designer are to be approached. And on the other hand, the aeronautical engineer must mold the hull, the wings, the control surfaces and the engines to evolve an airplane that is thoroughly airworthy and efficient in the performance of its service. To give and take in the compromising game that is presented to the aeronautical engineer in producing a flying boat is perhaps one of the most difficult works of engineering art now available. It must be remembered, however, that completeness has not been exemplified in any of the flying boats built. This in itself indicates the intricacies of the matter.

### Functions of Flying Boats

Like all other airplanes the fundamental requirements of a flying boat is that it must transport a pay load at high speed. The pay load in this case may be commercial in aspect or military in character. The more valuable the object



in proportion to its weight and size the better. The matter of high speed is relative. Depending somewhat on the distance apart of the terminals the higher the speed the better, provided the degree of safety is not changed materially. High speed reduces the time persons or objects are in transit and unless the transportation is entirely one of sightseeing this time saving is usually of economic value. There is a limit definitely determined by economical phases where the cost of high speed is too great for the gain to be attained. Practical matters of construction have determined the top speeds so far and it is likely that such will be the case for some time to come. Flying boats doing one hundred to one hundred and twenty-five knots are such vast improvements over the other overseas transportation means that the comparison is inclined to be a little ridiculous.

The second requirement of a flying boat is that it must be a controllable machine. Being a controllable means of transporting pay load at high speed the basics are met and we have a controllable economic advantage. This is a form of the essential required in the progress of civilization.

Before proceeding to the elements of design, it is perhaps advisable to discuss the commercial and military applications of flying boats in order that one may see what the demands are. It is granted that each of these uses may demand its own type of craft more suitable for its own purpose than it is for the others but that stage is still in the offing. At the present time each design that has been produced has been a complete compromise in that endeavors have been made to allocate it to all services. This, of course, is fundamentally incorrect, but it has been and is a means to an end until the cost of producing individual features can be absorbed by the operating units.

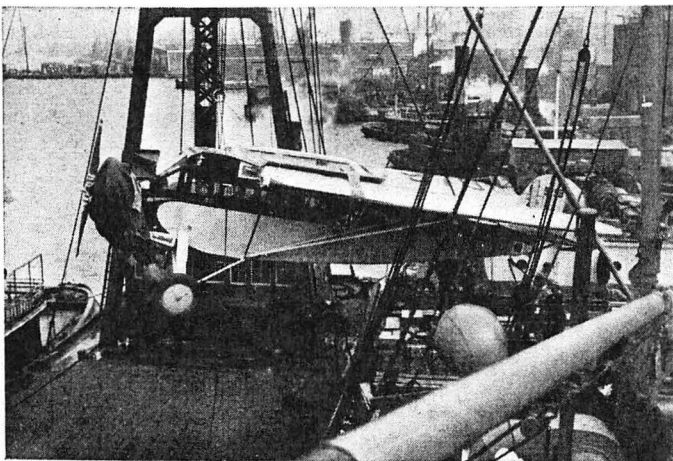
#### Military Functions

The present flying boat of the military organization is substantially a long range airplane. Aside from the crew and its effects, the useful load is given over to the carrying of fuel and limited armament. This arrangement permits of extended patrolling and scouting over the sea areas adjoining the bases from which the boats operate.

The use of flying boats as military transports has not developed although it is expected that such a use will be a natural result when the need arises. The speed with which troops can be conveyed to a destination lying beyond the shores makes it possible to concentrate and to act more quickly than would otherwise be the case with the resultant advantages accruing to such an offensive move. Likewise the flying boat makes it possible to advance a landing party from a fleet under conditions more nearly within the control of the leader. The full utilization of the carrying capacity and of the high speed combined in the flying boat gives added freedom of action to the military command.

The laying of smoke screens, the making of raids, bombing, and the many other military functions incorporated in military aircraft generally extend equally to the flying boats. Extended sea coasts to be defended and overseas operations in the offensive actions demand a preponderance of strength in the diversified services rendered by aircraft capable of incorporating seaworthiness features.

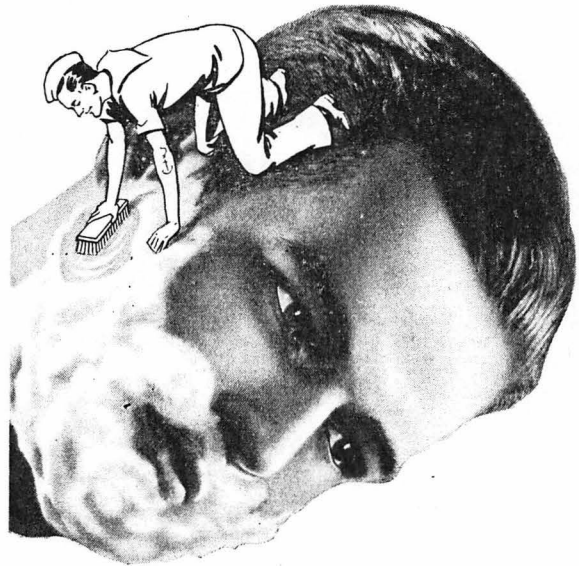
Next to being a controllable craft of high speed, the most



#### WHEN FORESIGHT COUNTED

In the original plans constructing the new "Lake" type cutters provisions were made for the emergency deck storage of planes. The value of this foresight was illustrated when Fairchild cabin plane was carried from Seattle to Alaska on the Cutter CHELAN. Illustration shows the plane being brought aboard the cutter.

## NO MORE PAINFUL "DECK-SCRUBBING" SHAVES



## Sink that beard in this extra-moist lather

---softens whiskers---soothes skin

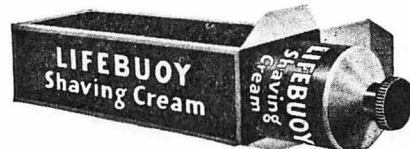
**A**HOY Mates! All aboard for the smoothest fastest shave you ever had. For this new lather sops up water like a sponge—stays moist—and gives the best-feeling shave on any coast.

#### Holds 52% More Moisture

Lather up with Lifebuoy Shaving Cream. Then see what short work your razor makes of the lather-softened whiskers. Notice how long this creamy Lifebuoy Lather stays moist on your face. Laboratory tests show that Lifebuoy will hold 52% more moisture than ordinary lather. It has the famous protective ingredient, too—that made Lifebuoy the *biggest selling toilet soap* in the Navy. That's why it soothes the skin and leaves your face so cool and smooth, and as fresh as a summer morning.

#### Test It Yourself

If you haven't tried Lifebuoy Shaving Cream, you're in for a real surprise. You're in for easy, comfortable, speedy shaves—without sting or burn or after irritation. Why wait? Enjoy your first soothing Lifebuoy shave tomorrow. Get the big red tube of Lifebuoy *today*.



# LIFEBUOY Shaving Cream



**TWO OF COAST GUARD'S LEADING PILOTS**

At the left is Lieutenant Commander C. G. von Paulsen, stationed at Coast Guard Aviation base, Cape May, New Jersey. Lieutenant Commander von Paulsen is also qualified for engineering duty and entered the Coast Guard in May of 1910. At the right is Lieutenant L. M. Melka, now on temporary duty with the General Aviation Manufacturing Corporation, Dundalk, Maryland. Lieutenant Melka entered the Coast Guard in August of 1926.

important characteristic of a military flying boat is its ability to ride out a sea. Military craft are expected to encounter rather rough seas in their operation due both to the absence of choice in the matter of weather and to the length of the operations. Accordingly there is an essential that the construction be rugged and if possible, it is desirable that it remain intact and operable in seas of more than normal severity.

**Passenger Transport**

The most important commercial function of flying boat operation is the transportation of passengers. The urge and the need for individuals to be in some other place besides the one they occupy is so great that they pay well for reliability, safety, high speed, and comfort. The time consumed by surface vessels and trains in going between two points is from two to ten times that required by an airplane. And in some cases the inconveniences of the older forms of transportation are such that the modern nervous system of mankind is not capable of coping therewith. Accordingly, economic benefit as well as the desire for individual freedom insures the increasing demand for individual transportation.

The passenger, in being transported, demands above all things a very high degree of safety. This demand to a large extent is inculcated by a fancied opinion of the public that air travel is filled with accidents. Exactly how dangerous flying is for the passenger can be determined from reports that are available; but one can be assured that an airplane aloft is a long way from being characterized as 'dynamite.' The records will also show that the airplane in itself is very reliable and that improvement in the degree of safety can be effected most readily by experience on the part of operators.

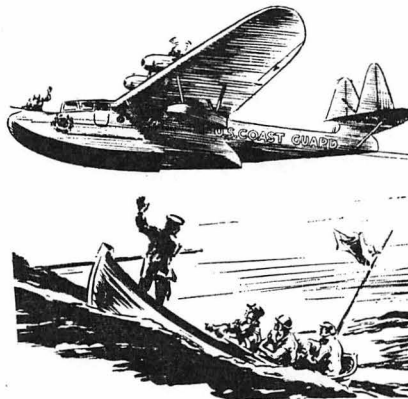
So far as the safety of the flying boat itself is concerned, improvements in the reliability of the engine operation and in the handling of the boat to and from and on the water are worthy of consideration. The first is being taken care of by increasing the number of unit power plants and by decreasing the number of engines necessary to maintain flight—aside from the inherently more reliable engines being produced by the engine builders. The second matter is up to the aircraft designers entirely in that few flying boat designs now available are capable of being properly handled on the open sea and of riding through the effects of

a rough sea. Then handling of a flying boat on the water should require a degree of knowledge regarding seamanship, but as matters now stand it would be difficult for the most experienced individual to make the least headway in a running sea due to the lack of surface craft characteristics. It is not intended here to impugn the reputation of airplane constructors, for much has been done with little experience, but to give the operators a fair deal a great deal can be done by the designers in giving their seaplanes a reasonable degree of emergency seaworthiness.

