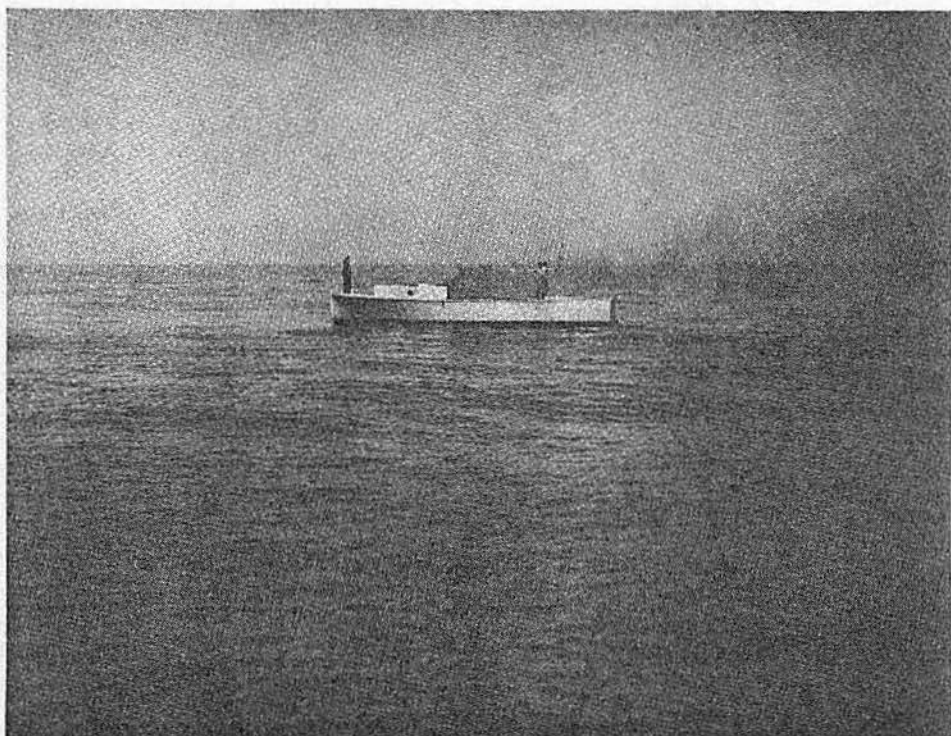


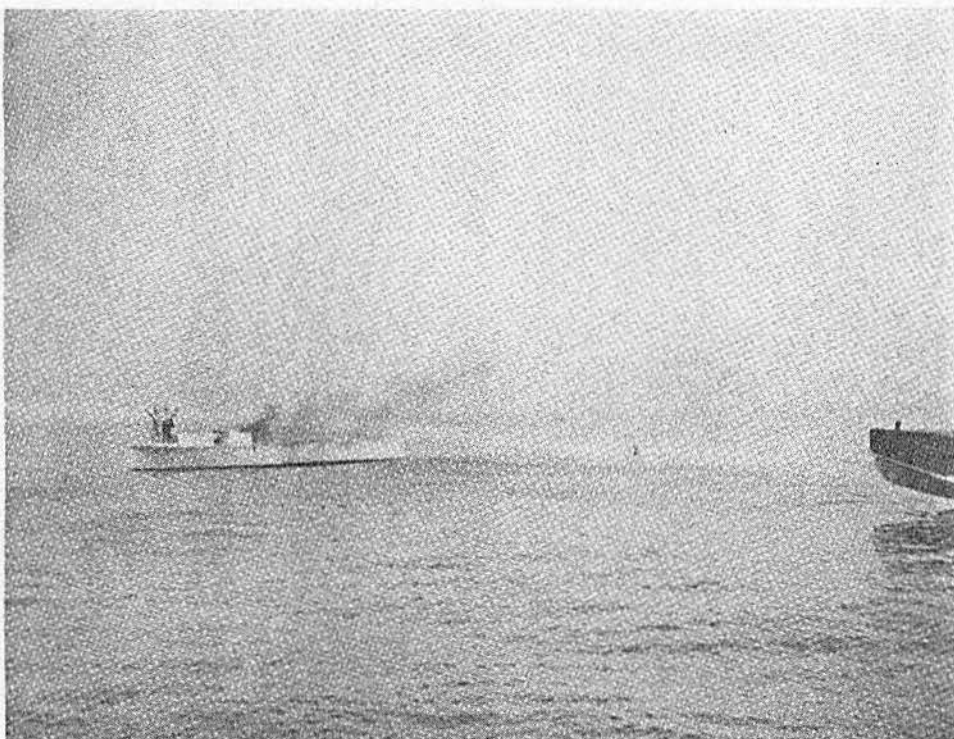
THE FLYING LIFEBOAT OF THE
COAST GUARD

By
COLONEL HAROLD C. REISINGER
U. S. Marine Corps

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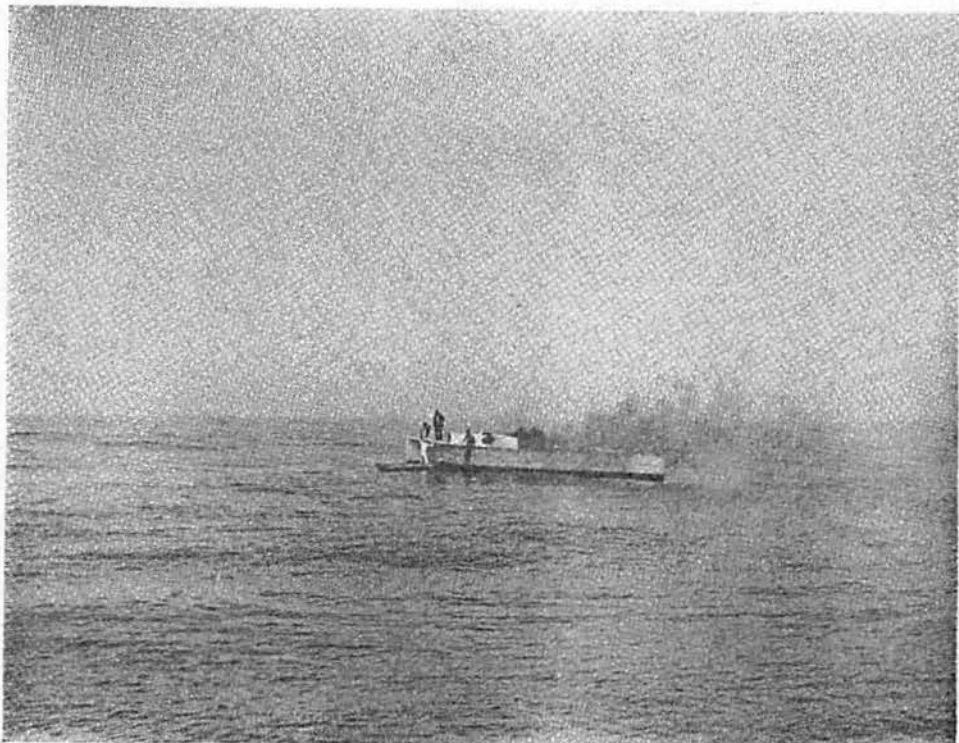


THE BOAT CATCHES FIRE

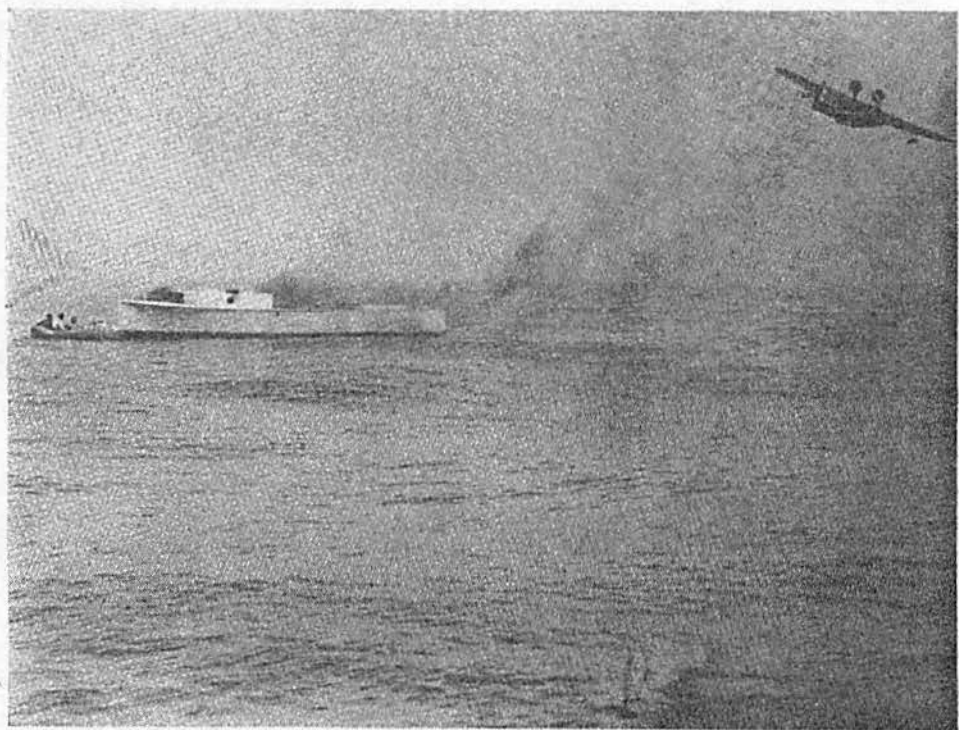


THE *ADHARA* APPROACHES

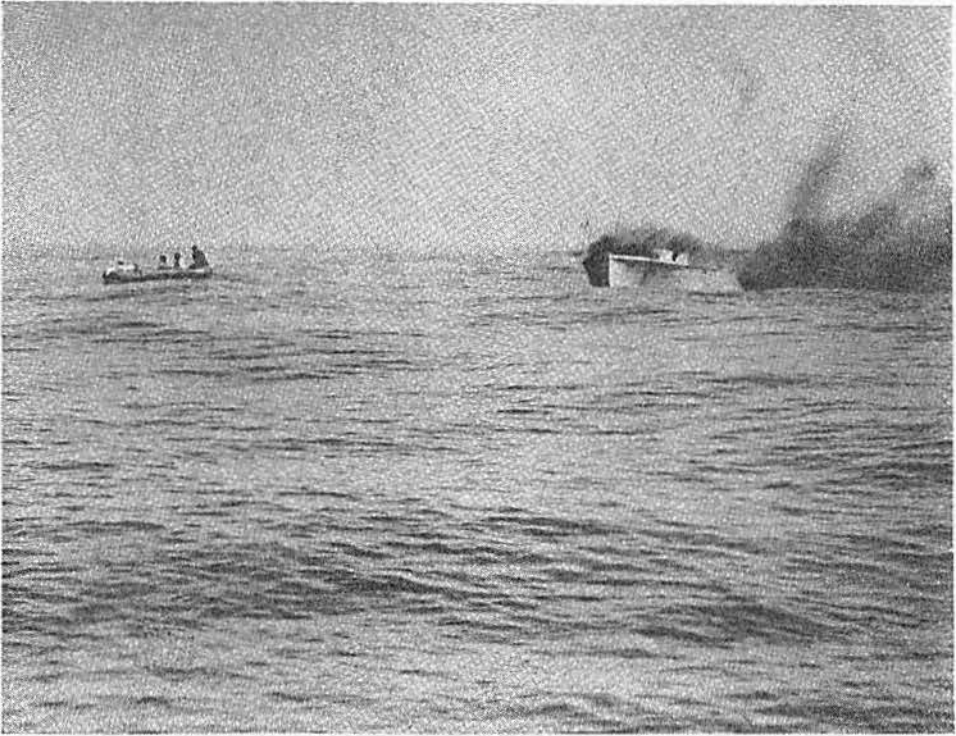
(These and the illustrations on pp. 74-80 give a photographic account of a rescue at sea and are by courtesy of Colonel H. C. Reisinger, U. S. Marine Corps.)



