



Sidstrand III day bombers in service with No. 101 Squadron, R.A.F.—a "Flight" photograph of 1933.

BOBOLINK TO DELTA

BOULTON PAUL AIRCRAFT OF FORTY YEARS

By H. F. KING, M.B.E., and "B.P." Test Pilots

Part I GROWTH OF A COMPANY

THE great structural-engineering company of Boulton and Paul, founded in the year 1797, acquired a new interest in 1915, when the Air Board enlisted its services for the production of standard fighting aircraft, of which the F.E.2B was the first. The company was well equipped for the high-class woodwork demanded, and its engineering department included a small foundry.

Construction began at the Rose Lane, Norwich, works, the facilities of which were extended in 1916 by the opening of a new self-contained factory at Riverside, Norwich, having its own railway sidings and river frontage, and access by road to an aerodrome some two miles distant. There erection shops were set up, together with facilities for test flying prior to the handing

The first aircraft built by Boulton and Paul, an F.E.2B.



over of machines to the Royal Flying Corps. The F.E.2Bs were followed by F.E.2Ds, and orders were met for great quantities of propellers of many types.

At Riverside there was a sizeable experimental and research department, equipped with mechanical testing machines of the latest pattern, with chemical, metallurgical and photographic laboratories, and a wind tunnel of the 4ft N.P.L. type. With this backing, in 1917, the company decided to embark upon aircraft designs of its own, and engaged Mr. John D. North as chief engineer. Mr. North had been successively a pupil of the Aeronautical Syndicate, chief engineer to the Grahame White Aircraft Co., Ltd., and superintendent of the aviation department of the Austin Motor Co. Upon joining Boulton and Paul he put in hand the designs for the Bobolink single-seat fighter and the Bourges twin-engined day bomber. Following the F.E.2D, the company turned out Sopwith Camels and Snipes, and built also a number of hulls for the F.3 and F.5 flying boats. At the peak of production, in 1918, the output of Camels exceeded 45 a week.

As the war neared its end the supplies of high-grade spruce for aircraft construction were dwindling alarmingly and inferior timbers were being employed to an increasing degree. The requirement thus arose for a wider use of metal construction, and Boulton and Paul turned to high-tensile steel as a structural medium demanding no penalty of weight. By the end of 1918 a form of steel spar had been developed upon which a subsequent standard system of metal construction was based. So promising was the new material that in 1919 the company resolved to abandon timber entirely, though this could not be wholly implemented for several years. Timely decision, however, did enable the firm to take a leading place among aircraft constructors.

Through unpropitious times, with wartime contracts terminated, and in the likelihood that a working loss must be accepted until more stable conditions arrived, the experimental aircraft department was kept in being. Certainly there was no lack of enterprise or imagination. The Atlantic machine, later described, was remarkable in every way and demonstrated an extremely high performance, while of the little P.9 two-seater the phrase "ahead of its time" could be applied with conviction.