Although of primary importance in case of an accident, but as a matter that is relatively well controlled, the fire hazard exists. In this respect fuel is the most potential source of danger. Stick and fabric construction exist in flying boats of older types only, but metal construction is far from being a good fire risk. The location of the fuel tanks and the control of the conveyance of the fuel to the engines determine to a large extent the degree of the fire hazard. Wing fuel tanks and double bottom tanks should have a lower insurance rate than where the tanks set into the inside of the hull. The fuel piping and its connections must be built for rugged operation and simple manipulation. If the heat of the engine can be kept away from spraying fuel the accomplishment is worth the candle. Heavy oil engines for aircraft will practically eliminate the fire hazard.

**Built Sturdy**

A flying boat presents a stalworthy construction compared to the ordinary landplane and confidence on the part of passengers seems to be engendered thereby. A boat that has the characteristics of strength and stability in comparing it with a surface vessel makes the matter of dangers at sea considerably less. It can hardly be said, however, that the elements of speed and fineness of operation in the air should be sacrificed at the expense of construction which has not yet been proved to be absolutely necessary at sea. The type of flying boats that designers are heading for slowly will incorporate those features of design which will make inherently successful in the air as well as in the



roughest seas.

In mentioning reliability as a requirement for satisfying the passenger it is intended to convey a meaning of regularity. When the passenger can depend on a service of transportation he will eventually become dependent thereon. This is primarily up to the operator when he is given a rational and



**COAST GUARD STUDENT FLIERS AT PENSACOLA**

Left to right, Lieutenant (J.G.) W. A. Burton, Lieutenant W. A. Foley, Lieutenant (J.G.) G. H. Bowerman, Lieutenant (J.G.) C. B. Olson, Coast Guard Line Officers undergoing flight instruction at U. S. Naval Air Station, Pensacola, Florida.

a reasonable craft to fly.

Comfort of passenger in flying boats is considered to be superior to that prevailing in other types of aircraft. Engine noises and vibration are reduced by the distance of the engines from the hull proper and by the insulation that it is possible to build into the cabin space. The size of a flying boat hull is usually dependent on the buoyancy that the craft must have and, as a consequence, a sense of spaciousness is possible in the passenger spaces. This, of course, is an advantage, for flights of over a few hours are exceedingly tedious unless some movement about the craft is possible. Sleeping arrangements in the form of berths are necessary where long flights are contemplated and the adaptation of cabin spaces in Pullman style is practicable. Many of the routes being flown overseas are in tropical climates where the heat in closed spaces is almost unbearable. For safety reasons open ports are undesirable. Forced ventilation with controlled humidity may give airplane builders a control on the matter of atmospheric comfort that is desirable and in a measure necessary.

Due consideration by aircraft designers to provide means for the passengers to relieve themselves of the monotony of continuous travel renders a service. This in itself involves special installations which can be folded into out of the way places and which are conveniently handled when in use. Air travel like other travel will find a varying class of individuals to please and the ingenuity of the interior decorator may be of benefit to the aeronautical engineer.

#### Express and Mail

The revenue to be expected in any air transportation should be in proportion to the pounds-miles transported. This is based on the assumption that various routes are equally difficult, which assumption is not now correct but will be in time. On a pound-mile basis the transportation of express and mail is a more prolific source of revenue than the handling of passengers. This is reasonable and will become more evident as the volume of air transportation becomes greater.

It is not necessary to point out the many advantages that accrue to the speeding-up of express and mail movement for these have been discussed fully by others; but it might be well to mention that outlying countries brought nearer to the United States by the flying boat will automatically increase the export side of the ledger and give the world a share in the higher level of living enjoyed by the Americans.

In the handling of express and mail by flying boats more leeway can be allowed so far as safety is concerned than is the case with passenger carrying vehicles—reliability, on the other hand, must be adequate, particularly during the early years of development. This is essential for the moral effect and to help advertising.

More night flying can be expected with express and mail than is the case with passengers, but this should not influence the design to any great extent excepting as night-flying equipment is necessary and more instrument flying will be done. This in itself will also call for more navigation by the stars.

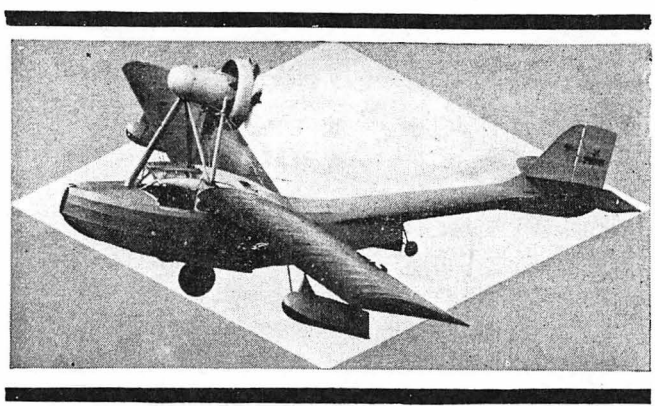
It can be expected that in time as the services become well known and standardized older boats will be pressed into service as express and mail carriers while the newer vessels take their places in the passenger field. The adaptation of one to the other is not particularly great.

#### Design Items

The most important item in considering the items of design is the size of the boat. This can be determined only from information on the route to be flown and the weight to be transported. If the range is within 700 air miles it is possible that the 20,000-lb. boat will serve equally well as a 40,000-lb. boat making the proper exception to the fact that the larger boat will carry the greater load. The efficiency of carriage in either case is equal, however, since the pay load and the fuel load are equal. Where the range exceeds 700 air miles the size of a flying boat must be relatively large to carry a reasonable pay load.

Most flying boats now in existence weigh less than 20,000 lbs. gross. A few boats of over 40,000 lbs. gross weight have been built and utilized to advantage. It appears, therefore, that anything up to 50,000 lbs. is within the capacity of the designers, constructors and operators. Above that weight it is advisable to maintain a cautious attitude.

It is proper to mention at this point that from 40 to 50 per cent of the gross weight can be given over to the useful load. This useful load takes in the weight of the crew, fuel and oil, pay load, and special arrangements for the pay load. The crew may number from three to six, depending somewhat on the size and on the service. The special equipments vary with the service only. After deducting these items from the useful load the remainder is split between the fuel and



## Now you can afford to own an amphibion

**T**HIS is an amphibion country by virtue of its thousands of miles of inland and coastal waterways. Sportsman pilots and commercial operators now can afford to broaden their flying activities and utilize the airplane throughout its entire scope of usefulness. Dealers, too, can approach prospects who up to now have been "cold" because of the high-cost situation which the PRIVATEER III has overcome. ¶ \$8,990 is the attractive price of the new PRIVATEER III, first and only high speed cabin amphibion selling at so low a figure. ¶ With the Continental R-670 of 215 h.p. the PRIVATEER III carries three (and luggage) in a comfortable, well appointed cabin at 120 m.p.h. The cabin, sound-proofed and ventilated, is equipped with sliding windows, dual controls, windshield wiper and a sliding door on each side. ¶ Among other important features are the automatic, positive-action retractable landing gear; the non-corrosive hull structure; shock absorber-equipped wing tip floats; location of the pilot forward of the leading edge, etc. ¶ If you will write or call, we shall be glad to furnish complete technical data and other information—and to arrange a demonstration flight.

## AMPHIBIONS, INC.

Garden City, Long Island, N. Y.

Top speed, 120 m.p.h....cruising, 100 m.p.h....span, 42'5"....length, 30'....height, at rest on ground, 11'7"....power, 215 h.p. Continental R-670....new type Townsend Ring....Heywood Injection Starter....low pressure tires....fuel level gauge....tachometer....oil thermometer....altimeter....air speed indicator....compass....tools....anchor....rope....fire extinguisher.

the pay load, the most efficient adjustment, from a commercial viewpoint, being an equal division by weight, other factors being regarded alike. The extreme range with present boats and with all pay load displaced by fuel is not much over 1,500 air miles.

The range now given approximates one thousand miles; but there are some routes that will require a range of two thousand miles such as the Azores-Bermuda trip. Increased speed over these long routes should be worthy of consideration at the sacrifice of the cost.

#### Planes Not Fine

Airplanes of the present day, generally speaking, are not fine. Complete investigation of any design will indicate that a fineness does not exist. Some of this is due to the lack of respect for the results achieved by "a cleaning up" of the craft; but it appears now that the tendency is towards increased performance, and since the refinement of line and the cleaning-up are sources of improvement in this respect, the designers will undoubtedly give heed to the matter. The flying boat hull is a particular point of interest since aerodynamically the hull could well be improved by giving it a more satisfactory streamline form. It must be realized in this connection that increased performance in the matter of range is sorely needed by flying boats and improvement in reducing drag is of double value until the range can be put over the 2,000-mile point conveniently.

Aerodynamically the flying wing is a beautiful prospect, but flying boats can grow to that from the present hull-wing-nacelle-tail arrangement only through many growing pains. Flying boats are, generally speaking, more airworthy than they are seaworthy. A substantial hull, cleared of minor protuberances and extending far enough aft to carry the tail surfaces high and dry, seems to be accepted by most flying boat manufacturers as the desired trend. It is unnecessary to point out that internally braced wings come nearer meeting the immediate ideals of the aerodynamic engineer than the other forms and although externally braced monoplanes and biplanes are prevalent among the flying boats now the aerodynamic engineers' wish will soon be met more than half way.

#### Easy Control Wanted

In considering the other aerodynamic features of controllability and stability, much remains to be done. The present state of the art is such that duplication of previous experiences seems to be the easiest way out, but the clamor of operators on long trips is becoming sufficient to make the designer think long and arduously to produce a boat which is positively stable and easily controlled. The locations of the various parts of the craft, their form, and control over certain parts such as the stabilizer, the elevators and rudders have a bearing on the stability and the controllability. Multiple motors placed on the wings demand special positioning of the engines with respect to the tail surfaces and in some cases multiple rudders are essential to gain the advantage of the slip stream from the propellers.

