

In the rear part the body is of the monocoque type, with oval formers of channel section, placed back to back and connected by short lengths of tube. The longitudinal stringers are also of steel, of a double S section. The covering is in the form of special fibre sheets, riveted to the metal parts. This sheet is fire and damp resisting.

The two seats are placed in tandem, and dual controls are fitted. The engine—a three-cylinder radial air-cooled Cosmos Lucifer—is so mounted that the engine, by undoing a long hinge bolt, can be swung around the bolt on the opposite side, when the back of the engine with its accessories is readily accessible. This is an excellent feature from the practical point of view, and one to which more attention should be paid generally. The piping, etc., is so arranged that it does not require disconnecting when the engine is swung out. In the accompanying sketch the piping and other paraphernalia are omitted for the sake of clearness.

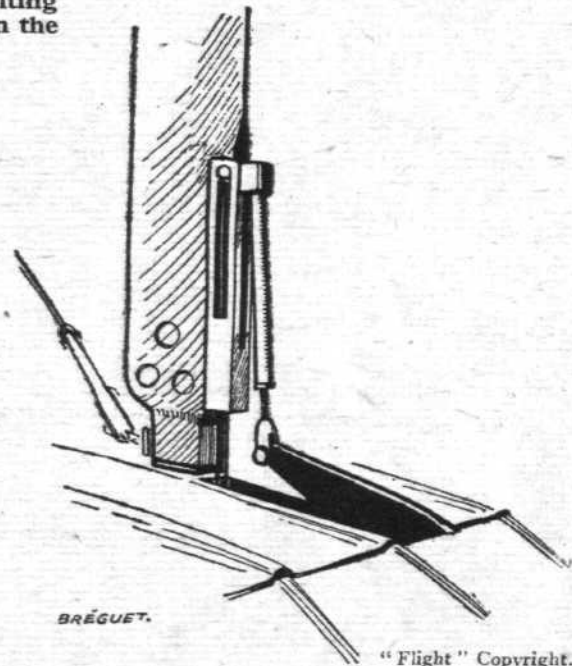
The wing structure is also entirely built of rolled steel sections, the shape of which may be seen in one of our sketches. The spars are roughly of I section as regards their external shape, but are built up of thin, rolled sheet steel. The flanges are corrugated and are attached to the webs by riveting. The webs are provided with lightening holes, slightly

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THE BOULTON AND PAUL P 10 : Sketch showing hinge mounting of engine, and on the right, one of the substantial hinge rods on the Boulton and Paul P 10

if scientifically carried out, is not only possible as a substitute for wood, but is even superior in many respects. For instance, the weight of the P. 10 actually comes out lighter than the same machine built in wood in the ordinary way, while its strength is, if anything, superior to that of the wood machine. This, however, is not the chief point of the design, although it incidentally proves to what state of perfection Boulton and Paul have carried metal construction. The chief advantage will probably be found in the longer life of the steel structure. We understand that although ordinary steel and not rustless steel has been used, the manner of treating and varnishing the metal components has proved so effective that prolonged tests have failed to show any signs of the metal parts rusting after prolonged exposure to moisture. The effect which this side of the question of metal construction will have upon the life of a machine can hardly be exaggerated. For use in tropical climates especially, the steel machine should last very much longer, and consequently be cheaper in the long run, than would one of the ordinary wood construction.

In the space at our disposal in a show issue we cannot hope to do justice to a machine like the P. 10, but we hope at some future date to be able to publish a detailed account of its constructional features. In the meantime, a few brief notes will have to suffice. The fuselage of the B. and P. P. 10 is built up, as regards the front part, of four tubular longerons.



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Sketch showing aileron-operating gear on one of the Breguets

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□ The Breguet Sea-
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 □ undercarriage of
 □ all Breguet ma-
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