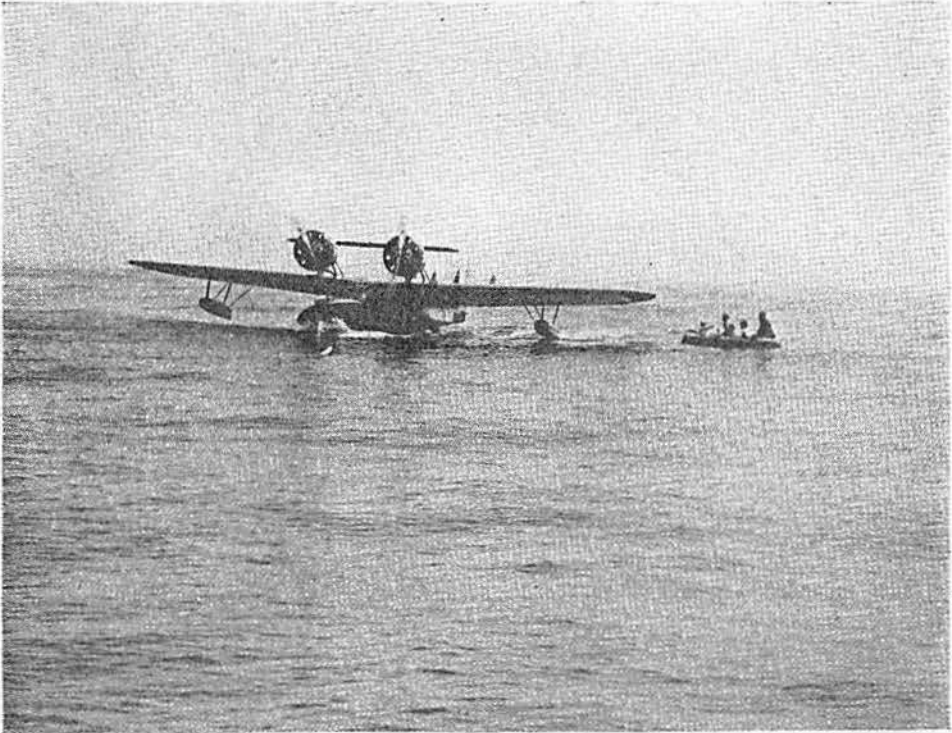
LIFE RAFT TAKES OFF THE CREW OF THE BURNING BOAT



LIFE RAFT LEAVES THE BURNING BOAT
The *Antares* is hovering above covering manœuver.