The most pronounced defect noted in the present day tail surface design is a lack of rigidity. Excessive vibration of the tail can result in failure of the tail as a whole or of individual parts.



**FLIER**

Lieutenant (T) L. Christopher, Coast Guard pilot stationed at Section Base Nine, Cape May, New Jersey.

In addition the weaving of the after structure with respect to the forward structure is bound to cause some loss in the controllability feature.

Flying boats are essentially heavy airplanes. Accordingly, to permit a maximum of maneuverability at the expense of weight and stability is neither necessary nor desirable. Maneuvers in the air of the most commonplace character are sufficient provided no element of safe control is overlooked. On the other hand ease of control over the actions desired is necessary to relieve the pilot of undue exertion on a long trip. Servo-control or mechanical control are within the range of practicability.

#### Speed Essential

High speed is the item that makes the airplane an important unit of transportation. Higher speeds will make it more important. Flying boats now have a cruising speed of about one hundred miles an hour. This, of course, is a great improvement over surface craft with speeds of less than thirty knots as the indicated maximum but the comparison should no longer be considered. The speed of flying boats should now be regarded as the initial step towards the ultimate reasonable speed which is believed to be near the two hundred miles an hour mark. By improvements in the power plants and in the ships themselves in their use of the power provided a doubling of the prevailing speed is believed to be reasonable.

The matter of high speed is of primary interest where the distance between terminals is great. The time consumed by passengers to reach the terminal

and to get away from a terminal to the ultimate destination must be small in proportion to the air travel to give full benefit to the completed voyage. For the time being most flying boat transport will be done between sunrise and sunset. Consequently the greater the distance which can be covered in that stretch the more advantageous such travel becomes.

The amount of power that an airplane of the type being considered requires is determined largely by the gross weight to be handled. Greater power even to the extent that a craft becomes materially overpowered is a wish that is hardly ever fulfilled. The higher the power the better the performance. The problem goes on forever.

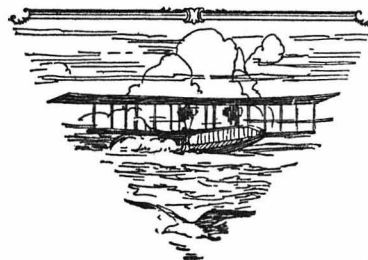
#### Power Plants

Multiple power plants cannot be avoided in the present day boat. As many as twelve units have been employed. Factors of safety are relatively high with four engines. Four engines installed, with full load flight practicable on three, seems to be an efficient combination. Then as the fuel is consumed, flight with only two engines is within reason. This permits a combination that does not require unusual co-ordination of power plant and that is not too complicated. And yet, it gives a degree of maneuverability with small chance of complete failure as an airplane. Much discussion has taken place on small boats as to the number of power plants desirable. Due to the great difficulty that exists in placing one engine favorably the writer has felt that two engines should be the minimum considered. The increase in weight is not believed to be insurmountable.

#### Fuel Paramount

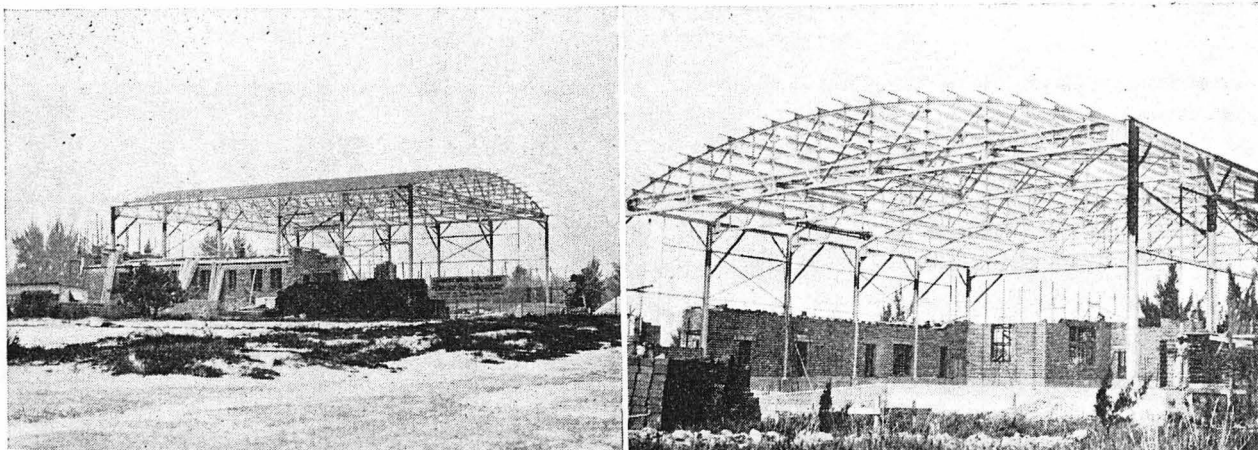
The arrangement within a flying boat depends on the service to be rendered. The first consideration as a rule is the location of the fuel. The use of double bottoms for fuel or the placing of tanks in the wings seems the most reasonable disposal. Either of these allows rather open space in the hull for useful and pay loads. The pilot's cockpit is ordinarily just forward of the wings. That more or less limits the use of the space forward of the cockpit for radio or some semi-permanent part of the useful load. Between the cockpit and the tail the pay load finds ample space to make exact location convenient. Other considerations also dictate that this space shall be so used. Baggage spaces, passenger spaces, or its equivalent in a military machine must be specially resigned to obtain full value for such utilization.

Before concluding the author wishes to stress the need for designers of flying boats to head more into the open in the matter of making this type of vessel cleaner aerodynamically and more worthy of its seagoing title by being truly seaworthy. The fundamentals for meeting the nature of service to which it will be adapted can only be gleaned from the experiences of the sailor and the aviator. The future of the flying boat as a high speed load carrying device for overseas service seems assured to augment the services rendered by liners, tramp steamers, cargo vessels, river boats, yachts, transports, patrol ships, cruisers, scouts, mine layers, survey ships and other water borne vessels in commerce and in military service.





# New Coast Guard Air Station, Miami, Fla.



## NEW COAST GUARD AIR CONSTRUCTION

Illustration shows the construction under way for the New Coast Guard hangar at Miami, Florida.

**Lieutenant Commander C. G. von Paulsen, U.S.C.G., to Command New Air Base on Coast of Florida. History of Previous Air Station Efforts.**

**T**HE United States Coast Guard received authority from Congress in 1916 to establish ten Coast Guard air stations along the Atlantic Coast, Pacific Coast, Gulf of Mexico, and the Great Lakes.

The first air station was established at Morehead City, North Carolina, where practically all of the equipment consisted of discarded war material. Insufficient funds and poor equipment soon forced the abandonment of this station.

The next attempt to establish an air station was at Ten Pound Island in Gloucester Harbor where almost insurmountable difficulties were overcome and a make-shift hanger was erected. For five winters Coast Guard aeroplanes have been operated from this hanger which has no heat, no fresh water supply (except rain water from the roof) and which has a canvass curtain for a door.

### At Gloucester

The story of the construction and operation of the Gloucester Air Station parallels the story of hardship and self-sacrifice that occur only at places far removed from civilization and some day the story will be written.

The next air station was established at Cape May using the Naval hangers that were built during the war. These hangers were also unheated and are, in general, in poor condition. In fact it is probable that the cost of upkeep has equalled the cost of a new and adequate hanger at that point. However, the excellent humanitarian work performed at these two air stations and the valuable assistance given to surface craft by the planes indicated that additional stations should be established.

The cost of the valuable aircraft in searching for other aircraft that may become disabled, volume of over water air transport on the various coasts was investigated and was found that in Miami, Florida the greatest number of passengers was being transported and Miami was selected for the first real Coast Guard air station.

### Early This Year

On January 12, 1932 ground was broken and the Coast Guard officially took over the land at Dinner Key upon which to establish a station. Work was started immediately and the hanger is now approximately 65% completed. The hanger is of hall tile construction, 100 by 100 feet, with 31 by 31 feet extension in the rear. Along one side of the hanger are the officers' locker rooms, storerooms and machine shop.

Floors are reinforced concrete having a slope sufficient to permit one man to roll the large Coast Guard seaplane out of the hanger without any assistance. All exterior and interior doors are of metal construction except the large front door which is of steel built in one piece standing 26 feet high and 100 feet wide. This door is so construct-

ed that it can be opened either electrically or manually in a few seconds.

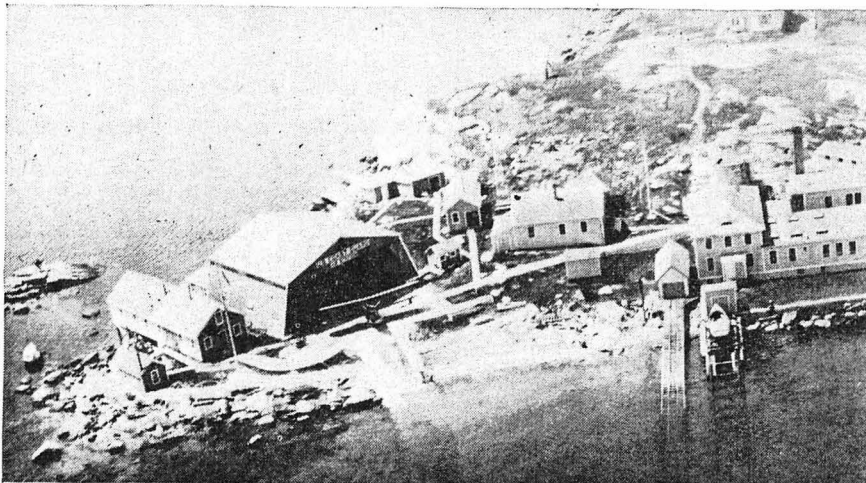
Hot water heating system, modern plumbing, and electric lights are also installed.

This hanger will accommodate five planes. The entire equipment of this air station is new, modern, and adequate.

