

hydrodynamic characteristics; some of these changes were made. The boat was flown with one, two and three steps for experimental purposes, but finally had two.

Although provision was made in the Fury for the carrying of armament, the aircraft was never used operationally. The gunner's cockpit which was originally provided in the bows was faired over at about the same time as the modified tail unit was fitted. After the Armistice the big triplane continued to be flown experimentally; and at one time there was a proposal to attempt the transatlantic flight. This project was officially opposed on the grounds of expense, but the crossing would have been well within the Fury's capability; maximum fuel capacity was 1,500 gallons.

The aircraft was wrecked a few months after Porte and Rennie were demobilized. With their departure from Felixstowe there was no technical officer to supervise the experimental flying, and it seems possible that the Fury's load was incorrectly disposed. The pilot, Maj. Ronald Moon, apparently lifted the boat off the water before its minimum safe flying speed had been reached. With no reserve power available the craft stalled, stove in its hull on striking the water, and sank; Moon and two of his crew lost their lives.

Just as the Curtiss company had adopted the Porte type of construction for the H.16 flying-boat, so also did the Norman Thompson company in England. After producing a series of boats which were generally similar to the Curtiss machines in appearance and construction, the Bognor Regis concern built two prototypes, designated Norman Thompson N.2C. This type was a development of the Norman Thompson N.T.4A, and had the same flight organs; but the N.2C had a Porte-type hull in place of the boat-built hull of the N.T.4A. This design was probably influenced by the production of F.2A hulls in the Norman Thompson workshops.

As remarked earlier, Service needs for flying-boats were drastically reduced with the coming of peace. Production virtually ceased, and the F.3 was soon withdrawn in favour of the F.2A and F.5. The F.3 was declared obsolete in September 1921, and several were sold abroad. Portugal and Spain used the type: a Portuguese F.3 made the first flight from Portugal to Madeira on March 22nd, 1921, covering the 530 nautical miles in 5½ hours; and three F.3s were carried aboard the Spanish aircraft carrier *Dedalo*. Some of these F.3s were reconditioned by Fairey Aviation before going abroad. Farther afield, two F.3s, adapted to carry six passengers or a ton of freight, were used for commercial purposes in Tasmania.

The R.A.F.'s use of F.5s was unspectacular, for no flying-boats were needed to patrol waters no longer infested by U-boats. A fine flight was made in the summer of 1919 by N.4044, one of the first F.5s to be built. Accompanied by N.4041, this boat left for a tour of Scandinavia in July 1919. N.4041 was recalled, but N.4044 continued alone and completed an uneventful and trouble-free tour which lasted 27 days and covered 2,450 miles.

Experiments continued. An F.5 (N.4838) was flown at the Isle of Grain with experimental aileron balances consisting of small auxiliary aerofoils, similar to those used on the Avro Manchester and the third Bristol Badger.

Two experimental hulls were tested on F.5 aircraft. The first to appear was N.178, which had a deep, hollow-bottom hull made by Saunders; standard F.5 flight organs were fitted, the mainplanes being rigged with a slight stagger. The second experimental F.5, N.117, was of considerable significance, for it was claimed to be the first military flying-boat in the world to have an all-metal hull. This hull was made by Short Brothers, to whom the aircraft was known as the Short S.2, and was an early example of a metal monocoque. Standard F.5 wings and tail surfaces were fitted: these included horn-balanced elevators. The Short S.2 hull had a fluted planing bottom, and its strength was proved when, near the west coast of France, the aircraft stalled into rough water from a height of about 30ft. The hull remained undamaged and completely watertight.

In 1921, fifteen F.5s were bought by Japan. These flying boats gave excellent service with the Imperial Japanese Naval Air Service, and were put to good use by the British Air Mission which went to Japan in 1921. Some impressive long-distance flights were made, and in some cases the Japanese F.5s were airborne for over nine hours.

