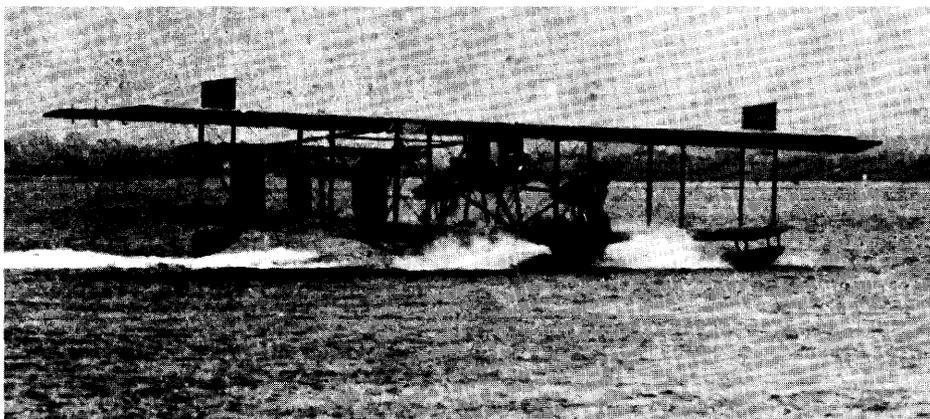
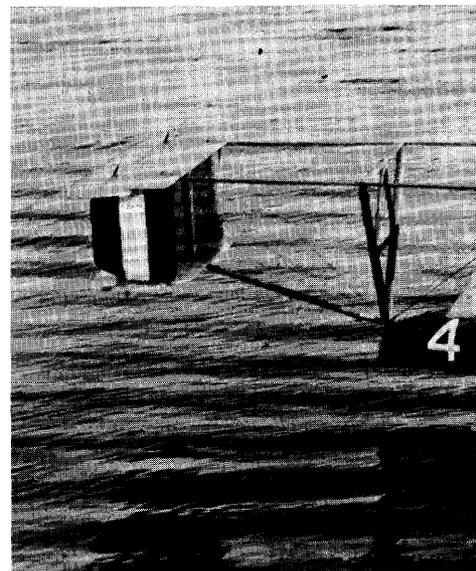


## THE FIRST FLIGHT ACROSS THE ATLANTIC



**A ONE-HOUR** test flight (above) on May 1, 1919, was sole operation of the NC-4 prior to the trans-Atlantic attempt. Lack of suitable gasket material led to contamination of fuel and oil lines, a typical problem with which the crew engineers had subsequently to struggle.



**T**HE NC-4 had flown only once prior to the departure from Rockaway. Small but possibly important defects were to be expected, and the lack of time to train the crew in teamwork was a nagging worry to her captain, Read. He was hoping the trip to Newfoundland would prove sufficient for the “shakedown” period.

A native of New Hampshire, LCdr. Albert Cushing Read was an observant man, small of stature, conservative in his ways and economical with words. Friends called him “Putty,” an unlikely nickname of obscure origin. One story has it that the monicker was earned when he came back from a summer vacation sporting a pallid complexion instead of a suntan. At any rate, the five-foot-four, 120-pound New Englander certainly knew how to express himself with effect; in January 1918, he had married Bessie Burdine, a young lady whose family owned Miami’s largest department store. While quiet to the point of reticence, he could be articulate when necessary.

Graduated from the Naval Academy with honors, he soon became one of the Navy’s best officers. As Naval Aviator #24, he was known as a brilliant pilot and navigator. The Navy was his life, the NC-4 a pivot point.

