

dubbed *Baby* or *H.M.S. Baby*—at that time the name *Baby* was frequently applied to small single-seaters.

The *Porte Baby* was obviously closely related to a large three-engined flying-boat, powered by three pusher engines, which was described as a Curtiss type in the 1917 edition (pp. 226b-227b) of Jane's *All the World's Aircraft*. The wing structures of the two boats appeared to be practically identical, but the engines of the *Baby* were differently disposed: only the central power unit drove a pusher airscrew, and the outboard engines were mounted as tractors. The hull of the *Porte Baby*, also, appeared to differ from that of the so-called Curtiss, particularly in the design of the afterbody.

The first *Porte Baby* was No. 9800. Its boat-built, plywood-covered hull was 56ft 10in long and 7ft wide; its maximum beam over side fins was 14ft, and it had a single step. Power was provided by three 250 h.p. Rolls-Royce engines of the type which was to become known as the *Eagle*; and the aircraft weighed 16,500 lb fully loaded. As on the smaller Curtiss *America* boats and the big three-pusher Curtiss, a glazed enclosure was provided for the pilots.

In its original form the *Baby's* hull had a relatively short forebody, and when tested the boat was found to wallow in a following sea. The water performance was greatly improved by lengthening the bows by three feet, and the *Baby* could leave the water fully loaded in about 35 sec. It was rather underpowered with only 750 h.p.; the maximum speed was 68 kt (78 m.p.h.), and 3,000ft was reached in 20 minutes.

The *Porte Baby* was put into production on a very small scale: twenty were ordered (numbered 9801-9820) and at least ten were completed by May, Harden and May, of Southampton Water, a subsidiary of the Aircraft Manufacturing Co. It is believed that Nos. 9811-9820 were subsequently cancelled, but some of these later hulls may have been made.

Most references quote three Rolls-Royce engines as the standard power installation, but some at least of the *Babies* had a 260 h.p. Green as the central engine. The production *Babies* had a modified form of installation for the outboard engines. Whereas No. 9800 originally had a diamond-shaped configuration of struts at the rear of the engine mountings, the later installation had only a single plain interplane strut. Ultimately No. 9800 also conformed to this arrangement. Performance was improved by the installation of more powerful marks of Rolls-Royce *Eagle* engine, and the *Baby* which underwent official performance trials in December 1917 and March 1918 had three *Eagle VIII*s. Improved radiators, generally similar to those of the later *F*-boats, were fitted to some *Babies*.

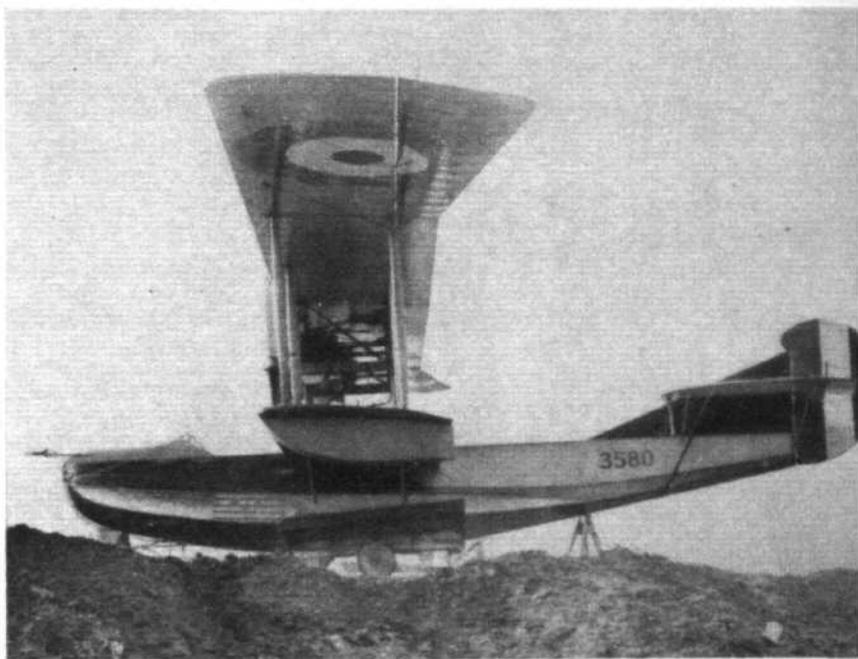
The *Porte Baby* flying-boats were flown operationally on oversea patrols from the R.N.A.S. stations at Felixstowe and Killingholme. When attacked by enemy seaplanes they were too large and slow to be able to give a good account of themselves in combat; moreover, the design of the boat did not lend itself to the effective use of defensive weapons. Some had a Scarff ring-mounting on a cockpit in the bows, but in the main reliance was placed on guns fired through windows.