It is expected that the Service will very soon prove its value to the commercial interests, the outing fraternity and to the Coast Guard under the direction of Lieutenant Commander C. G. Von Paulsen, U. S. C. G. who has been ordered to command.

### U.S.S. PONTCHARTRAIN

The cutter PONTCHARTRAIN, Captain William T. Stromberg, commanding, was host at a quasi-official reception at Halifax, Nova Scotia, to Canadian officials and dignitaries. Full honors were given to the following: Lieutenant Governor of Nova Scotia Walter H. Covert, Chief Justice of the Supreme Court of Nova Scotia Joseph A. Chisholm, Consul General of the United States George E. Chamberlain, and Brigadier C. F. Constantine, Royal Canadian Regiment, Commanding Halifax Garrison.



### AT SECTION BASE SEVEN

Coast Guard Airplane Hangar at Section Base Seven (Ten Pound Island), Gloucester, Mass. Lieutenant Commander Fletcher W. Brown, U.S.C.G., commands Base Seven.

Norward L. Mathews Photo

# The Commissioning of The New Antares

EDITOR'S NOTE:—Deeply interested in the promotion and modernization of the Coast Guard the last public official act of the late Rear Admiral Billard and the last public address of that sterling officer was on the occasion of the commissioning of the ANTARES, the first of a fleet of five new General Aviation Corporation flying boats for the Coast Guard. The article reproduced herewith was written by Admiral Billard shortly before his demise.

## New Flying Boats to Serve as Valuable Life-Saving and Patrol Adjunct to U. S. Coast Guard.

By

REAR ADMIRAL F. C. BILLARD  
U.S.C.G.

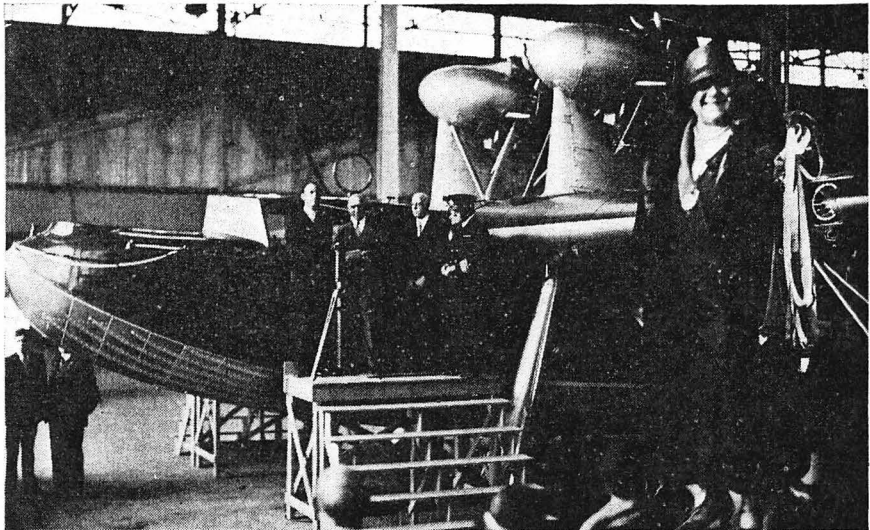
It was my privilege, a month ago, to witness a most interesting event, the placing in commission at Baltimore, Md., of the ANTARES, the first of five new airships for the United States Coast Guard.

Through the 142 years of its history, the Coast Guard has rendered aid to shipping and to mariners and passengers afloat by means of its seagoing vessels and of the lifeboats and surf-boats that operate from its shore stations. The time has now come, under modern conditions, when the Coast Guard must be prepared to augment this humanitarian work by the use of aircraft. The advantages of aviation in a wide variety of fields are becoming increasingly apparent. An adequate force of seaplanes can be of tremendous help in the work of the Coast Guard and thus contribute to the safety of marine commerce and to the safety of commercial seaplanes that fly over the water. A Coast Guard plane can quickly scout over a large area of water and locate a disabled vessel that needs assistance, or perhaps a missing small boat. Often a small yacht or power launch will breakdown at sea, and her failure to return to port at the expected time will cause great distress of mind to the families and friends of those on board. Such a case is always reported to the Coast Guard, and Coast Guard vessels immediately proceed to sea in search for the missing craft. A Coast Guard plane can find the missing boat so much more readily and speedily than can any number of surface craft. When the plane finds the missing or disabled vessel, she communicates by radio with the nearest Coast Guard surface craft, which proceeds to take such vessel safely in tow.

### Menaces to Navigation

One of the greatest menaces to the safety of navigation of ships at sea are derelicts and other obstructions to navigation, of which the Coast Guard removed or destroyed 370 in the last fiscal year. A derelict is an abandoned hulk floating about, with no one on board, and with no lights, and constituting a real danger to navigation. As these derelicts float every which way, under the impulse of winds and currents, it is often a very difficult and tedious task for Coast Guard surface craft to locate them. It is readily apparent how much more quickly these obstructions can be found by the use of aircraft.

Coast Guard planes assist fishermen: observing from the air large schools of fish, they have notified fishermen in the



### CHRISTENING THE ANTARES

On 16 April, 1932, General Aviation Manufacturing Corporation delivered the flying boat ANTARES. Mrs. F. C. Billard, wife of the late Commandant christened the ANTARES. Mrs. Billard is shown in the right insert. On the platform are: J. M. Schoonmaker, President, General Aviation Manufacturing Corporation; the Mayor of Baltimore; Assistant Secretary Lowman; Admiral Billard.

vicinity accordingly. They have transported disabled and sick seamen from vessels to hospitals on shore.

I believe the time will soon come when a seaplane can, as a matter of common practice, carry a line from shore over a stranded vessel in almost any kind of weather.

### Reporting System

The Coast Guard conducts an airplane reporting system along the Atlantic seaboard to observe and report the passage of all passing planes as they fly over Coast Guard stations along the coast. This service is of very great value to passenger air transport lines. Each station has its number painted in large figures that may easily be read by the passing plane, so that the pilot can tell just where he is, and each station reports by telephone the passing of the plane over that station.

The number of commercial planes carrying passengers over wide stretches of open ocean is constantly increasing. While accidents in aviation are now rare, they must inevitably occur at times, just as they will always take place in every form of transportation. The airships we are building will always be ready to proceed at once to the succor of any commercial plane that may have been forced down at sea. These airships have been specially designed by Coast Guard officers, working in conjunction with the contractors, for Coast Guard work, and to the best of my knowledge, there are no other planes just like them. They are large flying boats, Coast Guard cutters of the air, and will have a cruising radius of more than 1,000 miles without refueling. Each one will be able to search over an area of 25,000 square miles in one day. They are commodious enough to accommodate the passengers of a commercial plane that may have been

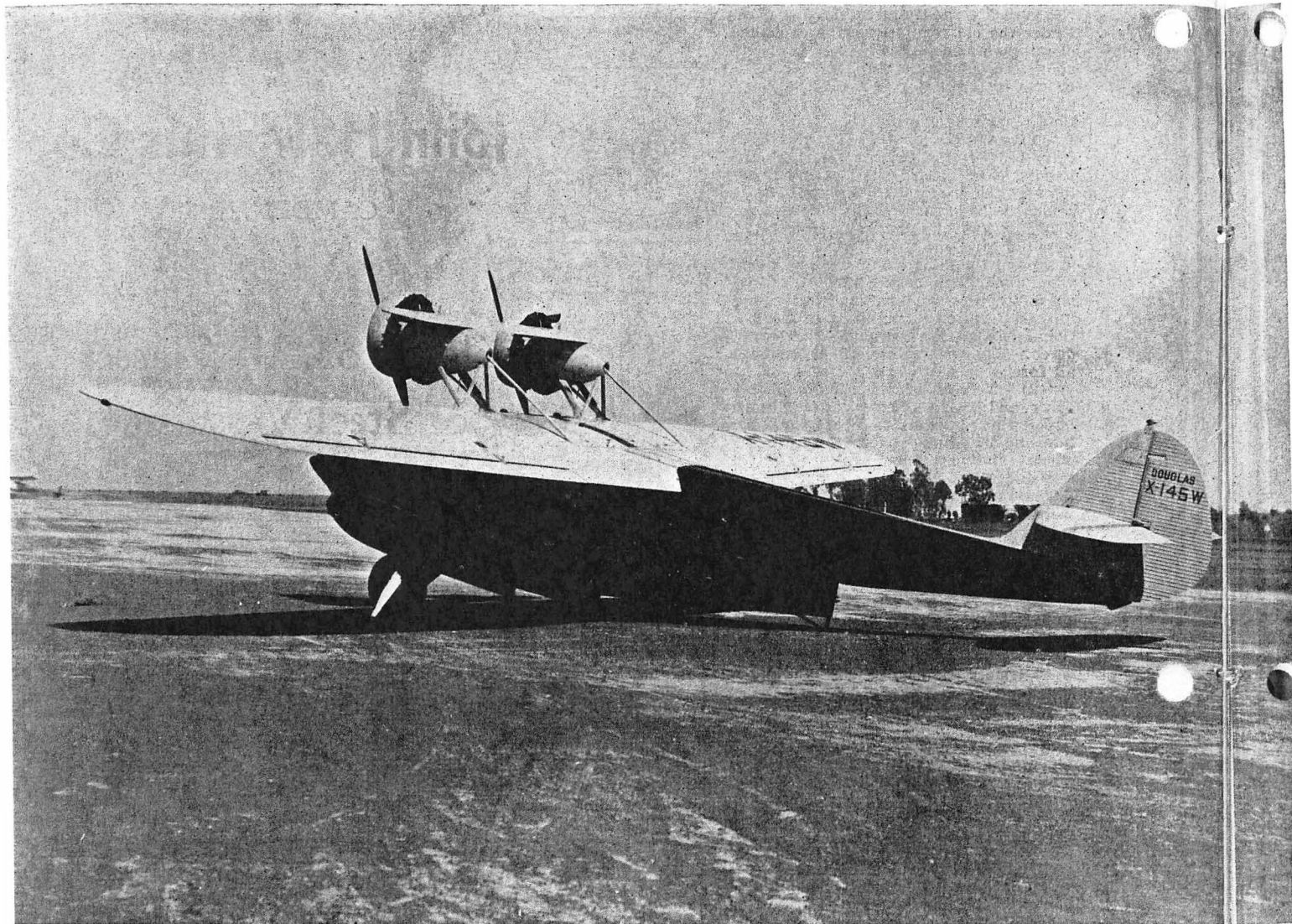
forced down on the water, or the crew of a small boat that may be picked up at sea. They will be able to transport sick or injured seamen and others, as need be, with celerity and comfort.