The trio of giant flying boats had departed Rockaway in a “V” forma-

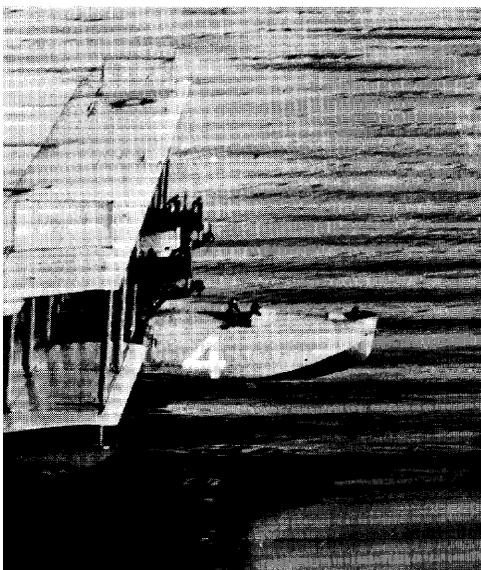
tion beneath leaden clouds: the “flag-plane” NC-3 was flanked on the right by the NC-1 and on the left by the NC-4. As the group made a sweeping turn around the air station and took up heading for Montauk Point, in the flight suit pocket of each crewman was a somewhat withered gift, a four-leaf clover — farewell gestures from Aviation Director Irwin. The gruff old Captain had brought them to the station on the 3rd of May. Now he stood below, sternly watching a year and a half’s work drone slowly out along the coast, headed for the jump-off point in Canada. Soon they were lost to view.

Arrangements on the NC boats seem strange to us today. The plane commander, who served as navigator, was stationed in the bow. There he had a small table, a cushioned box for a seat, his instruments, charts and log books. Equipped with the new “bubble” sextant designed by Byrd and a drift indicator adapted from an Italian airship gadget, he would plot the course, give directions and dutifully record all progress. Manipulation of the paraphernalia and, in fact, the need to see something, required the navigator to arise through the circular pit at the extreme front end of the boat. (It had originally been designed as a machine gunner’s position.) There, standing in the wind, he would “shoot” the sun and stars or, by

leaning over the edge, make observations through the eye-piece of the drift calculator. If he leaned far enough, he could make adjustments on the two spring-loaded flares. These pyrotechnic-tipped metal stems would jut straight forward from the hull when actuated, their burning brilliance illuminating the sea for possible emergency landings at night.

The flares were set off by punching a button on the pilot’s dashboard. It was a less than satisfactory arrangement, the button being located in such a prominent position that an ignorant man might easily be tempted to push it just to see what would happen. This occurred twice, once while the NC-4 was taking on gasoline. The fueling hose was less than two feet above the flares when they were ignited by a curious sailor in the cockpit. Quick work with fire extinguishers prevented a calamity.

Behind the navigator’s bow position, the hull was roomy, and there was space within, just forward of the pilots’ feet, to stretch out or even lie down. The hull was divided into segments, each compartment having bulkheads with outboard access doors through which a man could crawl fore and aft. The pilots sat on a bench, facing into the wind. Nine gas tanks of welded aluminum — a lightweight innovation — were amidships. Toward the stern was the aft cockpit for the



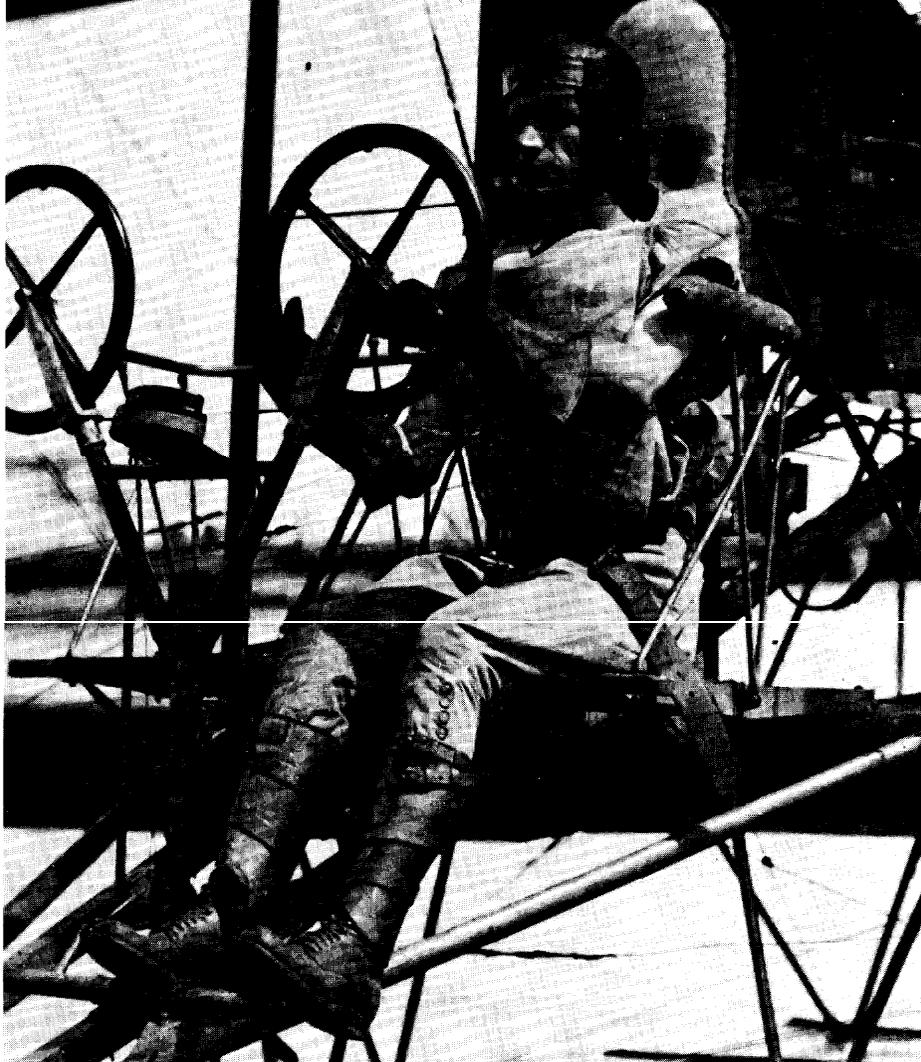
engineers and, below that, the crowded quarters for the radio equipment and its operator.