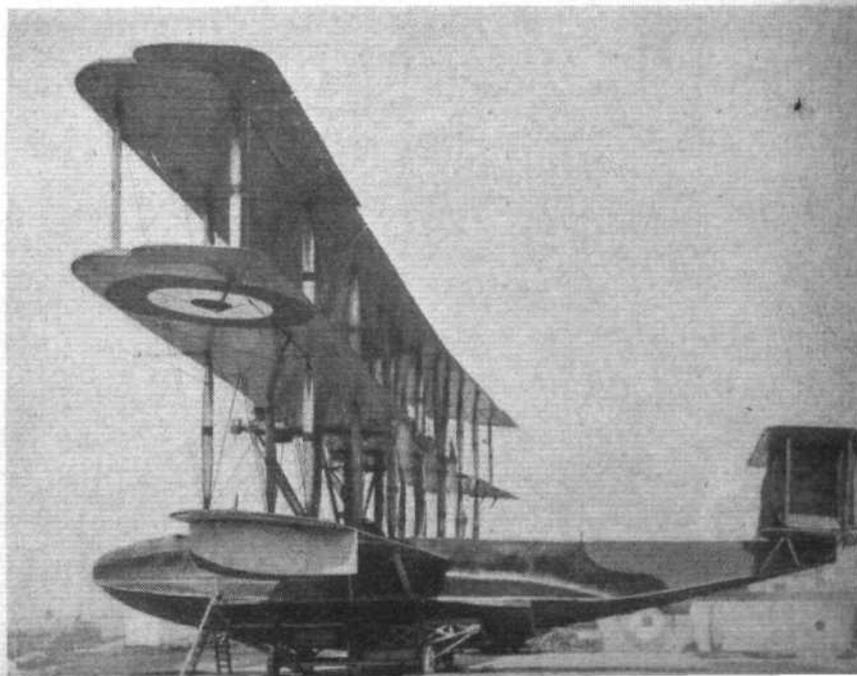
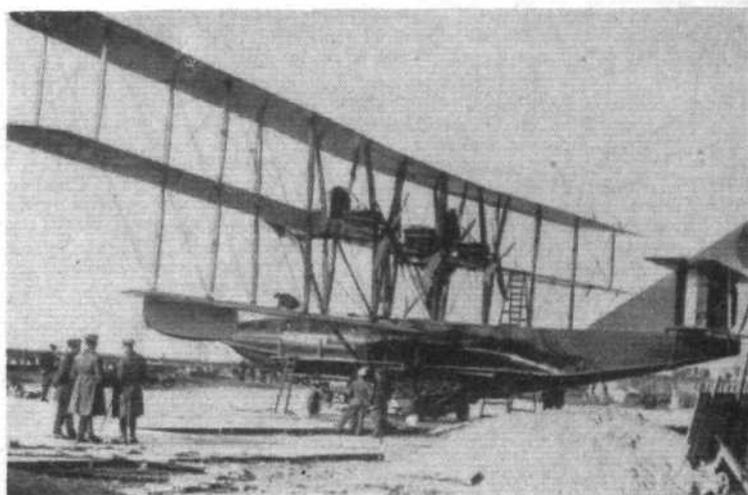
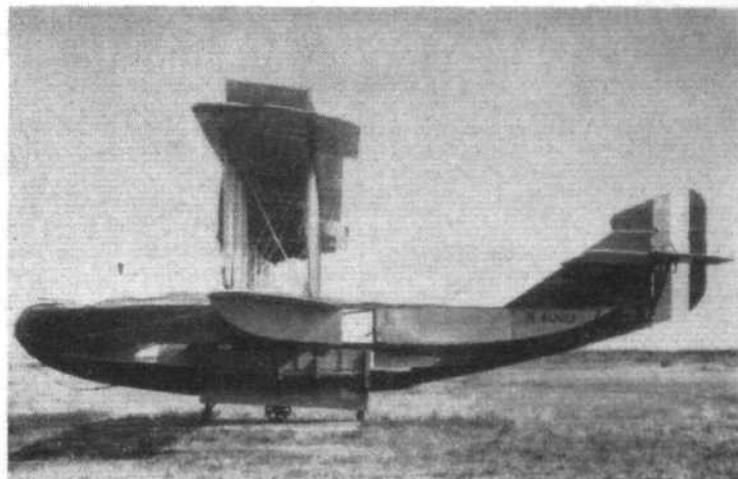
One of the first airlines to be operated by flying-boats was the Key West to Havana route of Aeromarine West Indies Airways Inc. The aircraft were two modified F-5Ls which had accommodation for twelve passengers in two cabins in the hull, to which circular windows were fitted. The machines were modified late in 1919 by the Aeromarine Plane and Motor Company of Keyport, N.J., and were designated the Aeromarine Model

75. The airline's passengers were mostly thirsty Americans seeking the type of refreshment denied them by Prohibition, but the withdrawal of airmail subsidies in 1923 brought about the collapse of the venture.

An F-5L was used to test an early radio compass on July 6th, 1920, when the aircraft flew from Hampton Roads to U.S.S. *Ohio* at sea with the aid of the instrument; the distance was 95 miles.

But John Porte was not to see the modest peace-time successes of his flying-boats. He left the R.A.F. as W/C. Porte, C.M.G., and in August 1919 he joined the Gosport Aviation Co., Ltd., as chief designer. For that company he produced a series of designs based on his Felixstowe types. Perhaps the most interesting of these was the Gosport G.9, which was simply a commercial version of the Felixstowe Fury, powered by three 600 h.p. Rolls-Royce Condor engines—the installation originally intended for the Fury. The G.9's engines were arranged as two tractors and a central pusher unit.

Neither the G.9 nor any other Gosport type was built, how-



(Reading downwards) America's Curtiss H.16, showing the adoption of a Porte-type hull; the Porte Super Baby, or—officially—Felixstowe Fury; and the same aircraft with its modified tail unit.