We are naming these five airships after prominent stars that are used by sailors in navigating at sea. The first one launched is the ANTARES. Just as the storm-tossed mariner, who, unaware of his position after days and nights of foul weather, eagerly glimpses the star that will enable him to ascertain his place on the face of the waters, so, I am sure on many occasions persons in distress at sea will joyfully glimpse a seaplane speeding to their rescue and bearing the insignia of the United States Coast Guard with all that it means.

### Cold Facts

Statistics are a cold sort of thing, but sometimes they tell quite a story. Will you permit me to give you just a few in connection solely with the assistance work of the Coast Guard. In the last fiscal year, ended 30 June, 1931, the number of lives saved or persons rescued from peril by the Coast Guard was 5,627; the number of persons in distress cared for was 561; the number of instances of assistance rendered, including major instances and minor miscellaneous occurrences was 12,097, the largest in the history of the Service. The value of vessels assisted including their cargoes, was \$47,959,465.

I believe that these ships of the air, launched on careers of humanitarian service will add lustre to the splendid record of sister craft that ply the surface of the waters. I trust that these Coast Guard seaplanes will further the two-fold mission of the Coast Guard, to which it has devoted its best energies for 142 years, namely, to defend flag and country at sea in time of war, and to serve humanity at sea in time of peace.



U. S. Air Services Magazine Photo

### DOUGLAS AMPHIBIAN, SIMILAR TO COAST GUARD PLANES

On its recent official run this beautiful product of the company whose ships were first to fly around world, showed a high speed of 132.3 miles an hour, and a cruising speed of 110 miles an hour. Metal construction is used throughout. Major Carl A. Cover, vice-president of the Douglas Company, and Chief Engineer Kindelberger demonstrated the ship in the East where it has made a more than favorable impression.

#### DOUGLAS FLYING BOATS

In March, 1931, the Coast Guard purchased its first flying boat from the Douglas Aircraft Corporation of Santa Monica, California. This boat, now designated as the "PROCYON," C.G.-27, was modified to fit the requirements of the Coast Guard better than any other flying boat in existence at that time, and, in addition, it followed very closely the proposed design of the General Aviation Corporation.

The hull is made of duralumin and the wing is of wood covered with veneer. The boat seemed particularly fitted to "a trial horse" for a construction program and after quite extensive tests it

was purchased and stationed at Cape May where Commander C. G. von Paulsen, U.S.C.G., has used it for the development of radio, instruments, and all of the other gadgets that spell the success or a failure of an aeroplane.

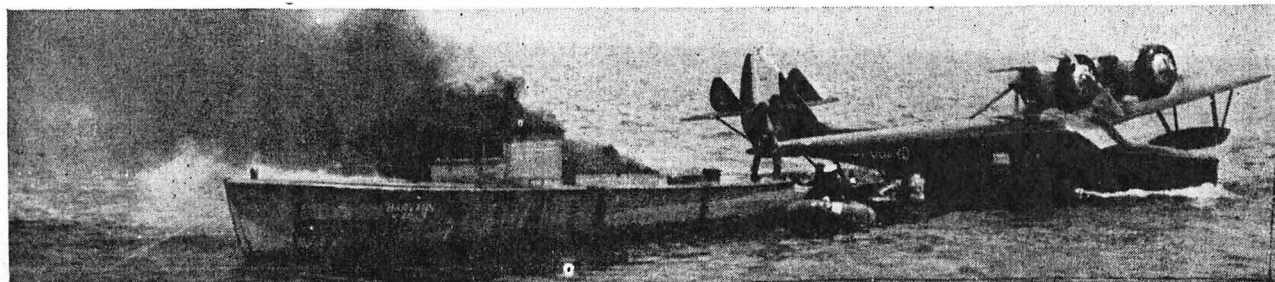
Sometime later the Douglas Company received orders for eighteen planes of this general character in the United States Army and the Coast Guard ordered two planes on this Army order. The first one delivered, now designated the "SIRIUS," C.G.-28, has been in Service since January 1932, and has proven a valuable addition to the Coast Guard Air Fleet.

Each of the foregoing planes is powered with two Wright engines, has a

cruising radius of approximately 500 miles, and is completely equipped with Standard Coast Guard radio, telephone, direction finder.

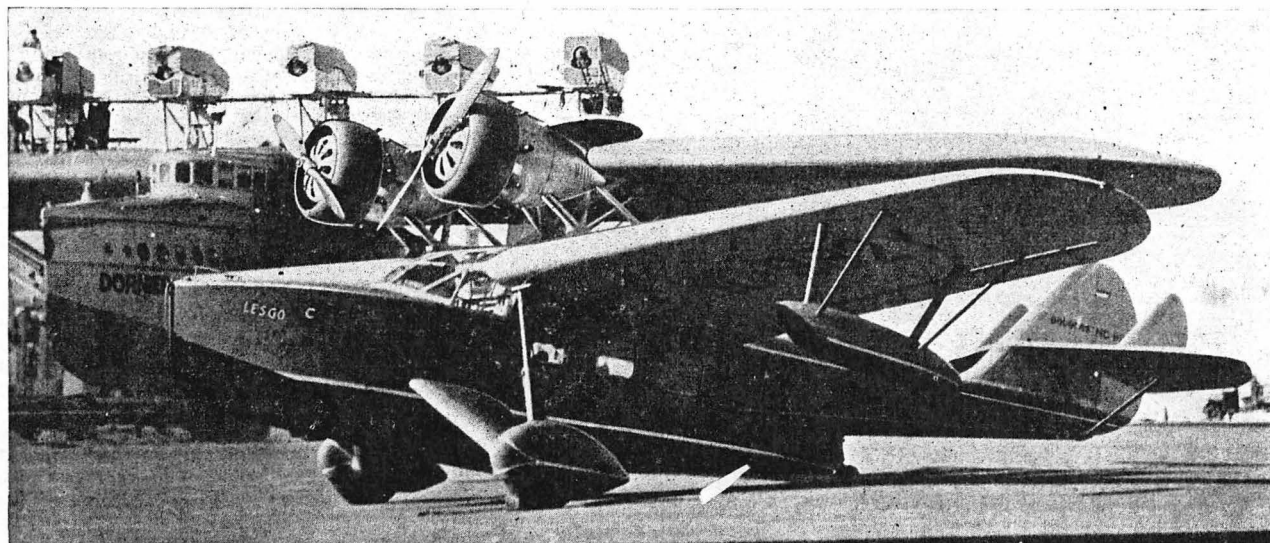
The third Douglas will be a modification and it is hoped an improvement on the "SIRIUS." The hull has been made approximately two feet longer, and the bow has been given a decided flare for the purpose of throwing down waves when taking off. The power plant has been changed to two Wasp 420 horsepower engines which will give the "ADHARA," C.G.-29, the top speed of probably 160 miles per hour and a cruising radius of 600 miles.

The "ADHARA" is scheduled to be delivered about July 10 and will be flown



### A PRACTICAL DEMONSTRATION OF LIFE SAVING

The Sirius, Douglas plane, CG-28, removing the crew from a burning run-runner at sea. A practical example of life-saving.



### SISTER SHIP OF DOUGLAS COAST GUARD PLANES

Courtesy Crosley Radio Corp.

Douglas Amphibian Monoplane, with 8 Passenger Cabin and 63-foot Wing Spread. Powell Crosley, Jr., of Cincinnati has named this Ship "Lesgo." This photograph was taken at Glenn Curtiss Airport, New York City. In background is the "DO-X." "Lesgo" is said to be the only Douglas Plane to be owned by a private owner.

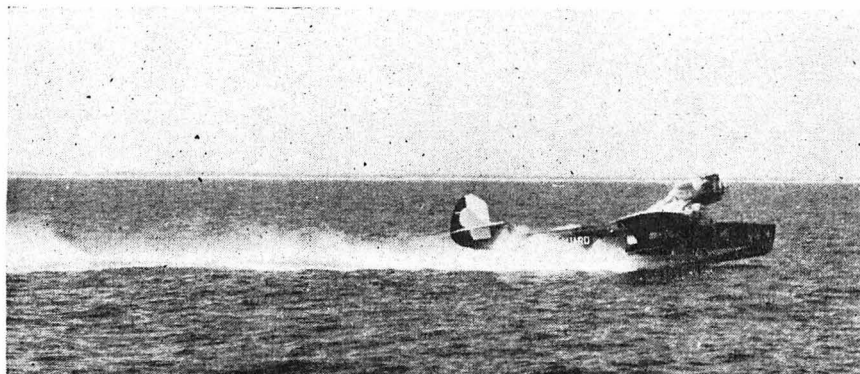
across the country by Commander C. G. von Paulsen.

Probable stations of these planes are, "P R O C Y O N"—Gloucester, Massachusetts, "SIRIUS"—Miami, Florida, and the "ADHARA"—Cape May.

### TWO BOUQUETS

The U. S. Coast Guard Magazine was sent, last month, to all on the retired list. "Thanks for the consideration shown the retired list," writes Commander John Dennett, Park Village, Maine, "never received this before from anybody. More power to you."

"The advertisement of Lankenau School for Girls shows up splendidly," writes that institution. "It is exceedingly well placed and our association at its meeting last night expressed great satisfaction at the way in which you have handled our contract. We do hope for results, and if so, we will continue our patronage of your columns."



