

The Porte Baby prototype No. 9800 in its original form; later the bow section was lengthened.

## HISTORIC MILITARY AIRCRAFT No. 11

Part I

By J. M. BRUCE, M.A.

# THE FELIXSTOWE FLYING-BOATS

**I**N 1909 a young British Naval officer named John Cyril Porte made his first practical entry into the field of aviation by building a small glider which, in company with Lt. W. B. Pirie, R.N., he attempted to fly at Portsdown Hill, Portsmouth. By the summer of 1910 Porte was experimenting with a little monoplane of the Santos Dumont *Demoiselle* type, powered by a 35 h.p. Dutheil-Chalmers engine. At that time he was stationed at the Submarine Depot, Portsmouth, and his monoplane's trials were conducted at Fort Grange.

By the following year Porte had fallen victim to pulmonary tuberculosis, and his Naval career was apparently prematurely terminated when he was invalided out of the Service. Despite his severe disability (for which medical science could at that time do relatively little) Porte remained actively interested in aviation. His aviator's certificate was issued by the Aero Club de France on July 28th, 1911; he had performed the necessary tests on a Deperdussin monoplane. Later in the year Porte was flying a Deperdussin two-seater at Shoreham, and by that time he had gone into partnership with Mr. D. Lawrence Santoni with the object of establishing a factory for the production of Deperdussin aircraft in Britain.

Flying-boats were probably a long way from Porte's mind in 1911: indeed, no boat had flown successfully at that time. Several "hydro-aeroplanes" had, however, succeeded in leaving the water. The first was the curious aircraft of Henri Fabre, which flew on March 28th, 1910; it was a canard monoplane fitted with crude floats and was quite unlike any other aeroplane. Contemporary with it, but less successful, was a Gabardini monoplane which had a true hull and came quite close to the later conception of a flying-boat. A clumsy German machine designed by Major von Parseval had appeared in 1909 but seems to have been unsuccessful.

The earliest recorded British attempt to produce an aircraft capable of rising from water was the Rawson-Barton Hydra-aeroplane of 1905. It did not fly, nor did the improbable structure designed by Mr. Jack Humphreys and built at Wivenhoe in 1909. The possibilities and potentialities of hydro-aeroplanes came to be recognized, but it was not until November 18th, 1911 that the first successful take-off was made by a British float seaplane. The aircraft was Cdr. Oliver Schwann's Avro biplane, which rose from the water of Cavendish Dock, Barrow-in-Furness, to make a brief flight. Six different pairs of floats had been fitted to the Avro before success was achieved.

Exactly one week later, on November 25th, the Waterbird left the waters of Lake Windermere. This aircraft had been built by A. V. Roe and Co. to the specification of the Lakes Flying Co., a group of friends headed by Capt. E. W. Wakefield. In 1909, Wakefield had publicly expressed his conviction that, at that time when aeronautical knowledge was sketchy in the extreme, the best type of aircraft to develop would be one which could rise from and alight on water, since it would be less likely to be damaged. His ideas were scorned, but he never lost faith in the hydro-aeroplane, and the Waterbird was a successful expression of that faith. It was a biplane with a single central float, generally similar to contemporary Curtiss aircraft.

No history of flying-boat development could be complete without adequate acknowledgment of Curtiss' great pioneering work.

Glenn Hammond Curtiss first made a name for himself in his home town of Hammondsport, N.Y., as a cyclist and motor cyclist. In 1904 he established a motor-cycle speed record which stood for

**WITH this article on a famous family of flying-boats—about which little detailed information has ever before appeared in print—Mr. Bruce resumes his popular series. He wishes to make grateful acknowledgement to Mr. Bruce Robertson, who has provided, together with certain other information, the data on serial numbers which will be published with the final instalment of this article.**

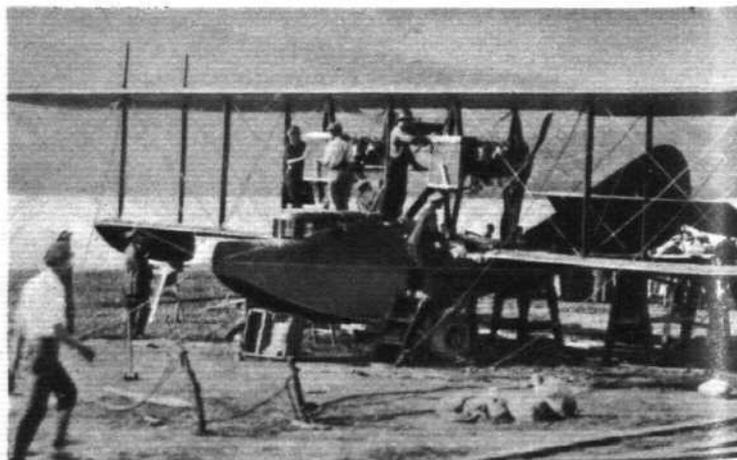
several years. In that year he also made a three-wheeled road vehicle propelled by a crude airscrew which was driven by a small engine of his own design.

Curtiss had enjoyed a considerable amount of success with his lightweight engines, a fact which had not escaped the attention of the well-known American balloonist Thomas Scott Baldwin. In 1902 Baldwin sought Curtiss' assistance to obtain an engine for an airship he had begun to make. The ship was the *Californian Arrow* of 1904 which, with its Curtiss engine, was instantly successful. Baldwin went on to make no fewer than thirteen dirigibles, all Curtiss-powered, one of which was the U.S. Army's first airship: it was powered by a Curtiss engine, and was officially tested at Fort Myer, Virginia, on August 18th, 1908.

The success of Curtiss' airship engines had stimulated his interest in aviation, and in 1907 he had joined Dr. Alexander Graham Bell's Aerial Experiment Association as director of experiments. Their associates were Lt. Thomas E. Selfridge, Frederick W. Baldwin and J. A. D. McCurdy. Three of the four aircraft produced by the Association do not concern this narrative, but the aeroplane which was the third to be built was designed by Curtiss; it was completed in June 1908, and was consequently named *June Bug*. Powered by a 40 h.p. Curtiss V-8 engine, *June Bug* was remarkably successful.

Late in 1908 Curtiss became interested in the idea of an aircraft which could rise from and alight on water. He began to experiment with the *June Bug* airframe: crude pontoon floats replaced the wheels, and the aircraft was renamed *Loon*. Despite many attempts made in November 1908, *Loon* could not be persuaded to leave the waters of Lake Keuka: the floats were of the wrong shape, and the aircraft was underpowered.

The Aerial Experiment Association disbanded at the end of 1908; and on March 3rd, 1909 Glenn Curtiss formed a syndicate in company with A. M. Herring and Cortlandt Field Bishop. The syndicate established the Herring-Curtiss company, the first aero-



The Curtiss "America" for which an Atlantic crossing was planned.