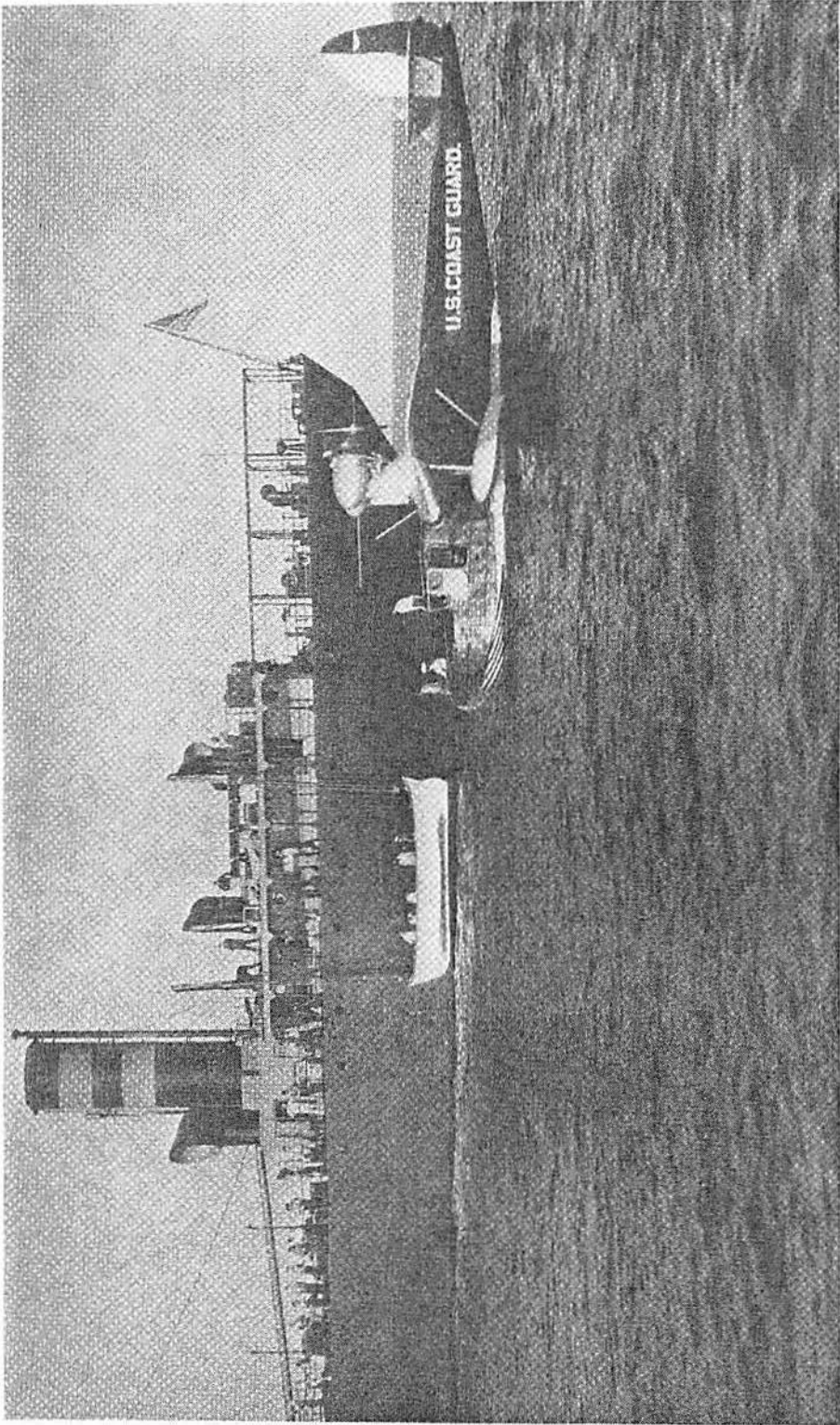


THE LIFE RAFT RETURNS

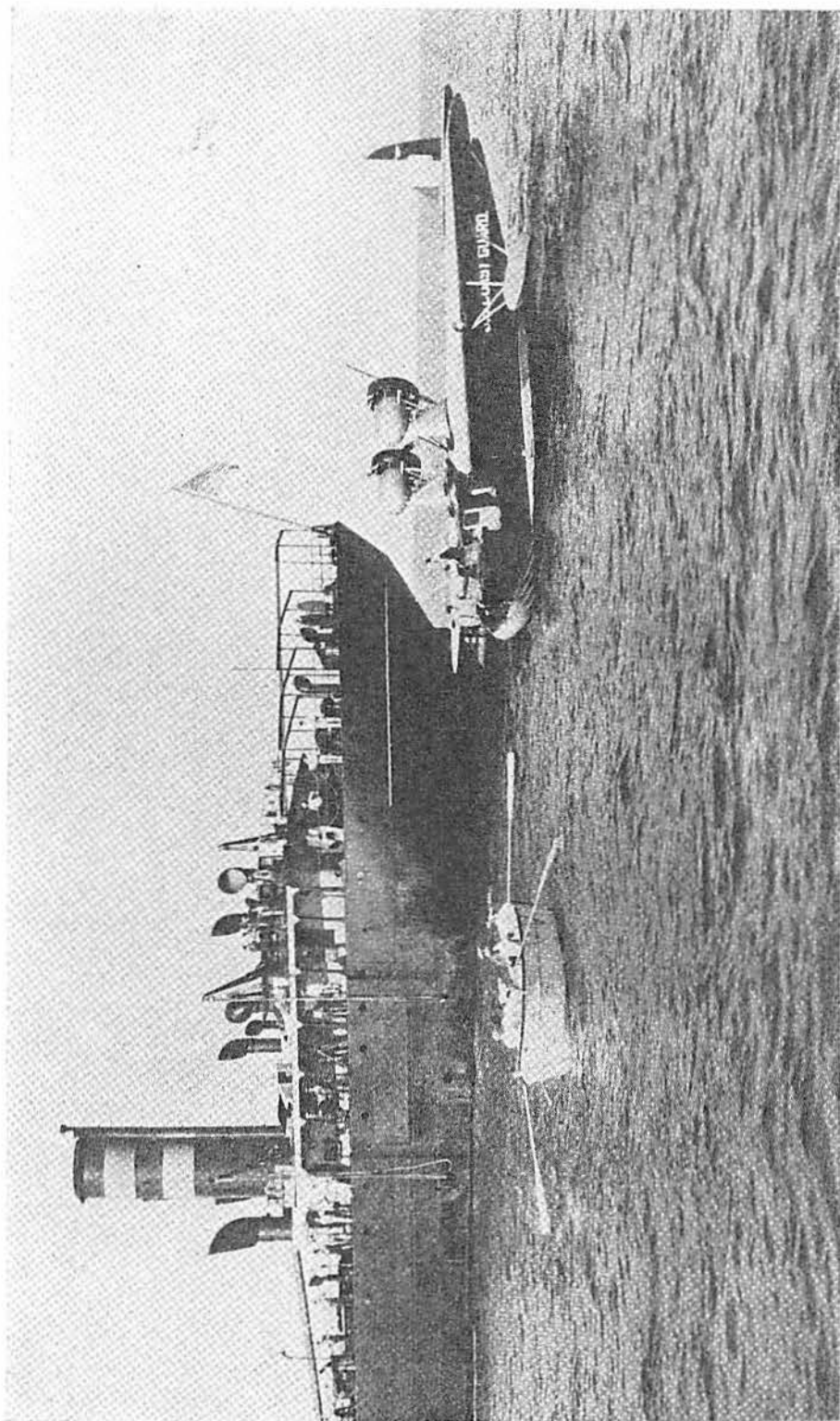


LIFE RAFT COMES ALONGSIDE THE *ADHARA*

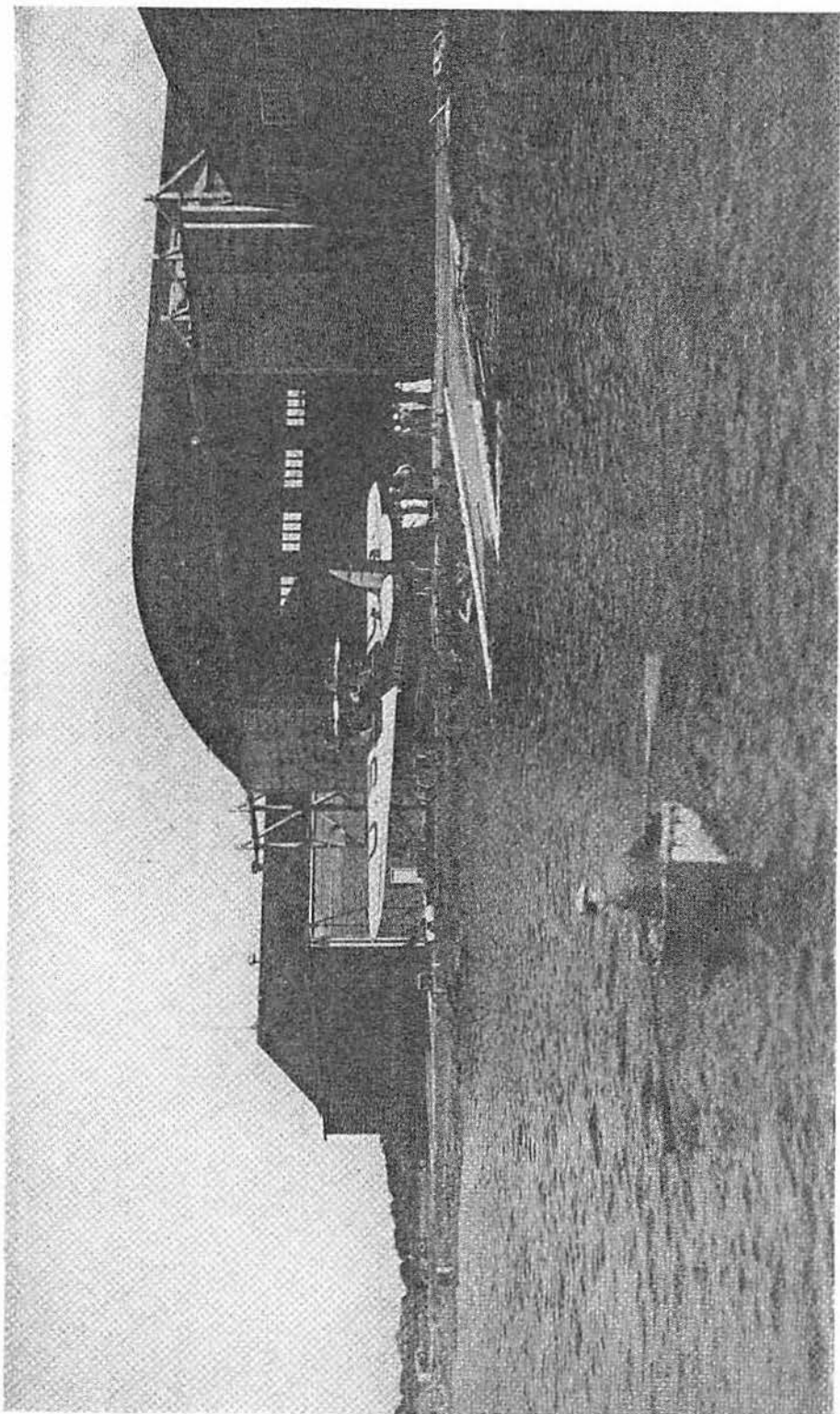
This is always a ticklish operation, as the plane drifts very quickly under the influence of the wind.



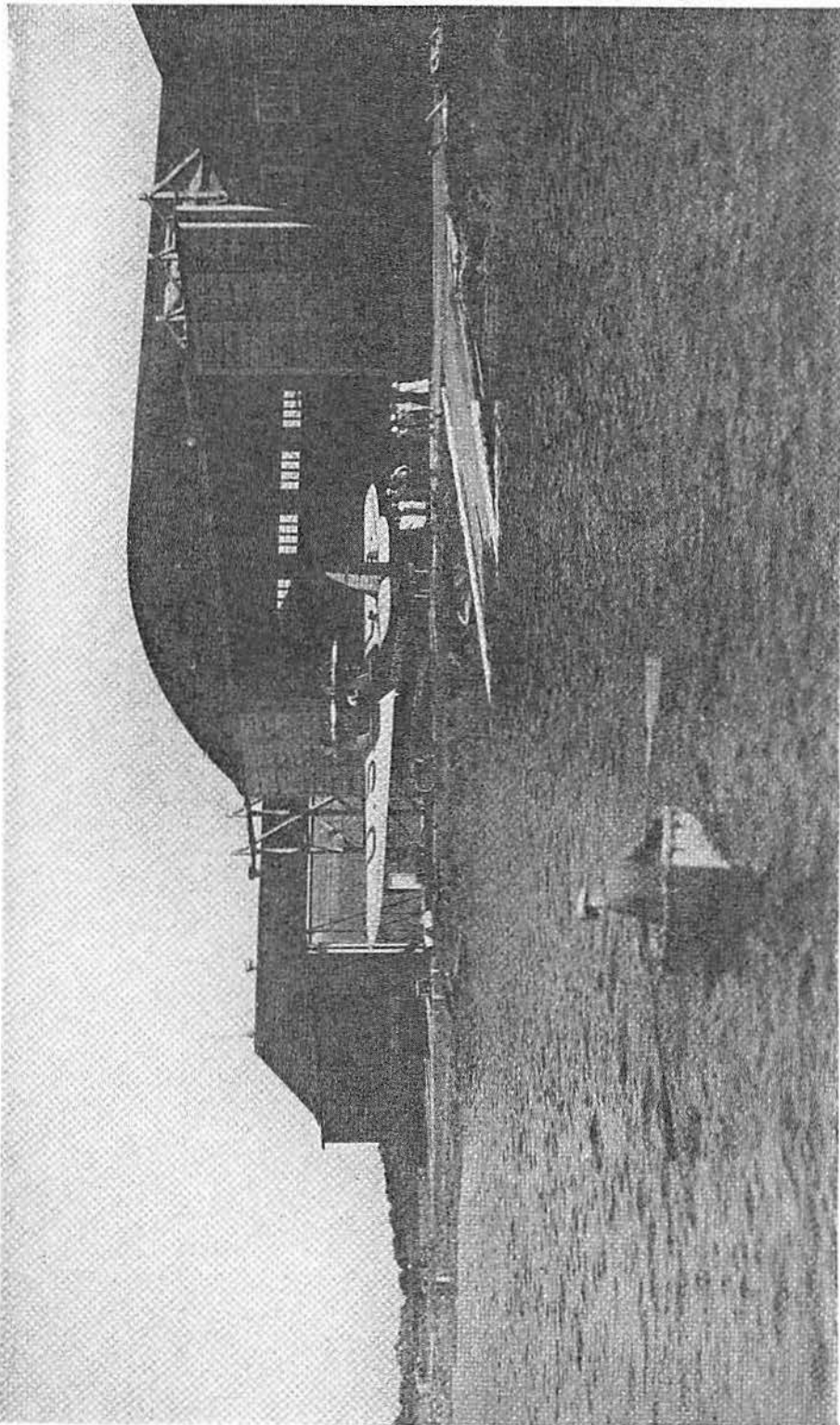
THE AVTARES STANDING BY AWAITING STRETCHER CASE



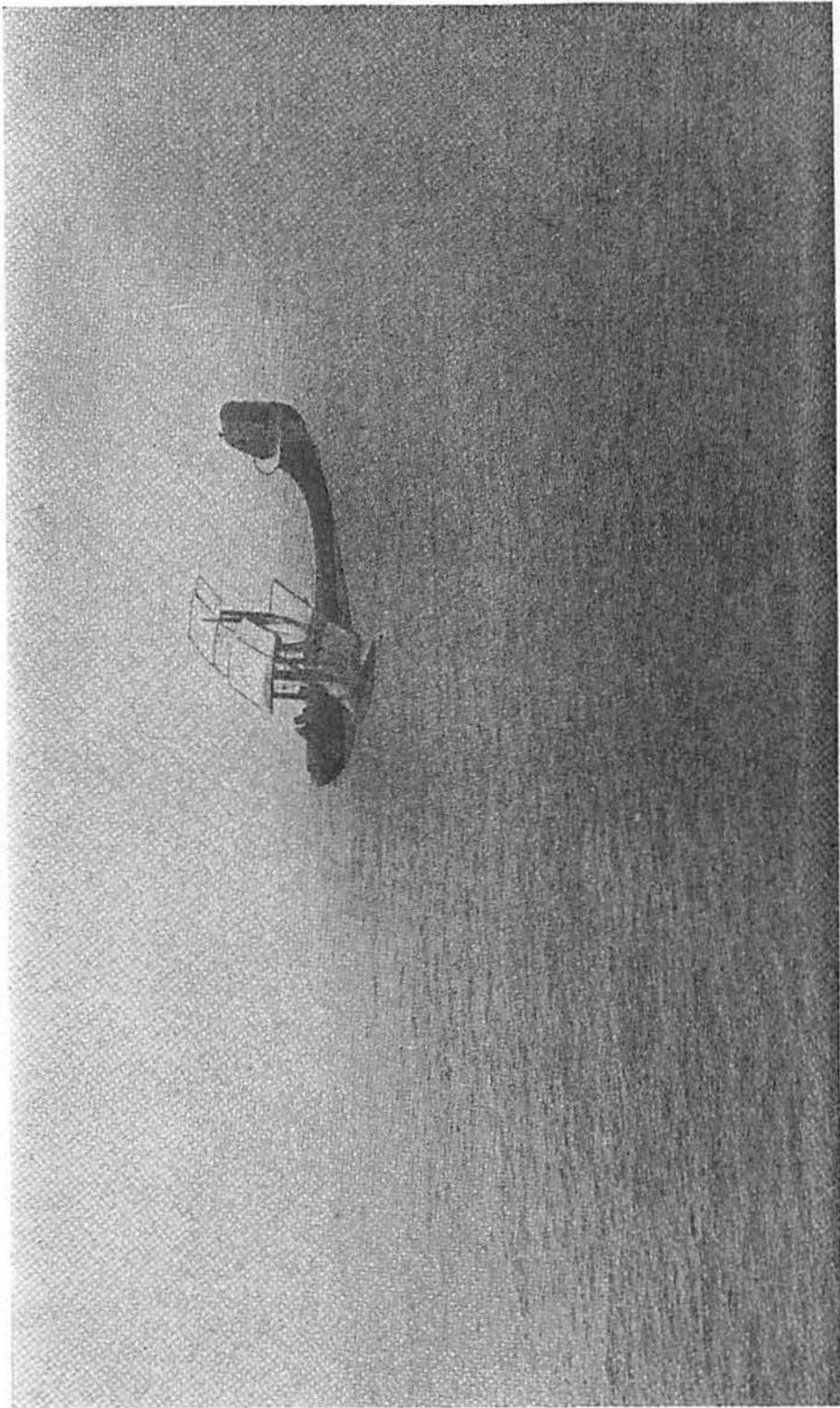
SHIP'S BOAT WITH STRETCHER CASE APPROACHING THE ANTARES



HANGAR AT THE CAPE MAY AIR STATION WITH *ANTARES* ON THE APRON



HANGAR AT THE CAPE MAY AIR STATION WITH ANTARES ON THE APRON



THE VIKING APPROACHING THE DELAWARE BREAKWATER
This photograph was taken from the *Adhara*.