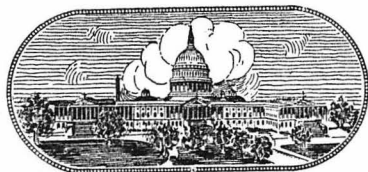
### LIKE A WATER FOWL

The Douglas plane Sirius, CG-28, about to take off.

e Photo  
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# Headquarters Personnel News Notes

"Straight from Washington"



War Time Rank, Officer's Stewards, Hospital Corps School, New Chief Petty Officer, Sea Service, Service Schools, No Favoritism.



By Pay Clerk Wm. Homer Carroll, U.S.C.G.

## Officer Steward Ratings

**A**T the present time there is an excess of officer steward ratings in the Coast Guard and Personnel Section Bulletin 25-32, 13 May, 1932, prohibits advancements to and in officer steward ratings except upon specific authority from Headquarters.

### War-Time Rank

On May 7, 1932 as indicated by Personnel Section Bulletin 26-32, 23 May, 1932, an Act was approved giving war-time commissioned rank to warrant officers and enlisted men. This Act is quoted herein for the information of personnel.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all warrant officers and enlisted men who served in the Army, Navy, Marine Corps or Coast Guard of the United States during the World War or the Spanish-American War, and whose service during such war was creditable and who have been or hereafter may be retired according to law, shall on the date of approval of this Act or upon retirement in the case of those now on the active lists of the services named herein, be advanced in rank on the retired list to the highest commissioned, warrant, or enlisted grade held by them during such war; Provided, That nothing in this Act shall entitle any of the personnel described herein, while on active duty, to any other rank than that in which they were serving at the time of retirement; And provided further, That no increase in active or retired pay or allowances shall result from the passage of this Act."

### Hospital Corps School

In the past it has been the policy of Headquarters to fill vacancies occurring in pharmacist's mate ratings through the enlistment of applicants who previously held pharmacist's mate ratings in the Navy. Personnel Section Bulletin 27-32, 24 May, 1932, quoted below, indicates the recent policy adopted by

Headquarters looking towards the filling of vacancies which may occur in such ratings.

### Personnel Section Bulletin 27-32

"In order that any vacancies occurring in the pharmacist's mates ratings may be filled from personnel already in the service, permission has been obtained from the Navy Department to have men of the Coast Guard receive training in the Hospital Corps School at the Norfolk Naval Hospital, Portsmouth, Va. The length of the course at this school is sixteen (16) weeks. The subjects taught include nursing, anatomy and physiology, first aid and minor surgery, hygiene and sanitation, weights and measures, materia medica and toxicology, pharmacy, bacteriology, and clerical. At present only non-rated men with a high school education or equivalent will be sent to this school.

"Men desiring to attend this school will make application through official channels to Headquarters, stating in the application their education and any previous experience or special qualifications they may have. Commanding officers will note their approval or disapproval on each application. In case of disapproval the reason therefor will be stated. In case of approval an estimate of the man's ability will be given.

"Any man assigned to this school will take with him his clothing and bedding. His pay and service records will be forwarded to the Commander, Norfolk Division. While attending the school Coast Guard personnel will be furnished quarters and subsistence in kind at the Norfolk Naval Hospital and will be under the same rules and regulations as Navy men attending the school. In general, men will be returned, upon completion of the course, to the division from which received.

"Commanding officers and officers in charge of all units are requested to bring this bulletin to the attention of every non-rated man attached to the unit."

### New Chief Petty Officers

BROWER, Clinton to Chief Boatswain's Mate (L) acting, Fifth District. TILLET, Elisha G. to Chief Boatswain's Mate (L) acting, Seventh District.

Wirie Frank Engman adv. from BM1c. to CBM. Perm. Appt. at Base Four.

Cecil MacLeod, adv. from CBM (a) to CBM. perm. appt. at Base 18, previous Navy Service.

Daniel Bradford Etheridge, adv. from BM-c (L) to CBM (L) perm. appt. at Cape May Station, Seventh District.

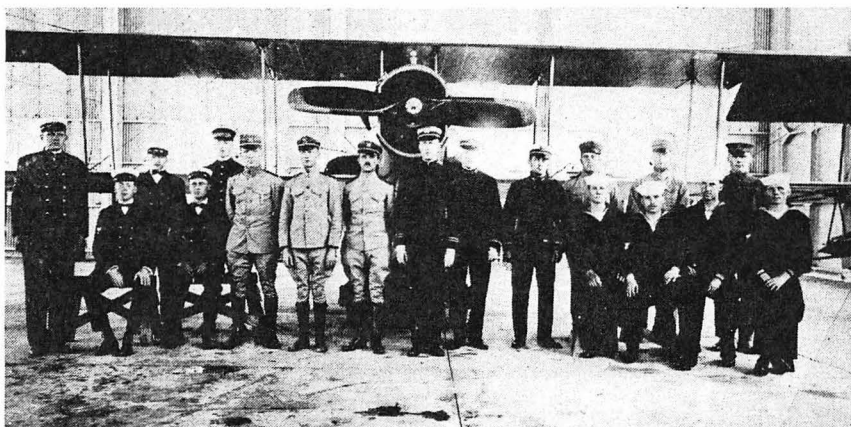
Virgil Augustus Barron, adv. from CY (a) to CY, perm. appt. on SEBAGO.

### Continuous Service Period

A number of letters have been received from enlisted men requesting information as to the length of continuous service period as well as the length of time they may remain out of the Service subsequent to discharge without losing the rating which they held at the time discharge was effected. It is evident that many men are under the impression that the continuous service period covers a period of ninety days only. This is an erroneous impression as the continuous service record is for a period of three months. For example: A man discharged on the 7th day of June would be eligible to reenlist in continuous service status up to and including 6 September. Of course, if he fails to reenlist on the day following discharge it would be necessary for him to pass the required physical examination before reenlistment could be effected.

In recent months there have been a number of men who applied for reenlistment just a day or two before the expiration of continuous service period and who, due to delay experienced in securing physical examination or necessary authorization from Headquarters for reenlistment, failed to secure reenlistment as the continuous service period in the meantime had expired. Attention of personnel in a previous issue of the magazine was directed to the fact that they should not sleep upon their rights but should make application for reenlistment in sufficient time before expiration of the continuous service period to assure reenlistment within such period to assure reenlistment within period. A man who reenlists within continuous service period is reenlisted in the rating in which discharged. If he fails to reenlist within continuous service period, he is only eligible for reenlistment in one of the ratings indicated in paragraph 3241 (b), Personnel Instructions, which is quoted herein:

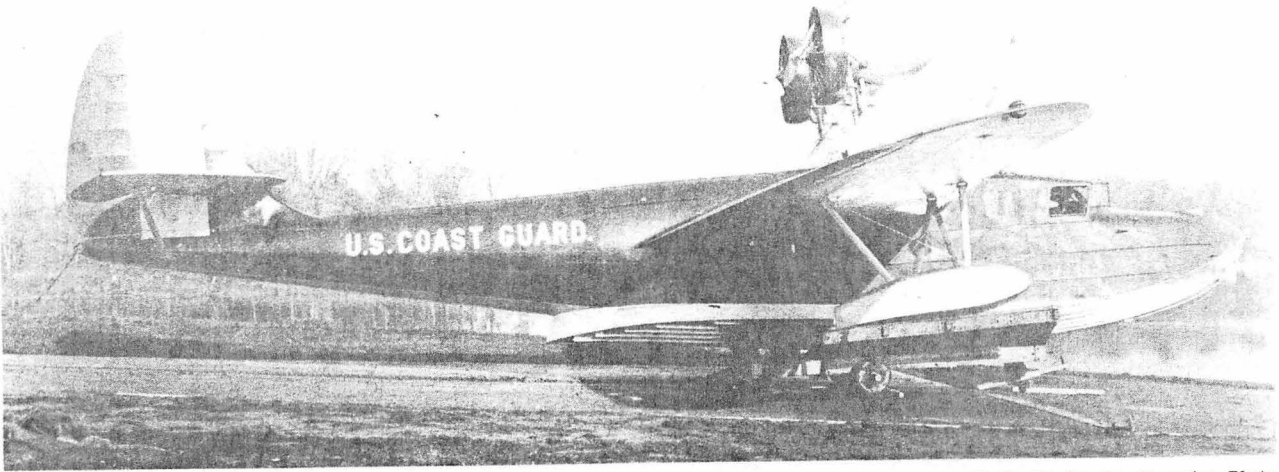
"Chief petty officers and petty officers first class, other than engineroom branch, reenlisting after expiration of continuous service period may reenlist as petty officers third class. Chief petty officers and petty officers, first class, engineroom branch, may be reenlisted as fireman, first class. Petty officers, second class and below, reenlisting after expiration of continuous service period will reenlist in a non-rated status and, in the case of engineroom branch, not above fireman, second class. Radiomen, second class, reenlisting after expiration of continuous service period will reenlist in a non-rated status and, in the case of engineroom branch, not above fireman, second class.



## IN EARLY COAST GUARD AVIATION DAYS

Illustration shows a Coast Guard contingent undergoing flight training at the U. S. Naval Air Station, Pensacola, Florida. Of the group above show, Lieutenant Commander E. F. Stone, Lieutenants W. S. Anderson and L. M. Melka remain in Service as fliers. The complete roster of all in the above picture is as follows:

# U. S. Coast Guard's New Flying Boats



must be Antares

—U. S. Air Service Magazine Photo

## ONE OF THE COAST GUARD'S NEW AIR FLEET

This new type of plane, carrying a crew of four, with a cruising range of 1,000 miles, and a speed of 125 miles an hour, is capable of making actual rescues from disabled craft. The above pictured type includes the CG-51, "ANTARES," CG-52, "ALTAIR," CG-53, "ACRUX," CG-54, "ACAMAR," and CG-55, "ARCTURUS"—FLB Flying boats, equipped with Wasp engines, mounted above the wing.