Members of the crew communicated either by a metal speaking tube (ineffectual in flight owing to engine noise) or a headset telephone rig. Special connections also enabled the navigator to switch into the radio circuit and talk with other planes or stations within a radius of about 20 miles.

Although the crew's flight clothing was lined with fleece, there was no provision for electric heating or other source of outside warmth. So beneath his leather coverall, each man wore a regular winter uniform and, according to his taste, light or heavy underwear, in some cases several sets.

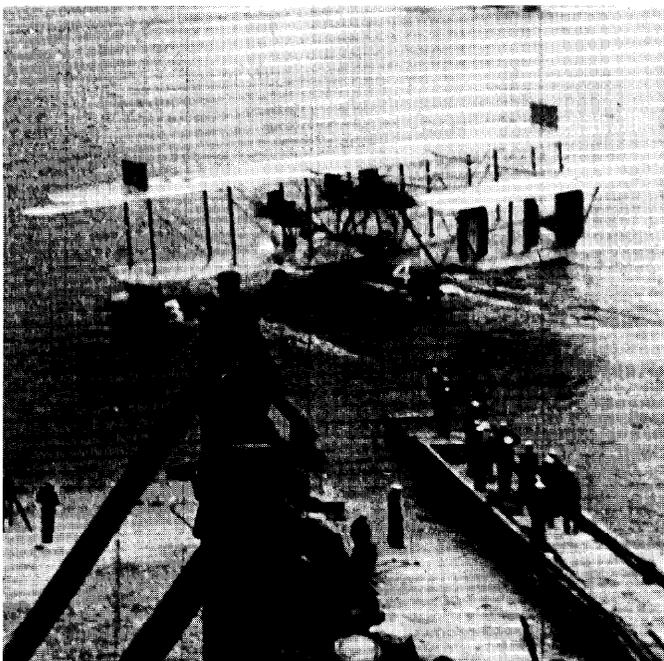
Equipment was complete. The navigator and pilots had the latest instruments, some of them designed by Byrd especially for the trip. The radio units were designed for all contingencies: In addition to the short-range set, there was a "telegraph" good for transmission and reception over several hundred miles. And most important, aboard each plane was a radio direction-finding compass.

As there were no parachutes, planners thoughtfully provided the engineers with linemen's belts, a security measure to prevent their being swept away while climbing about the engines during flight.