THE FLYING LIFEBOAT OF THE COAST GUARD

By COLONEL HAROLD C. REISINGER, U. S. Marine Corps

THE spring of this year witnessed the realization of a cherished ambition of the United States Coast Guard—the culmination of their effort to develop an aviation branch. Beginning in April, 1930, funds became available for the purchase of seagoing planes of a type adapted for general coastal service and especially suited to the rescue of those in peril at sea—planes that could operate in rough waters, supply medical attention not otherwise available, or transport from ships at sea casualties requiring immediate hospitalization. Ever abreast of the times, and following the policy and traditions of 142 years of efficient service as the guardians of the coast, the first line of aid to navigation, and the primary agent for succor to those who go down to the sea in ships, this step is one consistent with the history of the Coast Guard and of great importance to humanity.

Soon the public will become accustomed to seeing in their daily papers such a headline as appeared in the Eastern newspapers of August 15, 1932:

"PLANE RUSHES TO AID OF SAILOR"

A fisherman was suffering from blood poisoning on a schooner 175 miles east of Nantucket Island, Massachusetts. The master of the schooner radioed his request for aid. This message was picked up at night by the Coast Guard Aviation Base at Gloucester, Massachusetts. Immediately the *Sirius*, a new Douglas amphibian, proceeded upon its errand of mercy. The primary mission of the plane was to find the schooner and take the sick man to the nearest hospital. Constantly in touch by radio with the Coast Guard surface patrols, the plane searched in the darkness of the night among the fishing fleet on George's Bank until its supply of gas was almost exhausted. After an effort to reach

the Maine coast it was forced down upon the sea in the neighborhood of Matinicus Rock. Lack of news had justified a report that it was lost. On the following day, while the seaplane *Allair* was on a test flight off Cape May, the report that the *Sirius* was missing was picked up by its radio. At one o'clock this flying boat, having refueled, left Cape May to assist in the search for the missing plane and, if practicable, to find the fishing schooner and the sick man. At 6:30 P.M. the *Allair* discovered the *Sirius*, with the Coast Guard destroyer *Wainwright* standing by, near Monehegan Light off the Maine coast. Through cooperation between the surface craft and the *Sirius* the sick man in the meanwhile had been discovered and taken to the shore for treatment. This was all in a day's work for the Coast Guard aviation and characteristic of their instant response to an appeal from those at sea.

The same spirit actuated them in their exceptionally humane action in the case of a man in the SS. *Hampton*, bound from Newport News to Boston. He was informed by radio of the critical illness of his family. The commanding officer of the *Hampton* reported the situation by radio to the Coast Guard. A plane was immediately dispatched, intercepting the ship and picking up the much-worried passenger, landing him at the nearest railroad connection.

The Coast Guard has ever been a seagoing outfit. Its problems have been those of the sea and the handling of cutters and small boats under adverse weather conditions. When the Coast Guard finally went into the air, its aviation branch by no means lost its seagoing tradition. Truly, the Coast Guard aviation is no place for a landlubber. It requires great skill, nerve, and seamanship to bring a small boat alongside one of their flying lifeboats, as the danger of damage to the \$80,000 plane

is imminent at all times. From the moment you go aboard one of their newest seaplanes you feel aboard ship, and the fact that by the grace of its own powerful engines and the laws of aerodynamics it takes to the air does not change the character of the service. Being a seagoing outfit, when the Coast Guard set out to build according to its own ideas a seaplane suited to its work, it literally built a flying boat, a ship that combines the best qualities of a transport plane and those of the sturdy surface craft—the lifeboat.

Although it proved a handy and useful craft to the Coast Guard in its service to humanity, the Douglas amphibian had its limitations. The existence of these limitations led the Coast Guard aviation to develop a seaplane specially constructed to meet its needs more completely. The Coast Guard knew what it wanted, and there being no vessel hitherto developed to meet its peculiar needs, its aviation personnel laid down certain conditions as a basis governing the construction of such a desired vessel. This was a new departure and greatly broadened the field of usefulness of the plane and led to the construction of the flying lifeboat, a class of seaplane built to fulfill the following requirements:

An aerial "eye," capable of extended search, radio equipped to maintain constant contact with surface, thus saving hours and possibly days of delay of search; an aerial ambulance capable of a speed of 100 miles per hour, able to land in rough sea, equipped with hatches large enough to admit of stretcher cases and to be able to take off in rough water; a demolition outfit to effect the destruction at sea of derelicts and obstructions to navigation within a few hours after the report of location; a high speed flying patrol for observation, landing and returning with rescued crews of distressed small craft and capable of taking aboard fifteen or more passengers from distressed craft and standing by for lengthy periods on the surface, maintaining in the meantime radio communication with surface craft until transfer can be made of its passengers.

These specifications were turned over to the General Aviation Corporation of Balti-

more, Maryland, and the flying lifeboat was constructed there. The finished product has by test and in actual service lived up to the fondest hopes of its most ardent advocates.

Briefly, these ships are not only capable, maneuverable airplanes, but are of remarkable seaworthiness. They are especially equipped with radio telegraph and telephone, and direction-finding devices. The single wing has a spread of 74 ft. 2 in. The hull of aluminum alloy, with alclad skin sheets, is 54 ft. long, 8 ft. 8 in. in height, and 7 ft. 2 in. in beam—a veritable ship. Aboard, one feels as though one had entered a destroyer or submarine, particularly as the body proper is divided into three compartments equipped with watertight bulkheads and doors. This type of vessel, powered by two Pratt and Whitney motors, each developing 420 hp. at 1,900 revolutions, though of 11,200 pounds gross weight, attains an air speed of 112 miles per hour. Ceiling tests have been made with full load up to 9,000 feet. Its cruising range without refueling is 1,100 miles. This class of seaplane includes the *Antares*, *Allair*, *Acrux*, *Acomar*, and *Arcturus*: familiar names, the bright stars of the navigator.

Shortly after the *Antares* was delivered at the Cape May base, she received her baptism in service to humanity. A ship without a doctor and proper medical equipment, fifty miles at sea, radioed an emergency call at 8:00 A.M. Two men had been seriously burned and were in immediate need of medical attention and hospitalization. The *Antares* took off and within thirty minutes was alongside the ship and the injured men taken aboard as stretcher cases. This was accomplished in a rough sea without injury to the patients. One-half hour later the *Antares* landed at the Cape May base where the injured seamen were examined by Dr. Frank R. Hughes of the Public Health Service who had been summoned to the dock. Upon his recommenda-

tion the seamen were immediately removed to Philadelphia, the doctor accompanying them in the *Antares*, making some changes in the dressing of their injuries while in flight. At 10:15 A.M., two hours and fifteen minutes after the receipt of the emergency radio call, these two seamen were receiving hospital treatment in Philadelphia.

It seemed to this writer that a photographic record of such a humane act would be of special interest to the reading public, but diligent search failed to disclose its existence. It appeared that those engaged in an actual rescue at sea were usually too busy with the business in hand to take snapshots of the transaction; and further they occurred so often in weather unfavorable to picture taking. With the end in view of procuring suitable photographs, he endeavored for some time to be on the ground when a call was made requiring the employment of a flying lifeboat in the rescue of persons at sea. While such calls were frequent, they were never made at the time he was present. So in desperation he appealed to the Coast Guard authorities to stage for his special benefit a "rescue," employing the same methods as used in an actual case. Through the courtesy and cooperation of the entire force at the Cape May base, it was possible to obtain such a pictorial record on September 6, 1932.

An old launch about 45 feet overall was prepared with concealed drums containing combustible material calculated to produce a lively and colorful smoke. At the appointed time, the victim was towed out from Cape May to the South Shoal and there anchored. Three men had been placed on board the launch and when on location they proceeded to touch up the prepared fire pots. In a few moments we had before us an excellent presentation of a fire at sea, in which the crew, who took refuge in the bow, played a realistic part. Owing to the breeze and the heat generated by the fire pots, the boat soon was most convincingly

ablaze from its forward cabin to its stern. Shortly after the fire was started we sighted the *Adhara*, the Douglas amphibian, rushing through the air to the rescue. The Douglas amphibian type is rather a "wet ship" as compared to the flying lifeboat. However, the sea running was not so rough as to warrant or require the original use of the *Antares* for this exhibition and therefore the *Adhara* was assigned the principal rôle as life-saver. She was closely followed by the *Antares*, one of the new flying boats, which covered the operation of the *Adhara*, ready to effect the removal of the men from the burning boat in the event of any hitch or mishap.

The day was bright and clear, but a good southerly breeze had been blowing for some seventy-two hours, so that there was considerable sea running. The *Adhara* circled the scene of the fire but once before shooting down to a perfect landing, despite the swell. Within four minutes of the time it took the water, it had put over its life raft, inflated it, and removed the men from the burning launch. When the life raft had delivered the rescued ones on board the *Adhara*, it required but a few moments to deflate it and take it on board through the after-hatch. The amphibian then, with a rush of its propellers and a flash of spray, made a quick take-off and returned to the Cape May base, followed by the *Antares*. During the entire operation, which took but a few minutes in all, the *Antares* had maintained its position in readiness, circling constantly above the scene of the rescue. When the rescue had been completed and the planes had departed for the base, a surface patrol boat which had followed up the airplanes closed in on the burning launch, dropped a boat, put a crew aboard equipped with fire buckets, and soon had the fire extinguished.

During this "staged" operation, an actual derelict was sighted about five miles to the east of South Shoal, its position reported, and on the way in our surface

patrol boat picked up the derelict and towed it into port. The photographs were taken from C.G. 182, a 75-foot patrol boat, which, when inbound, was signaled by a fisherman in a power launch whose motor had gone wrong. Our craft, having the derelict in tow, used the radio telephone to notify the base at Cape May of the position of this fisherman in order that another boat could be dispatched to tow him out of trouble. As we passed within the breakwater east of Cape May we met another patrol boat with a deep-sea scallop fisherman in tow whose motor had broken down. When we landed at the base an aviator was out in a two-seated Douglas landplane searching for a party of lost fishermen. When found, the plane would radio the position to surface patrols. So in this one day, the writer had an opportunity of observing several phases of the Coast Guard activities, all of which bore directly upon aid to navigation and to those who go down to the sea in ships.

Fortune further favored the writer in his effort to procure photographic record of these activities of the Coast Guard. It was found that the SS. *Thomas Q. Brown*, from which the *Antares* removed the two injured seamen in June, would be near the Delaware breakwater on September 13. By radio, arrangements were made with the commanding officer of that ship to anchor and allow the scene to be re-enacted while photographs were taken. On September 13, with the co-operation of the SS. *Thomas Q. Brown* and the Coast Guard authorities at Cape May, the *Antares* landed close aboard that vessel, and the subsequent operation of removing a stretcher case at sea covered in detail the actual occurrence as previously described in this article. It is understood that the only material difference in the latter instance was that the weather conditions were very much more favorable.