**T**HE United States Coast Guard received recently from the General Aviation Manufacturing Corporation, Dundalk, Maryland, the first of a new series of flying boats, and acceptance trials were started immediately.

The General Aviation Manufacturing Corporation designed the plane to meet the requirements of the Coast Guard, and the seaplane is built throughout to United States Navy specifications. This new flying boat is of all-metal construction, fifty-one feet long, with a cantilever wing covered with wood veneer, having a span of seventy-four feet two inches. It is powered with two Pratt and Whitney 450 h-p Wasp "C" engines mounted as pushers with propeller blades near the trailing edge of the wing. The virtue of this arrangement is that it removes the revolving propellers from the point of contact with small surface boats approaching the bow, eliminates the chance that a person may be struck by the propellers, and it also does away with salt water spray so destructive to propellers. The old trouble of drowning the carburetors and ignition system is also conquered.

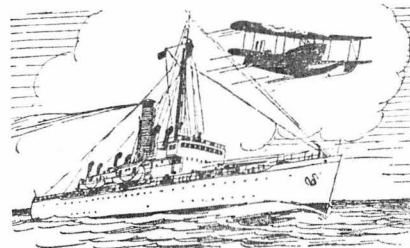
### Can Stand Heavy Weather

The hull is of sufficient size and strength for the flying boat to take off in heavy weather, thus enabling the Coast Guard to carry on rescue work under conditions which have hitherto been impossible. This new type of plane, carrying a crew of four, with a cruising range of 1,000 miles, and a speed of 125 miles an hour, is capable of making actual rescues from disabled craft. The seaplane can fly on one engine for one hour without losing altitude. It is maneuverable in water in winds up to 20 knots, and under such conditions can land and take off without bumping.

The seaplane is equipped with direction finding, radio transmitting and receiving set for communication with surface craft and shore stations, which will be of invaluable service in rescue work; and rescue work is what this plane has been designed primarily to perform. It also can carry lines from beach to stranded or sinking vessels.

Among the interesting features embodied in this plane is the retractible beaching gear, which folds up against the lower side of the wing, while the seaplane is in flight. After landing on the water the struts are swung down alongside the hull until they are in a vertical position. They are then locked in place, the plane taxis up the ramp, the wheels touch bottom, and the plane rolls out of the water. The beaching

Blue and Silver Coast Guard Aerial Fleet is Modern in Every Detail, Ready to Move Forward in the Time Honored Work of the Coast Guard.



gear is not designed to withstand the shock of landing on the ground.

These planes are the C.G.-51, 52, 53, 54 and 55, named, respectively the AN-TARES, ALTAIR, ACRUX, ACAMAR, and ARCTURUS.

### Hard Work Expected

The United States Coast Guard anticipates that the work which will be performed by this plane will far surpass that which has been done by smaller seaplanes now in the Coast Guard. The greater carrying capacity of the new flying boat, its size and strength, all promising to be of immeasurable value to the Coast Guard in its rescue work along shore and over the ocean. The advent of this type plane into the Coast Guard fleet will help greatly to maintain the high standard of efficiency of this Service. The Coast Guard motto "Semper Paratus"—Always Ready—will apply to the wings of the Service as well as to the surface craft.

## COAST GUARD AIRCRAFT DESIGNATION

Coast Guard aircraft will be recognized by the following designation numbers and names.

CG-2—Loening type OL5B, equipped with inverted Liberty motor, cruising range 500 miles. Stationed at Gloucester, Mass. Obsolescent, will be replaced in the near future.

CG-4 and CG-5—Vought type UO4, equipped with Wright J-5 radial engine, cruising range 350 miles. Stationed at Gloucester, Mass. These planes are obsolescent and will be replaced with new equipment at it becomes available.

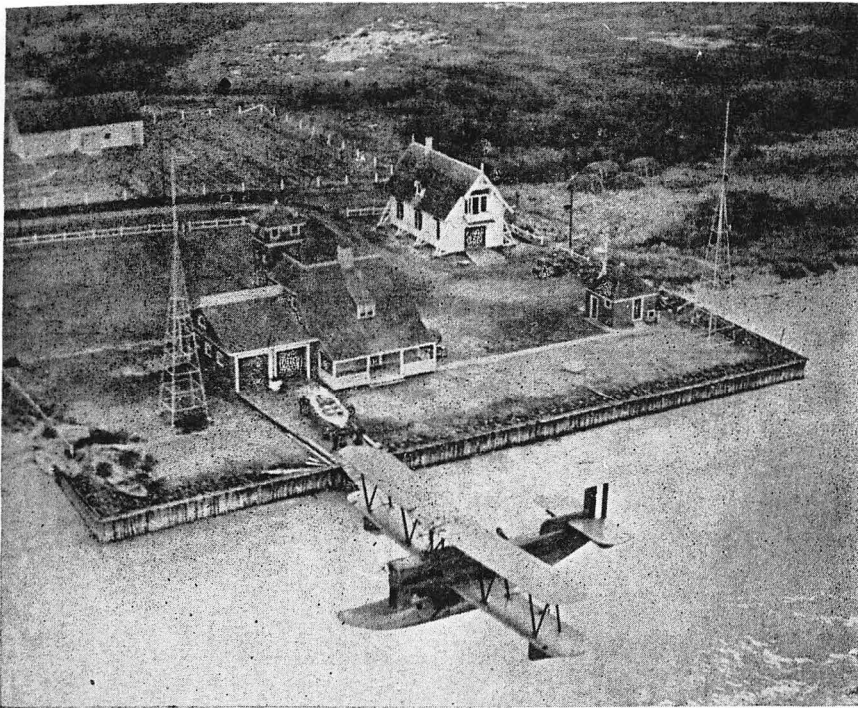
CG-8—Viking Flying Boat, equipped with Wright J-6-7 engine, cruising range 320 miles. Stationed at Cape May, N. J. Experimental, for district use.

CG-9—Douglas, convertible seaplane, equipped with Pratt & Whitney Hornet engine, cruising range 1,000 miles. Temporarily located at Bolling Field, Washington, D. C.

CG-27 "PROCYON," and CG-28, "SIRIUS"—Douglass equipped with two Wright J-6 engines mounted as tractors above the wing, cruising range 600 miles. Stationed at Cape May, N. J.

CG-29—"ADRARA"—Douglass, equipped with two Wasp engines mounted as tractors above the wing, cruising range 600 miles. Building.

CG-51—"ANTARES," CG-52, "ALTAIR," CG-53, "ACRUX," CG-54, "ACAMAR," and CG-55, "ARCTURUS"—FLB Flying boats, equipped with Wasp engines, mounted above the wing, cruising range 1,000 miles



### AN OLD TIMER

The veteran Loening seaplane, a familiar figure in the air along the Atlantic Coast, is shown flying over a Coast Guard station at Cape May, New Jersey.

Chief Yeoman Bagley (until a few weeks recently at Headquarters) is now on the SHOSHONE making his first trip on a Coast Guard Cutter. He has been at Headquarters for eight years and requested sea duty on the West coast. Considering the fact that he is about 45 years young, I would say that he has plenty of nerve. Just goes to show that the yeoman gang is always Semper Paratus too.



Chief Yeoman Christiansen. (SHOSHONE) is sporting gold stripes after 12 long weary years in the service and, (of course), 12 years good conduct.



"Is your love true?" the girl asked Radio McDougal as they sat out a moonlight waltz at Honolulu. "It is true as your beautiful complexion," replied Radio. "Isn't the band playing beautiful music?" said the lady.



One of the most curious wedding ceremonies in the world is that in vogue among a certain race of dwarfs inhabiting the Andaman Islands. The two parties climb two flexible trees growing near each other which an old man makes bend toward each other. When the head of the man touches that of the girl, they are legally married. Sailors visiting Andaman are advised not to climb trees.



Mrs. Amelia Earhart Putnam met the Prince of Wales, she being the first girl to do it on twenty bucks.



It remains for one of the farmer candidates to attain popularity by advocating turning under every third political speech.



Clarence Darrow says the least useful part of a man's existence is his hammock at

"Lazy" Laughlin was hiding behind a locker, dodging the job of scrubbing paint work. The boatswain's mate discovered "Lazy." "Loafing again?" roared the Chief. "I put you on bright work and you shirk. I put you in the running boat and you shirk. If there anything you like to work at?" "Yes," replied Lazy, "I like to work at intervals."



Sweet Vengeance! The ship's barber, says "Don't use THAT razor. That's the special DULL one. I made it dull to use only on the dentist the next time he comes in."



While strolling through the park one day, etc., etc. "Do you know, Gert, I could sit here all night and gaze at the moon."

"So could I. But foist let's eat."



Unalga: "What is your idea of a clever woman; one who can see the point of a joke?"

Tuscarora: "No, a woman who can laugh at a joke without seeing the point."



New York is to have a marathon sleeping contest which might be all right if they can get the right men to enter. We know a guy on the CONYNGHAM.



There are 200,000 trained nurses in this country, giving you a fair idea of how hard it is to reduce our operating expenses.



Japan didn't even establish a reputation for good marksmanship.

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In Florida the sun comes out every day, says a vacation ad. And the mosquitoes come out every night.



A man just back from South America says that things are so bad down there that they're offering three birds in the bush for one in the hand.



That historian who said the Chinese were the most peaceful people would have a hard time convincing the Japanese who were in Shanghai.



Meet Buzzsaw Blohokus, of Sout' Boilap, Joisey! Is he tough? He beat the Jimmy Legs up this morning. Legs got up at 4.45 a. m. Buzz was up at 4.



