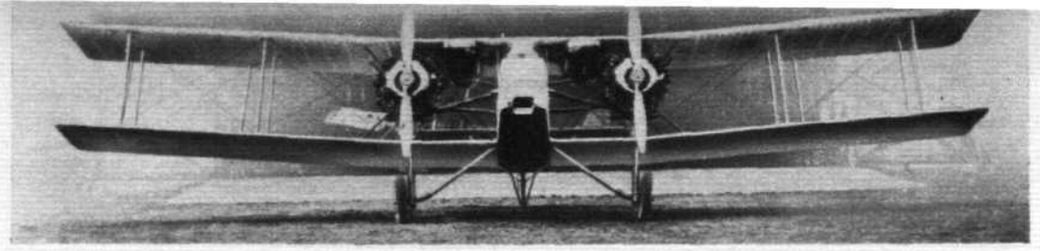
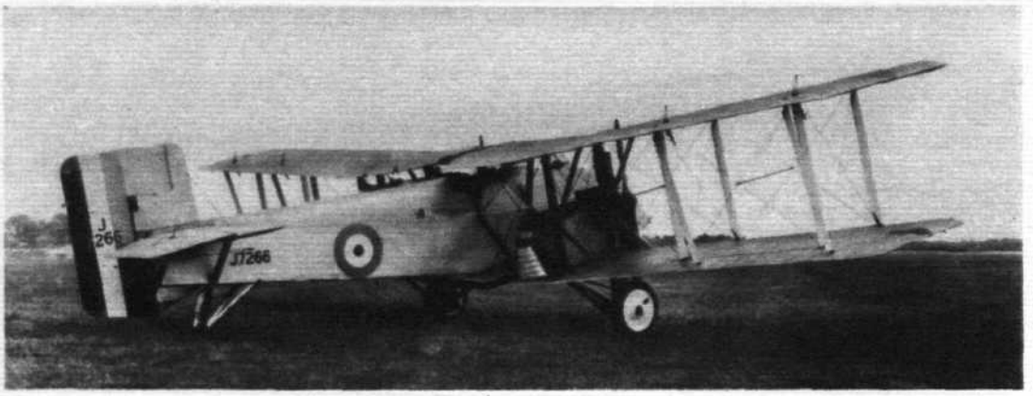
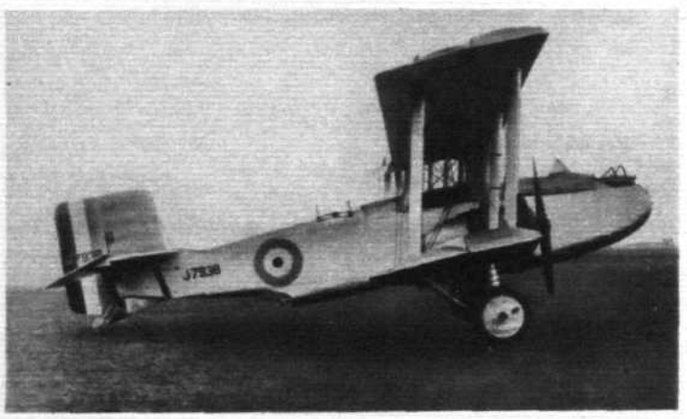


P.25 Bugle I.



P.25a Bugle II



P.29 Sidestrand I (prototype).

P.29a Sidestrand II.

BOBOLINK TO DELTA . . .

passengers in more than usual comfort. The centre portion of the fuselage differed from that of the Mail Carrier in being formed of built-up channel-section Duralumin girders over which was riveted a corrugated Alclad sheet covering.

The P.71A measured 54ft in span, was 44ft 2in long, and had a wing area of 1,718.5 sq ft. Empty and maximum permissible weights were 6,100 lb and 9,500 lb respectively, cruising speed was 150 m.p.h. at 4,500ft, take-off run (no wind, full load) 200 yd, and sea-level rate of climb 1,400ft/min.