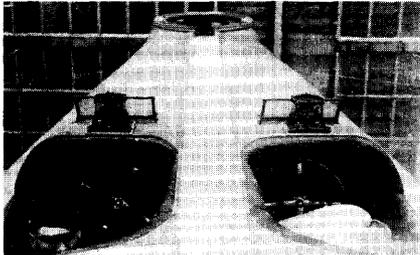


PIONEER PILOT READ WAS NAVAL AVIATOR NUMBER 24

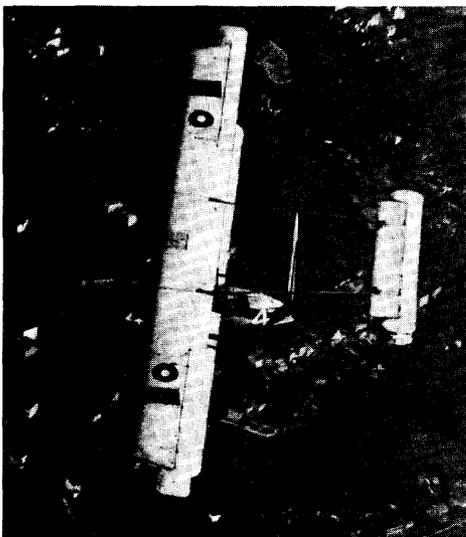
#### MAY 8 DEPARTURE FOLLOWED TOWERS' QUICK DECISION



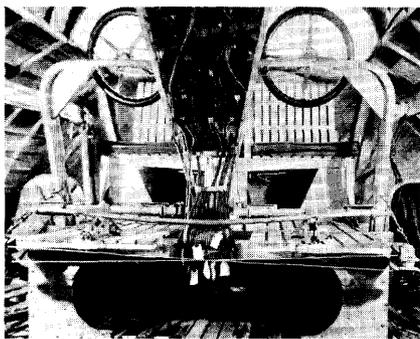
## THE FIRST FLIGHT ACROSS THE ATLANTIC



VIEW of pilots' and navigator's cockpits.



HIGH aspect ratio was an NC characteristic.



INTERIOR was functional, had ample room.

AS THE FORMATION moved eastward, the navigators busied themselves with Byrd's inventions and made computations. At noon Read made a note in his log: "Passing Montauk Point. Sun came out." He was feeling pretty good. From his position in the bow, he could see Towers in the lead plane and, several hundred yards beyond, Pat Bellinger in the NC-1. Both seaplanes stood out clearly, yellow wings shining brightly against the blue waters of the ocean below. Looking aft along the hull, he could see the helmeted heads of his pilots, Stone and Hinton.

Lt. Elmer Stone was the pioneer aviator of the Coast Guard. During the war he had been a test pilot, his performance earning him a place on the trans-Atlantic list. Ltjg. Walter Hinton was formerly an enlisted man. His skill in handling flying boats qualified him for the NC-4.

Normally the two pilots would take turns at the controls, each spelling the other at half-hour intervals. But when rough air was encountered, it would take the strength of both men to keep the massive plane on course. Hinton had made the takeoff from Rockaway, and it was agreed to swap positions for each leg of the trip. The first landing was to be at Halifax. From there they'd go to Trepassy Bay, near St. John's, the jumping-off spot for the big effort.

They had turned a little northward after Montauk Point, heading toward Cape Cod. At 12:30 Chatham Naval Air Station out on the Cape radioed a message:

DELIGHTED WITH SUCCESSFUL  
START. GOOD LUCK ALL THE  
WAY. ROOSEVELT.

Assistant Secretary of the Navy Roosevelt had long considered the NC's his pets. He had encouraged the project every step of the way and had given all possible support. In April, while Josephus Daniels was in Europe, accompanying President Woodrow Wil-

son at the disarmament talks, Roosevelt had made a quick trip to Rockaway, eagerly seeking a ride in one of the big boats. The weather was not the best that day, the men were nearly worn out from constant work, but Richardson took him up in the NC-2. It was a rough, bumpy flight, with FDR crouching just behind the pilot. When he got back on land, he was slightly green but full of enthusiasm. And now, on the NC-4, one of his school classmates and boyhood friends was the engineer, Jim Breese.

Lt. James Breese had also been a test pilot during the war. But it was his experience as a power plants expert, especially on the *Liberty* engine, that put him on the team. His assistant was Chief Machinist's Mate Eugene Rhoads. "Smokey" Rhoads, who had replaced the unfortunate Chief Howard, was reputed to be one of the best engine men in the Navy.