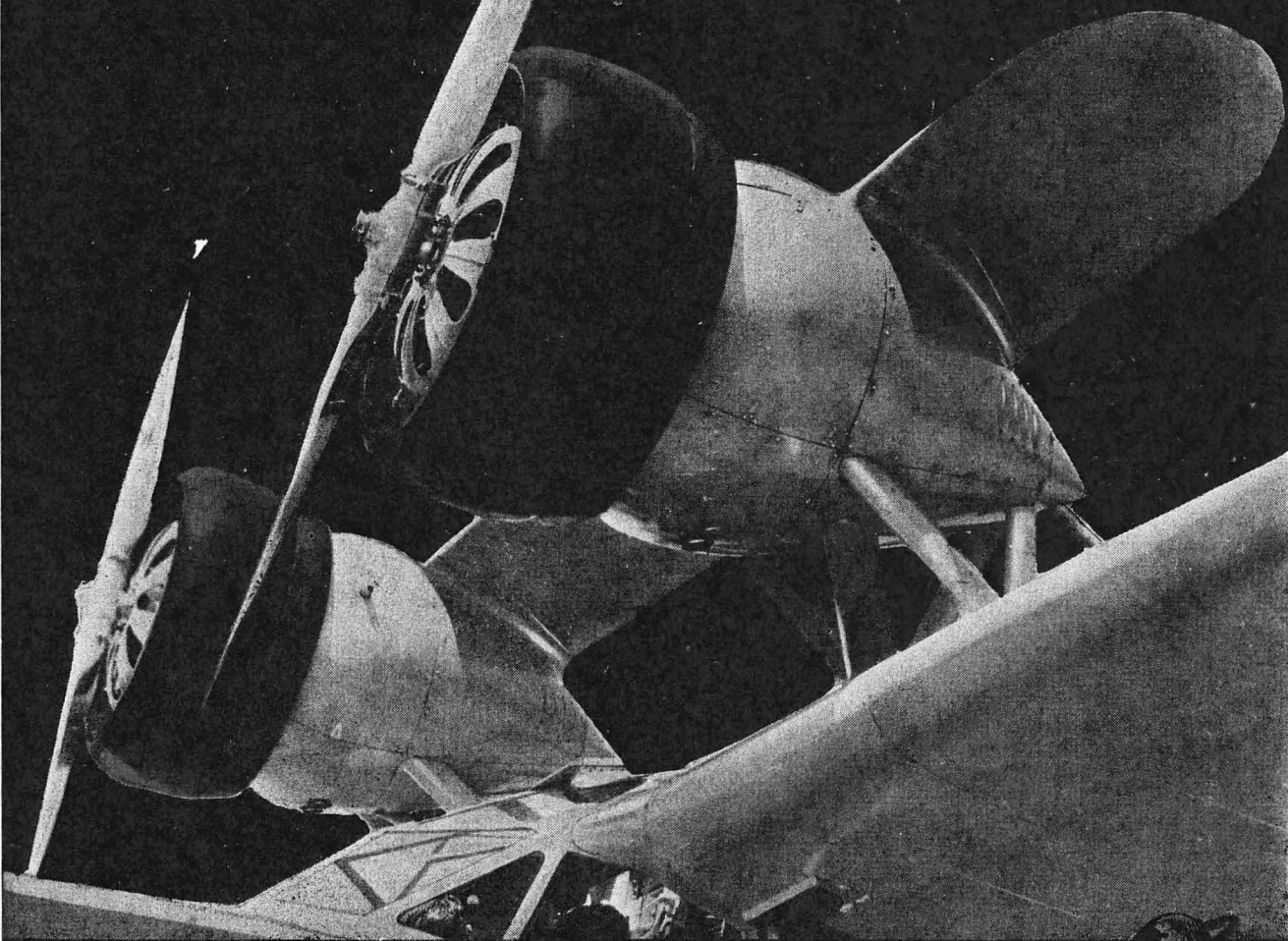
Some things just aren't done in restaurants, a book on etiquette says. We don't know what the others are, but steak is one.



600 H.P. PAWS  
**FLYS ONE TON**

PAYLOAD

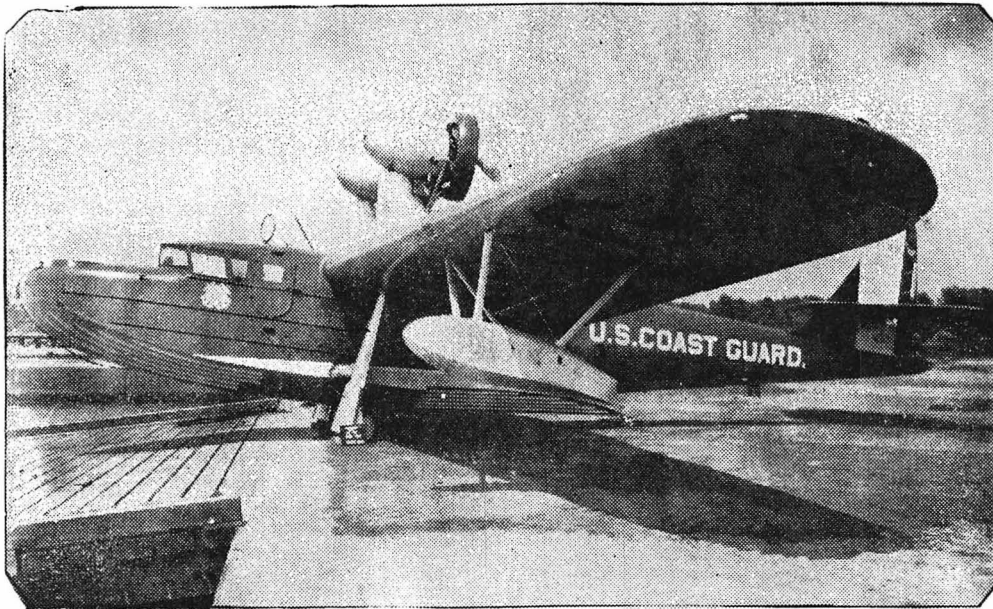
YET MANEUVERS ON ONE MOTOR



*Amphibion* **DOUGLAS**

DOUGLAS AIRCRAFT COMPANY, INC. SANTA MONICA, CALIFORNIA





**FOR THE COAST GUARD'S AIR FLEET**

*A new amphibian plane, the Altair CG-52, built for the United States Coast Guard by the General Aviation Manufacturing Corporation, Dundalk, Md., was christened and launched at the company's plant by Miss Aline Beverly Chalcker, of Washington, daughter of Commander and Mrs. Lloyd Toulmin Chalcker.*

**AT BASE TWO**

August 4, 1932, Coast Guard Day at Section Base Two. Of course, there was no fleet of destroyers to make things hum faster, no cutters to provide a dash of color, but there were fleet feet, and hundreds of voices encouraged the contestants in dashes of their own. To be exact, the day was done royally. A summary of events held is as follows:

100 yard dash—440 yard relay—sack race—potato race—equipment race—three legged race—watermelon eating contest—greased pig race—and two tugs of war.

A number of prizes were awarded by merchants who deal with our personnel. Iron Man Allison deserves more than one mere word of praise. His prowess and Herculean efforts to win the dashes, put away watermelon, and utterly demolish a nicely made pie were appreciated to the nth degree by the hysterical onlookers. As it was, he qualified, finished, and won his own Olympics. He "done right noble." Suszek, our half-pint cook was picking them up and laying them down in a manner that would do credit to Tolan, our Olympic flash. A scared rabbit would have gnashed his teeth in rage and shame at the manner in which Suszek would have passed him. He challenges anyone on the East Coast to beat him! How's that????

The dinghy race, which consisted of two contestants in each small patrol boat dinghy, using shovels of the coal variety for oars, laying a course from Pier 18 to Pier 17 and return, was nothing if not a riot. What with Big John Cullinan trying to fit his gigantic bulk in the stern sheets of one diminutive dinghy, and then trying vainly but valiantly to overtake and paddle his way to victory over a couple of his boys, and collisions that always seemed to be just about to occur and then did not happen, there was more than enough excitement. Fortunately there were no casualties outside of hurt pride, and a couple of blisters on various parts of the anatomy.

A word about the cracker eating and whistling contest. What a shame that such talent as was displayed by Iron Man Allison and Bruce Mull, (the football Mull), should be wasted on amateur contests. Blasting forth a cloud of crumbs fit to make a cloudburst, they finished in a dead heat. They are still trying to uncover Lieutenant Commander L. W. Perkins who was unfortunate enough to be standing near both contestants when they "popped off." A panic is the right name for it.

The greased pig was utterly terrified at the clamor of his pursuers and proceeded to fall in at dress parade when B.M.c. Forwood landed his bulk on his back in a beautiful swan dive. The tug of war was a real thrill with a fire hose being played on the team that was drawn first across the deadline. Plenty of water behind that hose too. All in all the crowd certainly had a dandy time, and it is doubted whether any other unit in the Coast Guard can boast of a better time.

**TARGET PRACTICE**

The Special Target Practice Force will hold short range battle practice off the Virginia Capes on or about the 21st of August, 1932.

The following vessels are participating: Norfolk Division, MENDOTA, PONTCHARTRAIN, MODOC. New York Division, MOJAVE and CHAMPLAIN. Eastern Division, CAYUGA, TAMPA. Cadet Practice squadron, SEBAGO, SARANAC.

The CARABASSET will probably be designated as the towing vessel.

Captain B. M. Chiswell has been appointed Commander of the Special Target Practice Force.

The target raft will be procured from the Norfolk Navy Yard.

The cutters on the East Coast are making every endeavor to bring the trophy back to the east coast this year. The trophy was won in 1929-1930-1931 by the TAHOE. There will be real keen competition.

Commander J. Pine and Gunner R. E. Barber will probably observe the practice for Headquarters.

**"GET THE FACTS!"**

We cannot be successful without knowing the facts," said Admiral H. G. Hamlet, commandant, in addressing the Communication forces of the service.

"Our communication instructions set forth the rules for the proper and efficient handling of communications. Our Communication studies show us wherein we have failed in certain instances.

"Let us analyze our distress cases. Just who failed to function 100 per cent in each particular case? Were the weak positions in our organization, as brought out in the last case, strengthened before this distress call? If the same position always fails, there must be a reason; also a remedy.

"Get the facts! Study them! Insure success!"