FOR BOMBING AND RECONNAISSANCE

P.7 Bourges I The Bourges I (serial number F2903) was a fast day bomber and reconnaissance aircraft, designed to be powered with two A.B.C. Dragonfly radial engines of 320 h.p. These engines were, indeed, fitted, though the machine was also flown with Bentley B.R.2 rotaries. Performance was of an exceptionally high order, being much the same as that of the Bobolink fighter, due to the clean, compact design. The engines were carried in streamlined nacelles between the wings, and the undercarriage was of split-axle type, of very wide track and modern appearance. Construction was of wood.

Measuring 54ft in span (57.3ft when balanced ailerons were later fitted), the Bourges had a wing area of 738 sq ft, weighed 3,420 lb empty, and had an ultimate gross weight of about 6,300 lb. Fuel capacity was 190 gallons, giving a potential endurance of over 9 hr, and top speed at 10,000ft was 124 m.p.h. Landing speed was only 50 m.p.h., and a height of 10,000ft could be reached in 11 min. F2903 was first flown in 1918, and was one of the first twin-engined aircraft on which aerobatics were performed. Armament was two Scarff-mounted Lewis guns, one in the nose and one in the dorsal position.

P.7a Bourges Ia Numbered F2904, this development of the Bourges I had a "gulled" centre-section (i.e. the inner sections of the top mainplanes were swept down to join the fuselage), and the nacelles for the Dragonfly engines were lowered to the bottom wings, the undercarriage was heightened to maintain airscrew clearance. The tailplane had a sharp dihedral angle.

P.7b Bourges II This development of the Bourges was numbered F2905, was powered by two Napier Lion engines, each of some 450 h.p., mounted on the lower wings, and was officially classed as a three-seat long-reconnaissance aircraft. It was probably the fastest twin-engined aircraft of its day, and it demonstrated its manœuvrability in the Royal Air Force Pageant at Hendon in 1923, when it was pitted in mock combat against two Jupiter-engined Gloucestershire-built Nieuport Nighthawk fighters. On this occasion the Bourges was repeatedly looped, rolled and spun. The gross weight of the Bourges II was 6,800 lb.

P.15 Bolton. Classed, like the Bourges II, as a three-seat long-reconnaissance aircraft, the Bolton was similarly powered by two Napier Lion engines. It was a larger machine, of 62ft 6in span, and weighed 9,500 lb all-up. The aircraft was first flown during 1922 and, apart from its high-tensile steel construction, exhibited many novel features. The Lion engines, for example, were left uncovered to an unusual extent, permitting radiators of relatively small size to be employed. A further advantage was that the exhaust silencers, of patented Boulton and Paul type, were very efficiently cooled. These silencers were aluminium manifolds, terminating in steel pipes in which saw-cuts had been made. Engine mountings were of special anti-vibration type, and the engines themselves were started by hand from the rear of the nacelles. The main petrol tanks were carried in the fuselage, constantly delivering to a feeder tank, likewise in the fuselage but at sufficient height to give gravity feed. In addition to the usual trimming tailplane, a "trimming fin" was employed, actuated by a wheel in the cockpit. The undercarriage, moreover, embodied a nosewheel designed to prevent the machine from nosing over in a bad landing. On the Bolton also a new type of Boulton and Paul oleo-pneumatic leg was incorporated in the main undercarriage.

P.25 Bugle I. A medium-range, three-seat bomber, the Bugle I was powered by two Bristol Jupiter IV engines and was first flown during 1924. It was principally of all-steel construction; the wings having box spars of corrugated steel strip, and steel ribs, and the inner pair of interplane struts being likewise of steel, whereas the outer ones were of Duralumin. The engine mountings were hinged, according to the patented Boulton and Paul method, and were built up mainly of circular-section tube, of Boulton and Paul "locked-joint" type, drawn from high-tensile steel strip. The fuselage was a rectangular framework with four longerons, these being built up of two drawn sections in such a manner that by cutting out one of the two sections a bearing was afforded on the remainder for an angle-plate, enabling struts or wires to be attached. Not only the main undercarriage, but the tail skid also,