Just after 4 p.m. on October 1st, 1917, the *Baby* flown by Flt. Cdr. N. Sholto Douglas and F/L. B. D. Hobbs was attacked by two enemy seaplanes and a landplane near the North Hinder Light Vessel, off the Dutch coast. The other members of the *Baby's* crew were Lt. M. W. W. Cross, R.N.V.R. (engineer), Sub-Lt. H. O. Fry (armament officer), and Air Mechanics C. Spikings and H. M. Davies. During the unequal combat Hobbs evaded the enemy's attacks for 20 minutes, and a hot fire was maintained by the flying-boat's gunners. The port and centre engines were shot about and stopped, and the *Baby* was forced to alight on the sea. During the fight A/M. Spikings continued to fire at the enemy after the engines near him were on fire and he had been scalded. Thanks to his gallantry, the enemy machines were prevented from closing effectively with the *Porte* boat, but once it was on the water they machine-gunned it as it lay helpless, and wounded A/M. Davies.

Nevertheless, the *Baby's* crew managed to repair the engines sufficiently to enable the boat to taxi slowly westwards. Despite his badly burned hands Spikings worked for several hours during the night on the engines. After a long and difficult journey, the craft managed to reach Sizewell Gap, on the Suffolk coast, by 1.30 a.m. on October 2nd. From there it was towed back to Felixstowe. After this near-disaster, the *Porte Babies* were never again used to patrol areas in which they would be likely to be attacked.

One of the *Babies* was used in experiments with torpedoes: it flew in April 1916 with two 14in torpedoes under its lower wings, but it is uncertain whether any attempt to drop the missiles was made. The prototype *Baby*, No. 9800, had a six-pounder Davis non-recoil gun mounted experimentally on its bows, probably as an anti-submarine weapon, for it would have been over-optimistic to consider the *Porte Baby* as an anti-Zeppelin aircraft.

From the historical point of view, the most interesting experiment in which a *Porte Baby* participated was the remarkable "composite" flight which was made in May 1916. This was a bold attempt to combine the speed and manoeuvrability of a single-seat



The aircraft with the *Porte I* hull was designated *F.1* and became first of the line. (Above) The *Porte Baby* and Bristol Scout C "composite."

scout with the long range of a large flying-boat; the object of the experiment was to provide an effective anti-Zeppelin weapon. A Bristol Scout C (No. 3028, one of those belonging to the seaplane carrier *H.M.S. Vindex*) was placed on the upper wing of a *Porte Baby* with its undercarriage just in front of the leading-edge. The Scout's wheels rested in crutches which were braced to the engine bearers of the flying-boat's central power unit, and its tail stick was held by a quick-release catch which was operated by the pilot of the Scout.

On May 17th, 1916 the *Baby* took off from Felixstowe with the Scout in place. The flying-boat was flown by Sqn. Cdr. Porte, the Bristol by F/L. M. J. Day. When the combination had reached 1,000ft Day switched on his engine and climbed away. Despite this success, however, the experiment was never repeated.

It appears that the *Porte Baby* was long-lived, for two examples of the type were still on charge with the R.A.F. at the end of October 1918.

No attempt had been made to develop the design of the *Baby*, however. Before the production *Babies* appeared—possibly even before No. 9800 itself was completed—John Porte tested a completely new type of hull on the Curtiss H.4 No. 3580. This hull was named the *Porte I*, and the modified H.4 to which it was fitted was the true progenitor of the line of Felixstowe *F*-boats. The new hull was built at Felixstowe air station, and in its ultimate form fulfilled Porte's desire to produce a hull which combined structural strength with hydrodynamic efficiency.

The chief interest of the *Porte I* hull lay in its structure. Basically it differed little from the fuselages of most contemporary landplanes, for it consisted of a sturdy cross-braced box-girder to which were added a vee-shaped planing bottom, and side fins. From bows to sternpost the hull was 36ft 2in long, and its maximum beam was 8ft; the side fins were about 25ft long. The top longerons of the basic structure were quite straight in side elevation; this raised the tail higher than that of any of the earlier experimental machines and gave a fore-and-aft angle of 18 degrees. The keel line was a smooth curve from stem to stern. Unlike its predecessors, the *Porte I* had open cockpits.