During this day another rescue scene was staged similar to that which was pho-

tographed on September 6 and a photographic record made of this operation.

The Coast Guard is an organization old in the service of the United States. It lays claim to being the oldest continuous uniformed service of the nation. It was created by the Act of Congress, August 4, 1790. From its creation it has rendered invaluable service to navigation and to humanity, and its history is replete with acts of heroic devotion to duty. Yearly it sees service from the polar seas to the Gulf of Mexico. On the one hand, it has made itself felt as a stern agency in the enforcement of the law; on the other, it is well known to seagoing men as the means to which they may look for timely aid in an hour of trouble.

The Coast Guard has served with distinction as part of the naval forces of every war in which the United States has been engaged, beginning in the time of the Revolution and concluding its last service in valuable convoy work in the World War. During its 142 years of existence it has been an economical branch of the service, producing the maximum results upon the appropriations allowed. This spirit was probably inculcated into the "Revenue Cutter Service" by its originator and founder, Alexander Hamilton. The earliest letters of the youthful Secretary of the Treasury to his collectors of customs stress this point. In a circular letter dated June 1, 1791, he writes with reference to the maintenance of the infant customs service afloat,

The establishment not being entirely agreeable even to members of the Committee, it will require uncommon care that it be not rendered more objectionable by any unnecessary expense. I request that they [supplies] be bought on the lowest terms for cash. The discounts on most goods purchased for ready money are considerable, and I wish the public to enjoy the benefits of that kind of dealing. . . . I recommend occasionally the consultation with some suitable person, if known, judicious and economical, who has been or is a merchant or master of a vessel, or both.

On the first visit by this writer to the Cape May Coast Guard Air Station, he was impressed at once by the fact that the money made available by congressional appropriation for aviation activities of the Coast Guard had been converted principally into flying ships. Within two antiquated hangars, war built and turned over to the Coast Guard by the Navy, he found three modern, up-to-the-minute flying lifeboats, together with a number of other fine types of land and sea planes. The buildings may be in dire need of repair, the skidways worn to a degree that is almost dangerous to the valuable craft that use them, but everything connected with the planes themselves approaches closely to perfection. *Semper Paratus* is the motto of the Coast Guard—in golden letters it appears in the emblem on each plane—and those planes were ready! Ready to respond immediately to a call to duty or to perform successfully a mission of mercy.

In the light of the present demonstrated utility of the airplane and seaplane in law enforcement, in navigational aid, and in the saving of human life and property, it is a bit difficult to understand the long struggle through which the Coast Guard passed in order to develop to its present stage its aviation branch. The airplane and the specially designed seaplane, through its wide cruising range and its increased search facilities, is signally adapted to the extension of the activities of the Coast Guard and the execution of its mission upon an economical basis. This fact was well known to the officers of the Coast Guard for many years; still, see the record of delay and disappointment in their effort to get into the air, so necessary to extend and perfect their service to the country and to humanity.

Three officers primarily are responsible for the development of Coast Guard aviation. In 1915, prior to our entrance into the World War, the Curtiss Airplane Corporation had established a flying school at

Newport News, Virginia. The Coast Guard cutter *Onondaga*, Captain B. M. Chiswell commanding, was then at Norfolk. Two of its officers, Lieutenant Hall and Ensign Stone, saw the possibilities of flying boats as an auxiliary to Coast Guard peace-time activities. The *Onondaga* was then engaged, among other things, in the succor of disabled vessels, spending many days in searches following radio reports. That an airplane would more quickly find and radio to the surface craft the position of disabled vessels, was apparent. Under these conditions these officers assumed the rôle of apostles to spread the doctrine of aviation as an auxiliary to that part of the Coast Guard mission which concerned relief of vessels in distress. Lieutenant Hall became a student in the Curtiss flying school. That company, in August, 1916, placed a flying boat at his disposal for experimental and other purposes. The utilization of aviation as an aid to surface craft in relief work was easily demonstrated. Stone, in March, 1916, was assigned to Pensacola for flight training and turned to actual flying, while Lieutenant Hall devoted himself to the study of aircraft engines and plane construction. When we entered the World War in 1917, Stone saw active service as a naval aviator in Europe. He became later one of the two co-pilots in the flight of the *NC-4* from Rockaway, New York, to Plymouth, England. Stone, now a lieutenant commander, commands the air station at Cape May.

Congress, first by the act of August 29, 1916, authorized the establishment of ten Coast Guard stations "for the purpose of saving life and property at sea, and for national defense," providing, however, no funds for their proper development. February, 1920, saw the Coast Guard make its first step forward, taking over an abandoned naval air station at Morehead City, N.C., and operating planes loaned by the Navy from this base. The Morehead City station struggled along until August, 1921,

when lack of funds required its abandonment.

The next impetus to Coast Guard aviation was through the initiative of Lieutenant Commander C. C. von Paulsen. He also had trained at Pensacola. In July, 1925, von Paulsen was established at the Coast Guard Section Base at Gloucester, Massachusetts. Through his efforts, with an abiding faith in the value of airplanes as a Coast Guard auxiliary, he developed an air station at Gloucester, obtaining an appropriation of approximately \$150,000 for five airplanes. The Gloucester station had meager facilities, a tent hangar borrowed from the Navy and other insufficient equipment. Throughout that bleak winter, von Paulsen and his men, like Washington at Valley Forge, kept the spark alive. Their airplanes operated along the cold New England coast, based upon this canvas hangar. In 1926 three other planes were added. An abandoned naval air station at Cape May, N.J., was then assigned to the Coast Guard. From 1925 to 1930, Coast Guard aviation was operated on a shoe string. But the fortitude and the determination of this small group of officers gained in the end its proper recognition. In November, 1928, a Coast Guard aviation section was created in Washington under Commander Hall. Hall's efforts in 1929, warmly supported by his superior, secured an appropriation of \$144,000 for aviation. The five planes then in use were to be replaced by a lesser number, more suitable to the peculiarities of the service of the Coast Guard. In 1931 additional appropriation enabled final steps to be taken to equip the Coast Guard with flying boats of a type adaptable to this peculiar service. In 1932 additional funds came. Now the Coast Guard has added to its fleet three Douglas transport amphibians and five specially designed flying boats of the *Antares* type. Of the ten stations authorized by Congress in 1916, funds came only for the construction of one hangar which was

completed at Miami, Florida, in August of this year. It was built under the supervision of Lieutenant Commander C. C. von Paulsen, who is now in command of the Miami aviation station. This hangar is especially designed with a view to economy in ground force, and its plan is such that one watchman may cover the entire plant at night and in an emergency place a plane in readiness for flight and warm it up before the arrival of the aviator.

The operation of the two planes at the Gloucester base during the months of March, April, and May, 1932, is interesting. The weather conditions prevailing annually on the New England coast in the spring are well known to be far from ideal. Still, see the record:

One Loening amphibian—powered by inverted Liberty motor—made 25 flights, cruising 3,753 miles during 55 hours 45 minutes in the air with no forced landings and no time out of commission, and

One Vought Corsair—powered by Wright Radial motor—made 35 flights, cruising 3,640 miles in 51 hours 35 minutes, with no forced landings and no time out of commission.

During this period these two planes operated from a temporary hangar with no proper facilities for housing and upkeep, made 60 flights, totaling 107 hours 20 minutes in the air, during which they brought under observation 47,000 square miles and identified 387 vessels. In many instances the planes rendered aid to disabled vessels and to those lost in small boats, not only through their own efforts, but also by radio communication with surface cutters, guiding the latter to the vessel in distress.

The annual flying record of the planes based at Cape May is equally interesting. Their activities, however, are too numerous for detailed citation in this article. Briefly, this is the summary: 365 flights, 759 hours 30 minutes in the air during the year ending May 31, 1932.

Possibly because of the presence of so many amateur sailors at the summer colonies on the Jersey coast, as well as its proximity to the lane of coastal traffic, it has fallen to the lot of the Cape May station to effect a great number of sea rescues, "ambulance calls" and "doctor calls."

It seems to be the popular view that the principal activity of the Coast Guard at present is in the enforcement of the Eighteenth Amendment—the prevention of the introduction into the United States of demon rum. It is true that when the Coast Guard got into the air, it began to make life miserable for the seagoing rum runner and to a great extent changed his hitherto established plans of operation. The ability of the plane, in a brief time, to bring under observation a thousand square miles of sea and coast, has made rum running a difficult occupation. Once the "suspect" speed boat is spotted, there is but small chance of its eluding the plane, which by radio is calling the surface patrol to close in and effect the capture.

So much publicity is given to this onerous and unpopular duty that the great service of the Coast Guard to commerce and humanity is but dimly discerned. Within the scope of an article such as this it is impossible to treat with any detail the many activities of this ever-watchful, efficient branch of the United States service. In the far North it protects the seal fishery and brings relief to those icebound and in sore need not only of food, but of medical attention and medical supplies; it plays the leading rôle in fair weather and foul, in the International Ice Patrol, constantly charting the flow of icebergs, warning ships worth millions that carry thousands of human beings, of the presence of dangerous obstructions in the steamship lanes; and down each coast into the tropical waters of the gulf it maintains constantly a visual patrol to render succor to those in distress, not only through its life-saving stations and its beach patrols, but through

the activities of its surface boats. And now the vision of all forms of surface patrol is extended far beyond their normal horizons through the use of the airplane, the area protected within a given time multiplied a hundred times; so that the service to ships at sea and those on board reaches hundreds of miles beyond the old limitations.

All those who follow the sea for their livelihood from our coasts, as well as their more fortunate brothers who seek recreation upon the lakes and oceans on our boundaries, know the Coast Guard as something more than a corps of "rum chasers." Many have personal reasons to appreciate its vigilance, hardihood, and efficiency in the service of humanity. From the Grand Bank to the Florida Keys the fishermen look to the Coast Guard plane or surface patrol for a friendly tip by radio of the location of runs of marketable fish. The mackerel fleet at Cape May this spring awaited word from the Coast Guard planes to put out to sea to intercept the mackerel run, and the pogie fishermen of the Virginia and Jersey coasts depend to a large extent upon the "eyes" of the Coast Guard to spot large schools of their oily little fish.

Statistics always seem to this writer deadily dull; still, in the case of the Coast Guard, dealing as it does with the rescue of human beings as well as the saving of vast sums of property, cold facts contain their human interest. Briefly, then, this is the record of the Coast Guard for the fiscal year ending June 30, 1932:

Lives saved or persons rescued from peril . . .	214
Persons in distress cared for	659
Instances of lives saved and vessels assisted	6,393
Instances of miscellaneous assistance	7,346
Value of vessels assisted (including cargoes)	
.....	\$39,177,247

In this signal service to commerce and humanity the air force, small as it was during most of the year, played an important rôle. Looking into the future, there is an extensive undeveloped field of use-

fulness open to the airplanes of the Coast Guard.