Filling out the crew was Ens. Herbert Rodd, an experienced radio operator who had helped in the development of the direction-finding compass. The ensign was a good man with a radio; he was now getting remarkable results with the long-range transmitter. But he was having trouble talking with the man 30 feet away.

Read's intercom was out. Standing in the bow, he was waving futilely at his pilots who seemed not to understand what it was he wanted. The NC-4 was falling far behind the other two planes, and he'd been motioning for more speed. They had passed Cape Cod and were now over open sea on the way to Nova Scotia. Read lowered himself into the hull to go back to the pilots when Jim Breese arrived to tell him they'd had to kill the center pusher engine owing to dropping oil pressure.

The plane could fly well on the three remaining engines, so they decided to continue, informing Towers of the situation. At 2:05 P.M., they passed through hazy air over the first of the "station" destroyers, the *McDermut*. Right on course, Read could

barely make out the other NC's miles ahead. He had a slightly uneasy feeling as he headed for the next ship, 50 miles further on. Halfway there, a geyser of water and steam suddenly erupted from the forward center engine, and Read watched a connecting rod sail out of the crankcase and off into space. Now they'd have to go down. Crawling to the pilots, Read yelled to turn into the wind and land. Rodd was busy with his radio.

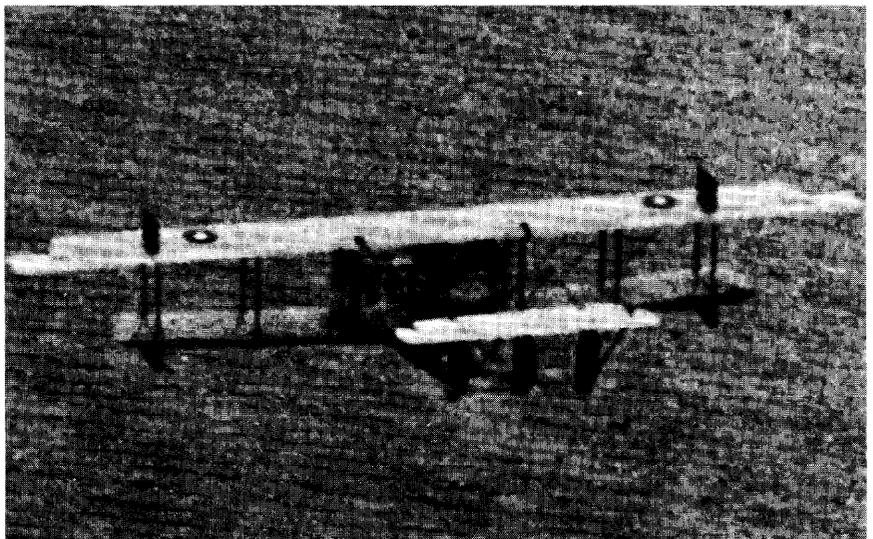
The distress call got through. Towers and two destroyers heard it. Although the other planes continued on, they had seen the flash of wings as Hinton made the turn and assumed Read was going back to Chatham. They had not seen the NC-4 descend.

The water surface was calm enough for a safe landing but, once down, Rodd couldn't get through to anyone; the destroyers were too busy talking to each other. He couldn't be heard on the long-range radio, and the short-range transmitter was on a frequency different from the ships' receivers. In the haze, a searching destroyer passed within ten miles of the floating seaplane without spotting her. A little discouraged, Read soon found himself in the middle of an empty sea, about 80 miles from the nearest land, with night coming on. There was nothing else to do but start taxiing with the two good engines left. He hoped they would hold out.

After dark the moon came up and they had a fairly pleasant ride. The engineers and pilots took turns at the controls and Read even got a little sleep. Towards dawn they tried to chase a passing steamer but only succeeded in losing another engine. For 20 minutes Breese and Rhoads worked on it while the NC-4 made circles in the ocean. Finally finding the right combination of cuss words to unlock the secrets of a recalcitrant *Liberty*, they were underway again. At dawn they were just off Chatham as two seaplanes took off from the air station to join in the search. They didn't have far to look.



ENTHUSIAST ROOSEVELT BEFORE HIS ROUGH FLIGHT IN 1919



NC-4 FLIES TOWARD CAPE COD ON THE FIRST LEG OF FLIGHT