It is now the plan of the aviation section of the Coast Guard to develop planes capable of still longer periods of sustained flight and wider cruising range for duty with the International Ice Patrol. Strong indeed these flying patrol boats will have to be; great in their reserve power and buoyancy to withstand the perils that will constantly beset them in this service. A fitting problem for the aviation section of the Coast Guard to solve, if one may judge by the advance made in the design and construction of the flying lifeboat as compared to other similar types of sea-going planes. There can be no question of the great value to commerce and human life of the service that will be rendered in thus broadening this activity. The work heretofore accomplished by the surface ships of the International Ice Patrol has been splendid, but is, in fact, insignificant compared to that which in the future will be given by the greater range of observation of the airplane as a patrol auxiliary.

These seaplanes of the Coast Guard will undoubtedly in time of war become, by their wide cruising range, their cargo capacity, and the superior radio equipment, a material factor in national defense. This fact is already recognized by some officers of the Navy and undoubtedly the planes of the Coast Guard will be assigned an important position in any future plan for the defense of our coasts.

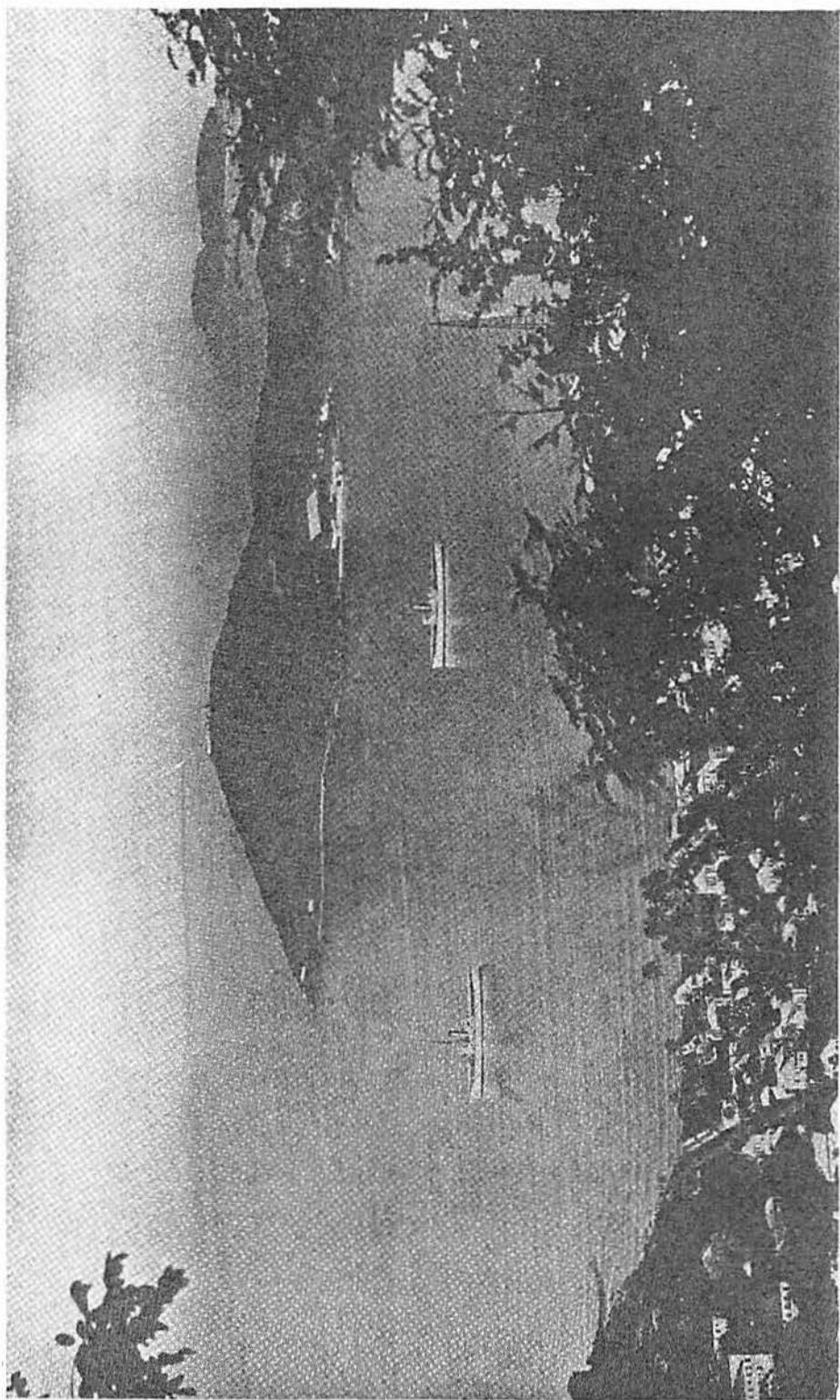
The writer earlier in this article cited the action of the *Antares* in going to the relief of two badly burned seamen on board

a ship distant from shore. A few days following this instance, the chief engineer of the SS. *San Antonio* was badly in need of medical attention while that ship was at sea off the Delaware coast. A doctor was placed on board one of the Douglas amphibians and flown to the ship. He rendered medical attendance to the chief engineer, accompanied him ashore and placed him in the hospital at Lewes, Delaware. In appreciation of this prompt and efficient relief of the stricken officer, the Marine Engineers' Beneficial Association wrote to Dr. Frank R. Hughes of Cape May, N. J., who performed this service. In that letter was found the following:

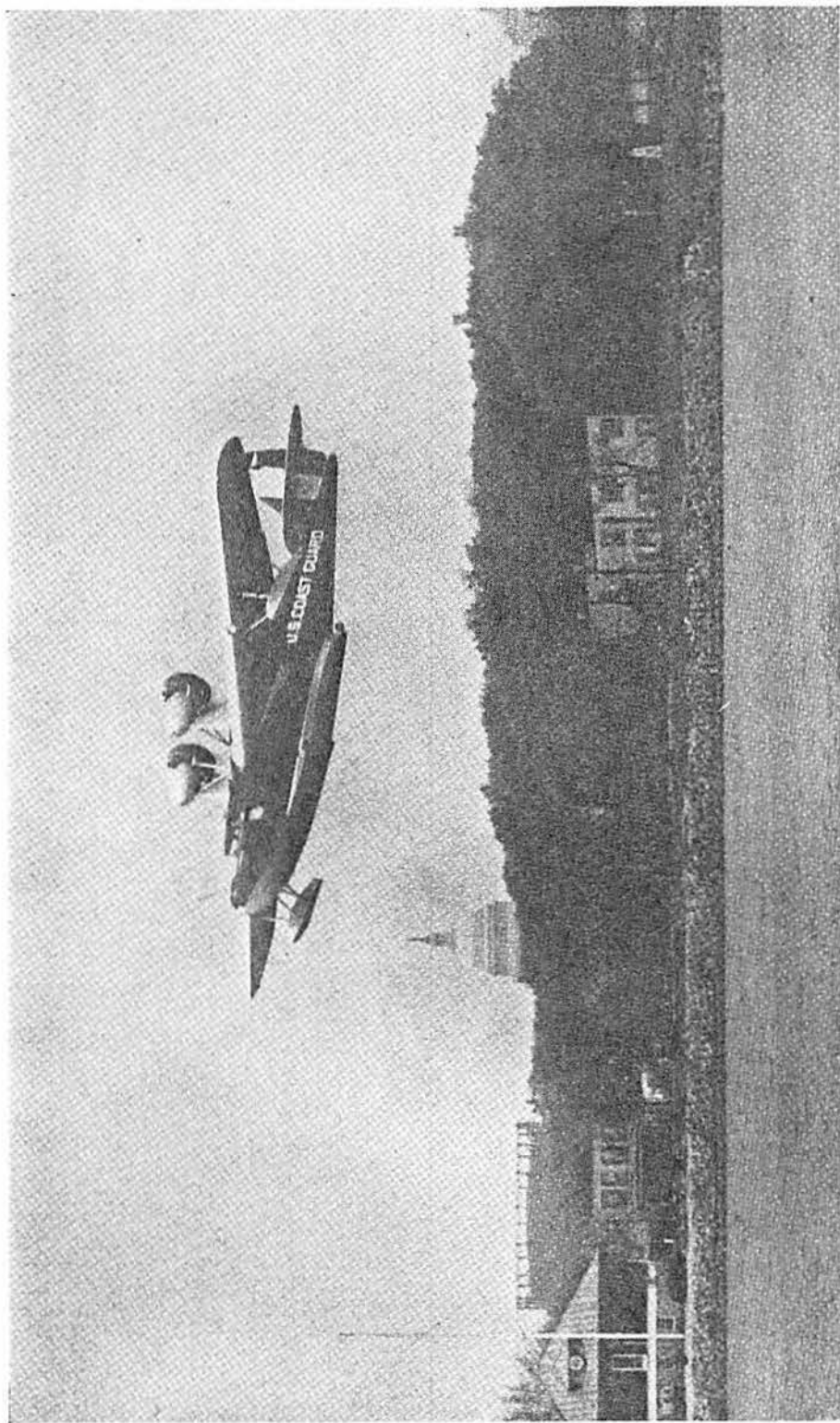
Deeds of this kind go a very great way toward offsetting the general impression of the public at large that the Coast Guard service is only a policing agency for dealing with law violators. We who are seamen know of the many valuable services rendered by the Coast Guard service as aids to shipping, consider this medical service to seamen at sea one of the most wonderful aids to men who go down to the sea in ships.

This humane service so promptly rendered was made possible solely by the presence of a suitable seaplane as an auxiliary to the Coast Guard. By no other means could medical attention be so quickly provided to one injured or suddenly taken ill at sea. The letter of appreciation from the Marine Engineers' Beneficial Association speaks for itself; it is illuminating and prophetic. Between its lines one may see into the future, and draw a convincing picture of the ever-widening field of usefulness of the flying lifeboat to the Coast Guard in its service to humanity.



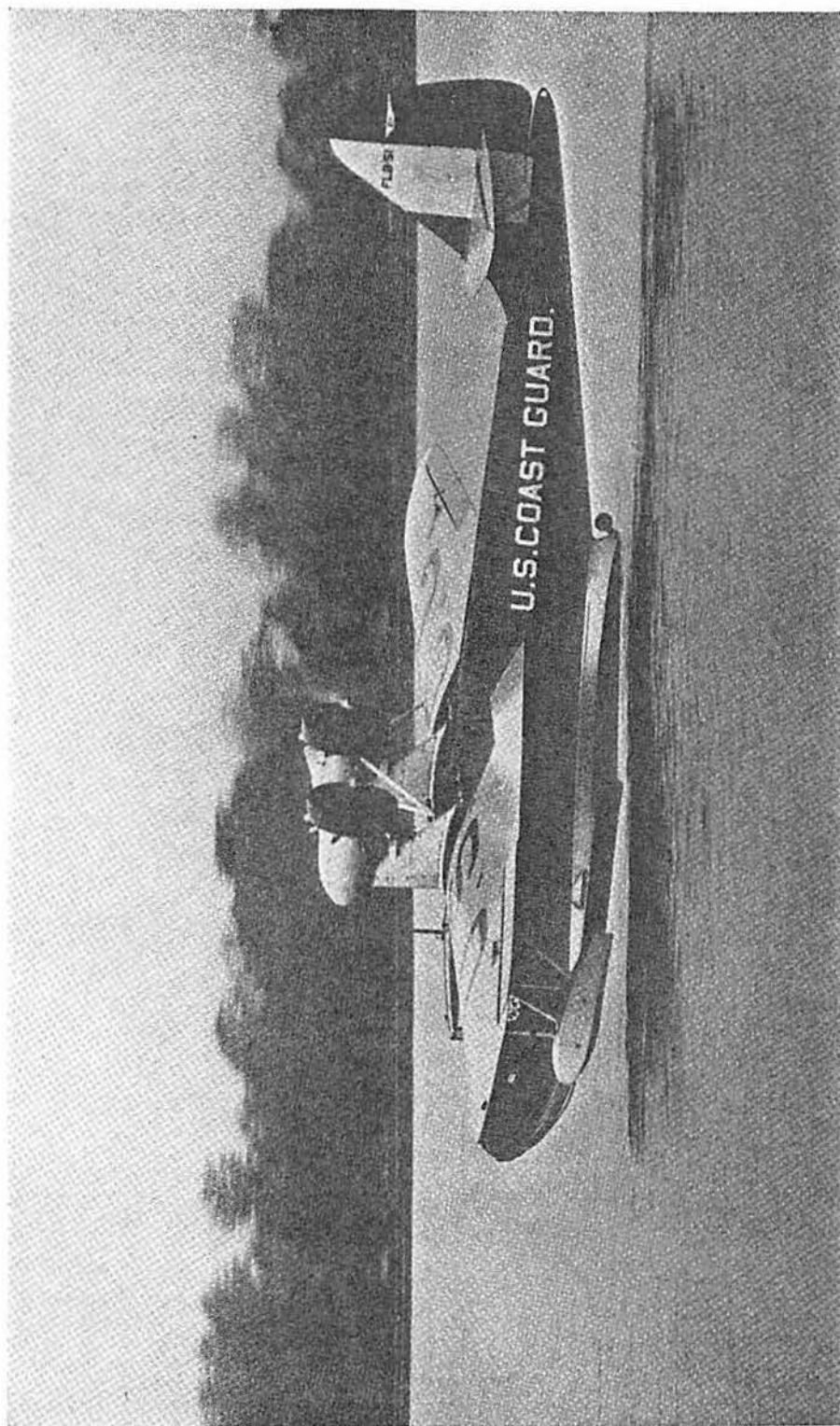


Courtesy U. S. Coast Guard Headquarters
U.S.C.G. CUTTERS SEBAGO AND SARANAC IN PORT OF ST. THOMAS, VIRGIN ISLANDS, DURING CADET PRACTICE OF 1932



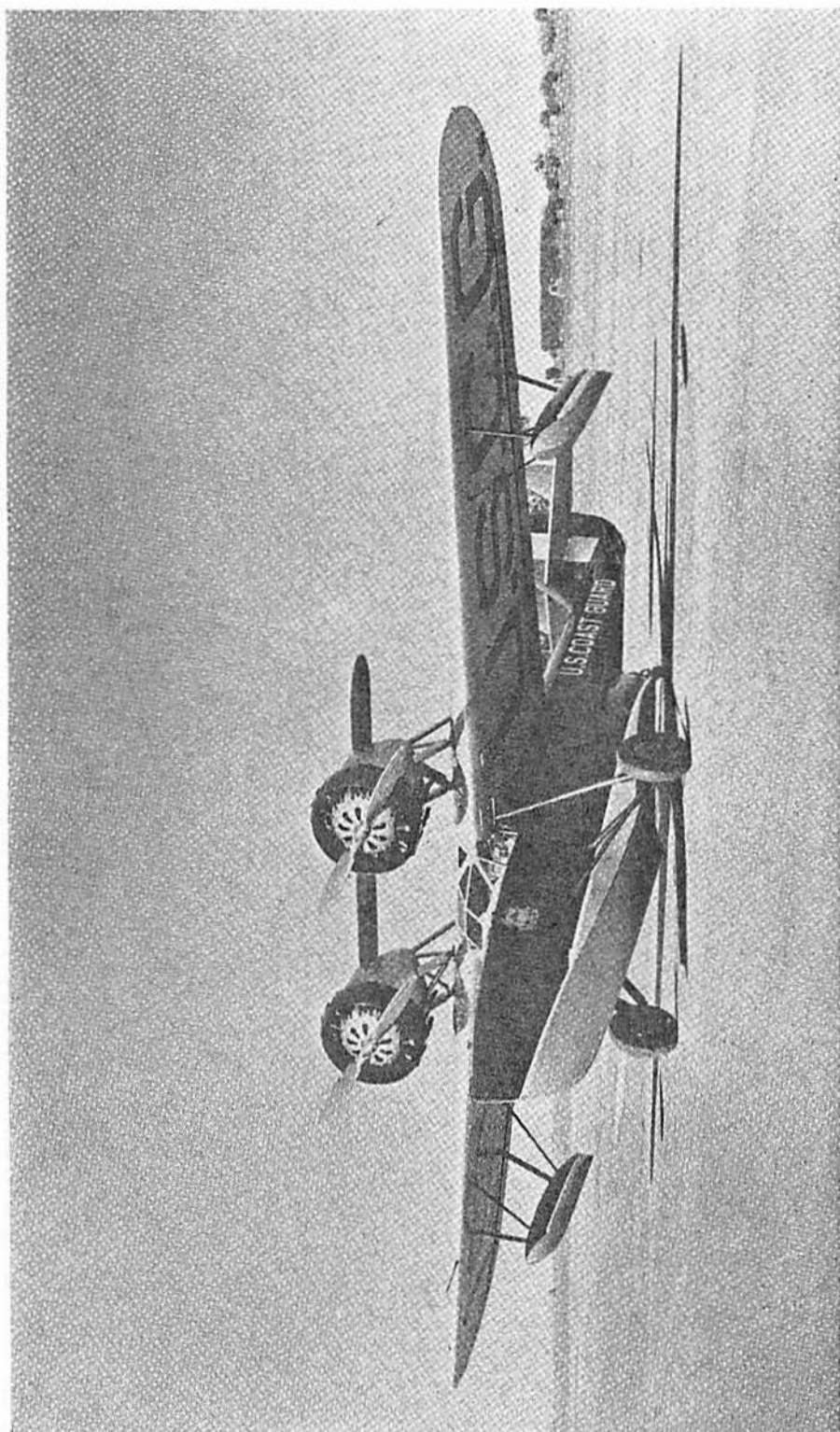
U. S. Naval Air Station, Anacostia, D. C.

A COAST GUARD PLANE OFF ANACOSTIA, D. C.

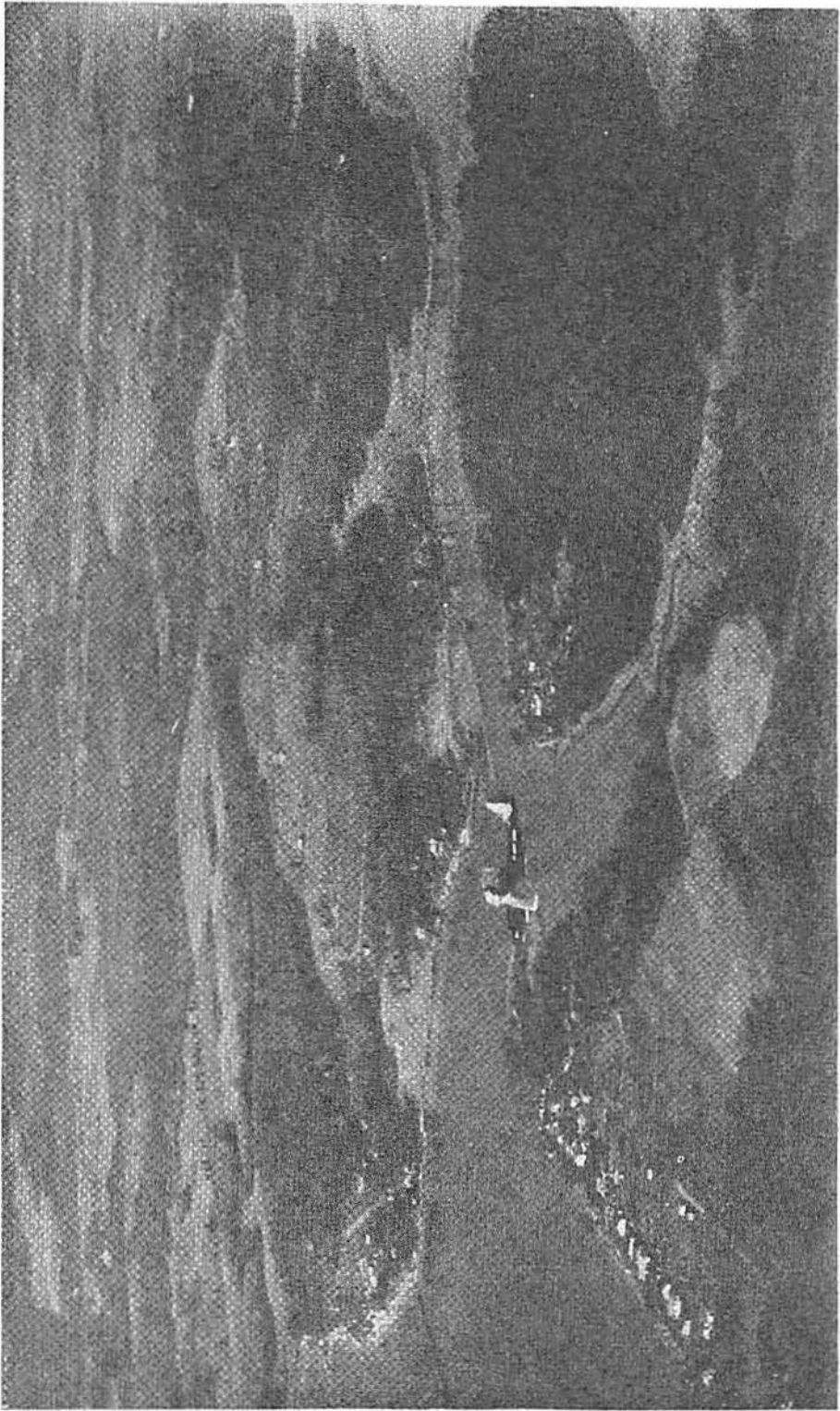


U. S. Naval Air Station, Anacostia, D. C.

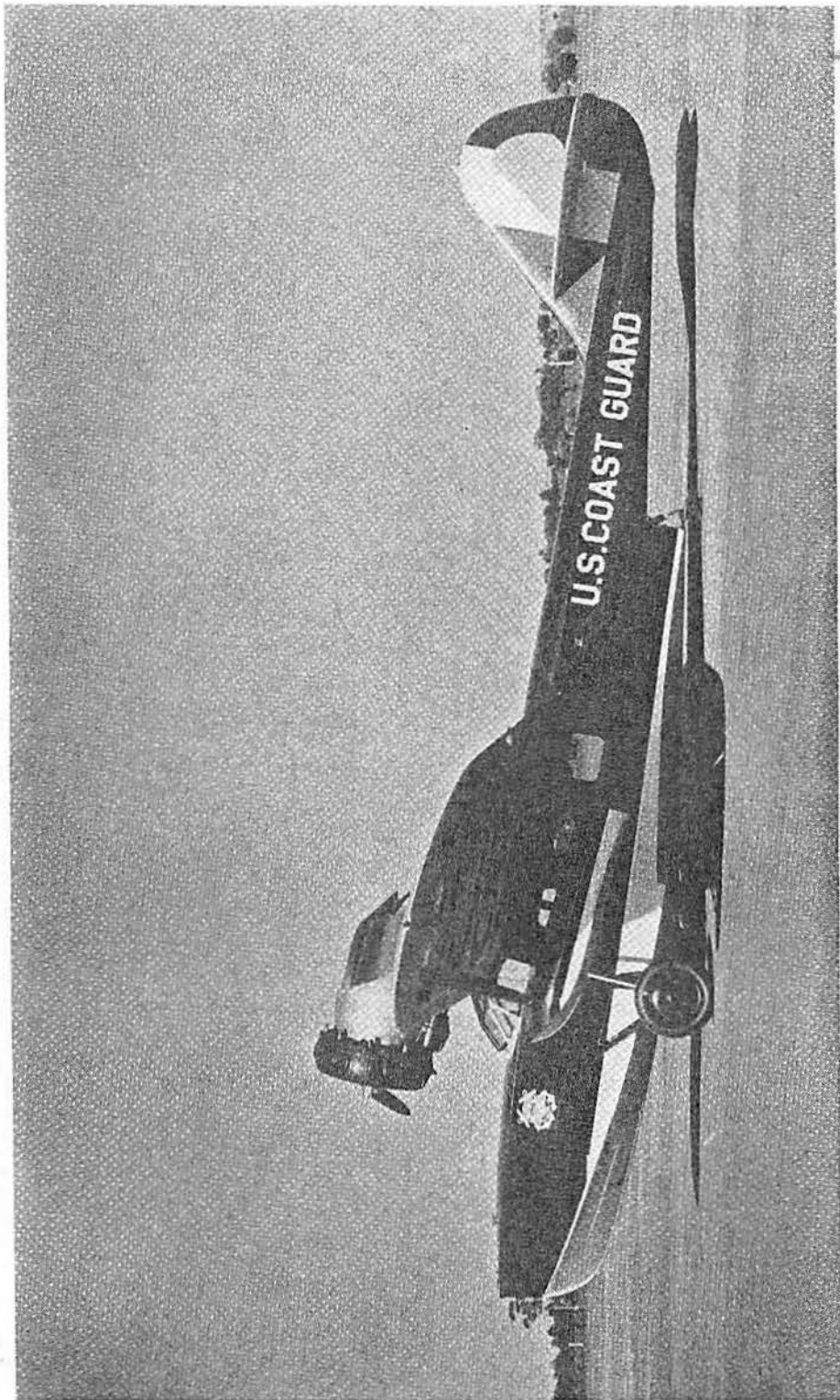
LANDING



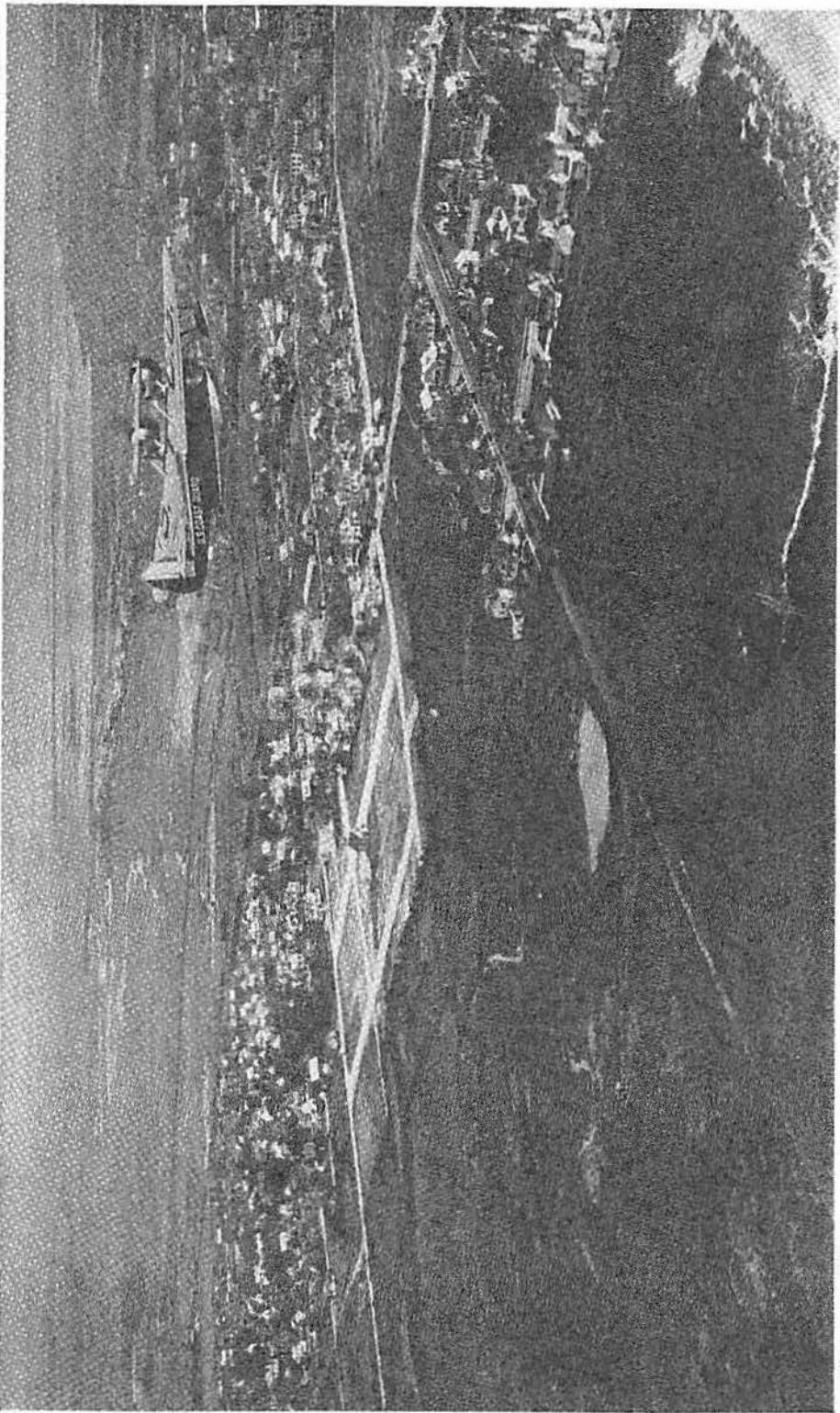
U. S. COAST GUARD PLANE ADHARA
(This and the photographs on pp. 101-104, inclusive, are by courtesy of Colonel H. C. Reisinger, U. S. Marine Corps.)



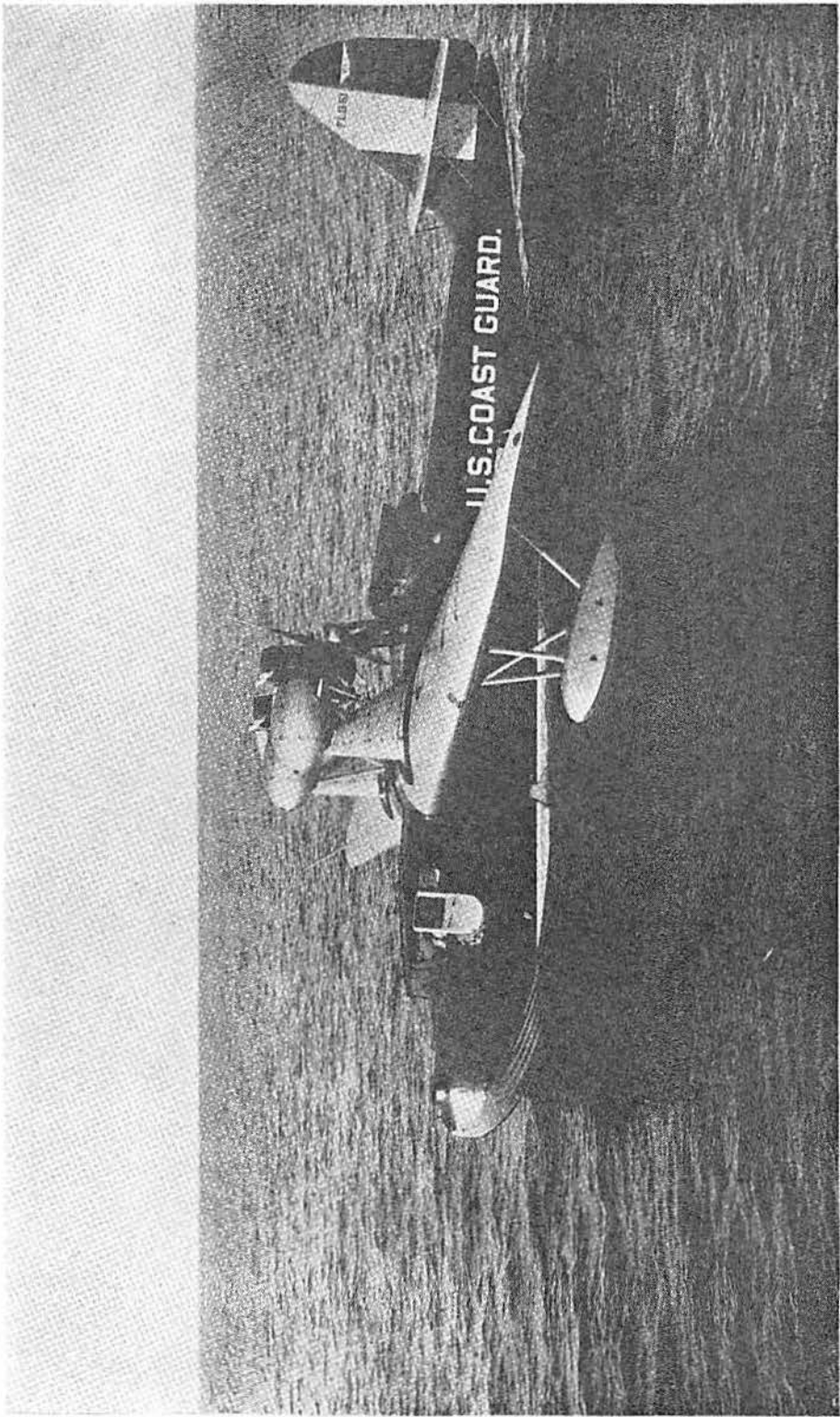
U. S. COAST GUARD PLANE *ALTAIR* ON MATERIAL TEST FLIGHT IN THE VICINITY OF ANNAPOLIS, MD.



U. S. COAST GUARD PLANE ADHARA, AT LOGAN FIELD, SANTA MONICA, CALIF.



HOMeward BOUND
The *Antares* flying over Cape May. Hangar and station visible in upper right-hand corner.



STRETCHER CASE PASSED AFT AND INTO THE ANTI-ARES BY AFTER HATCH