

A 1/12TH SCALE POWER MODEL

R. E. 8.

DESIGNED BY D. R. HUGHES

Five years Press secretary, now Hon. Sec. Mersey-side M.A.S. Winner Lady Shelley Cup, 1949 Age 23 Main interests are Scale and Tailless Also keen on Photography and Astronautics (member B.I.S.) An Advertising Layout man single, but very much attached.

THE R.E.8 was a very well-known two-seater observation aircraft used extensively by the Royal Flying Corps in 1917 and 1918. With comparatively low power in the form of a 150 h.p. air-cooled RAF 4A, vee-twelve, it was—in common with many other aircraft of its day—often heavily loaded with equipment. In addition to crew and armament, its duties required that it carry wireless, camera and bombs.

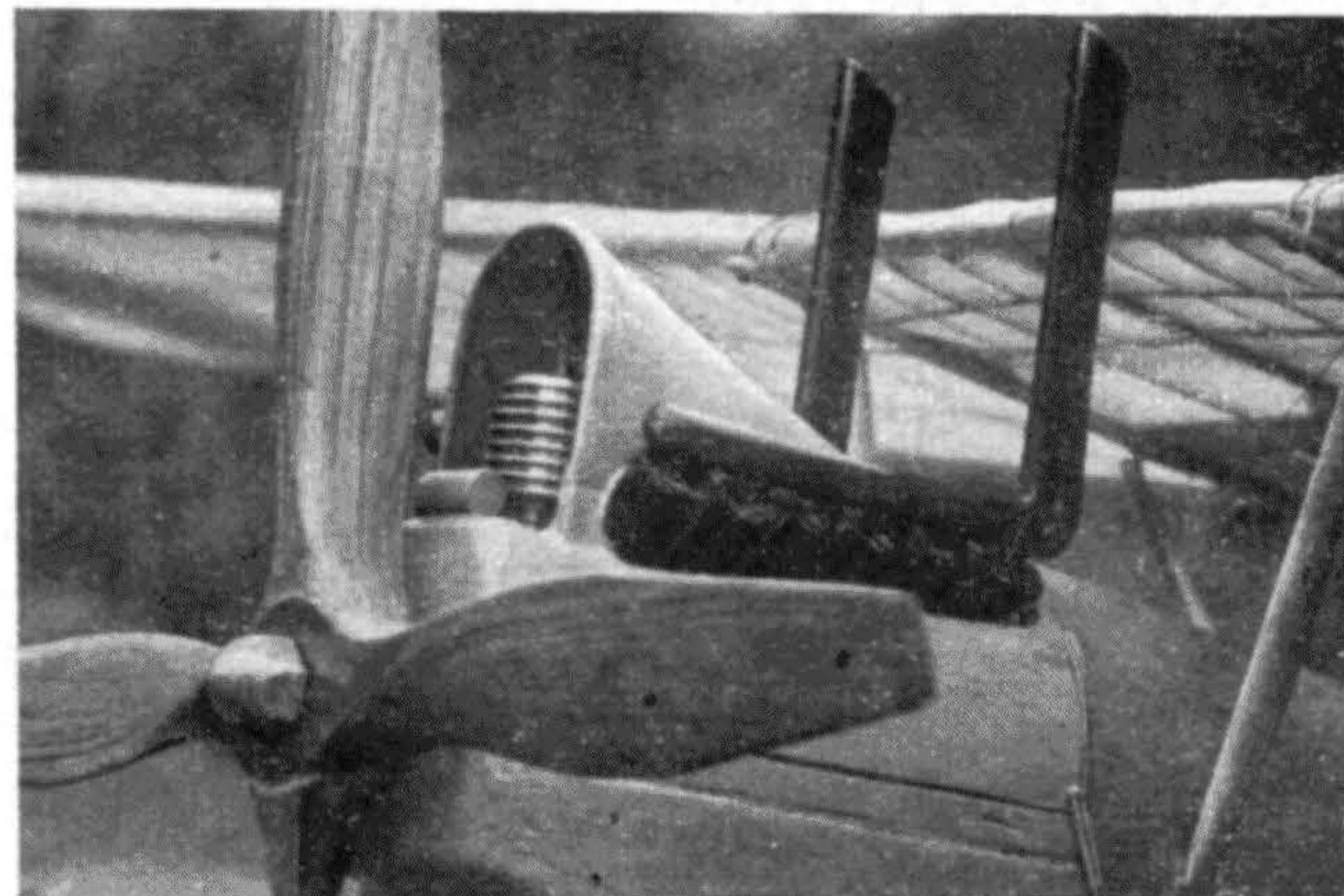
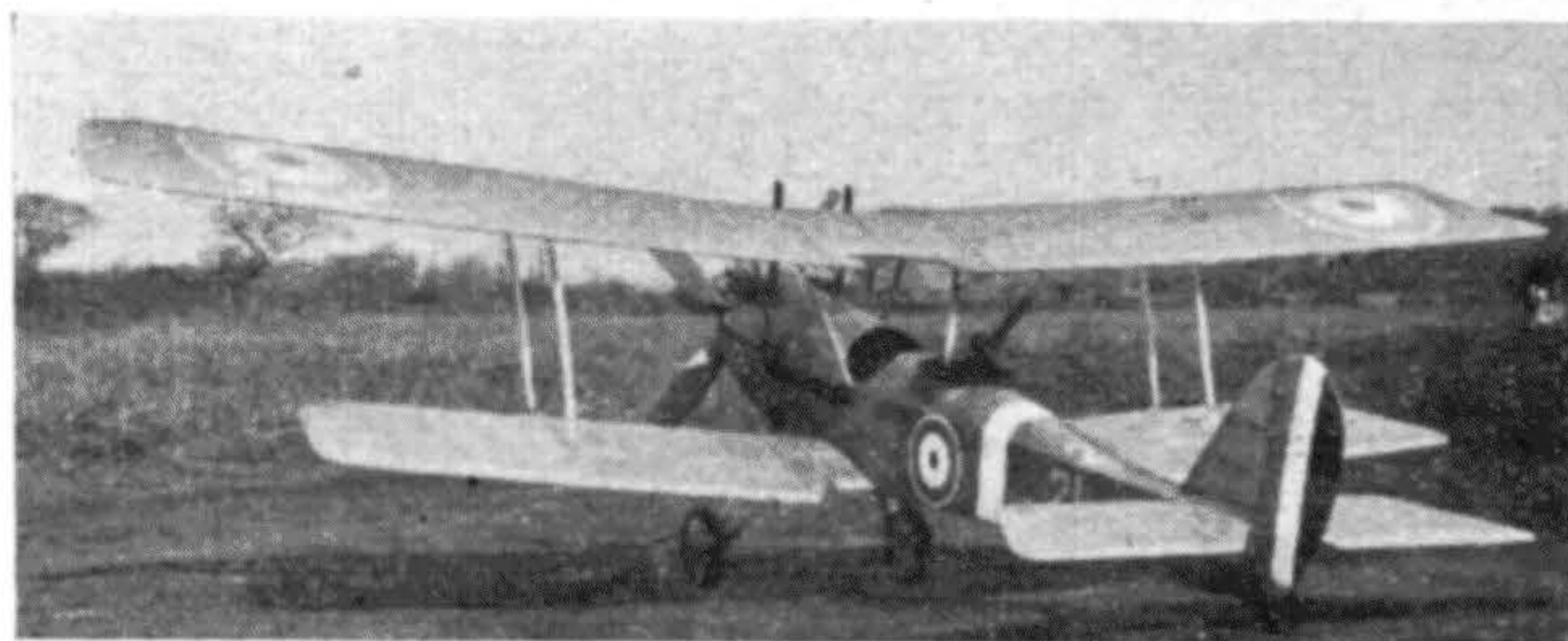
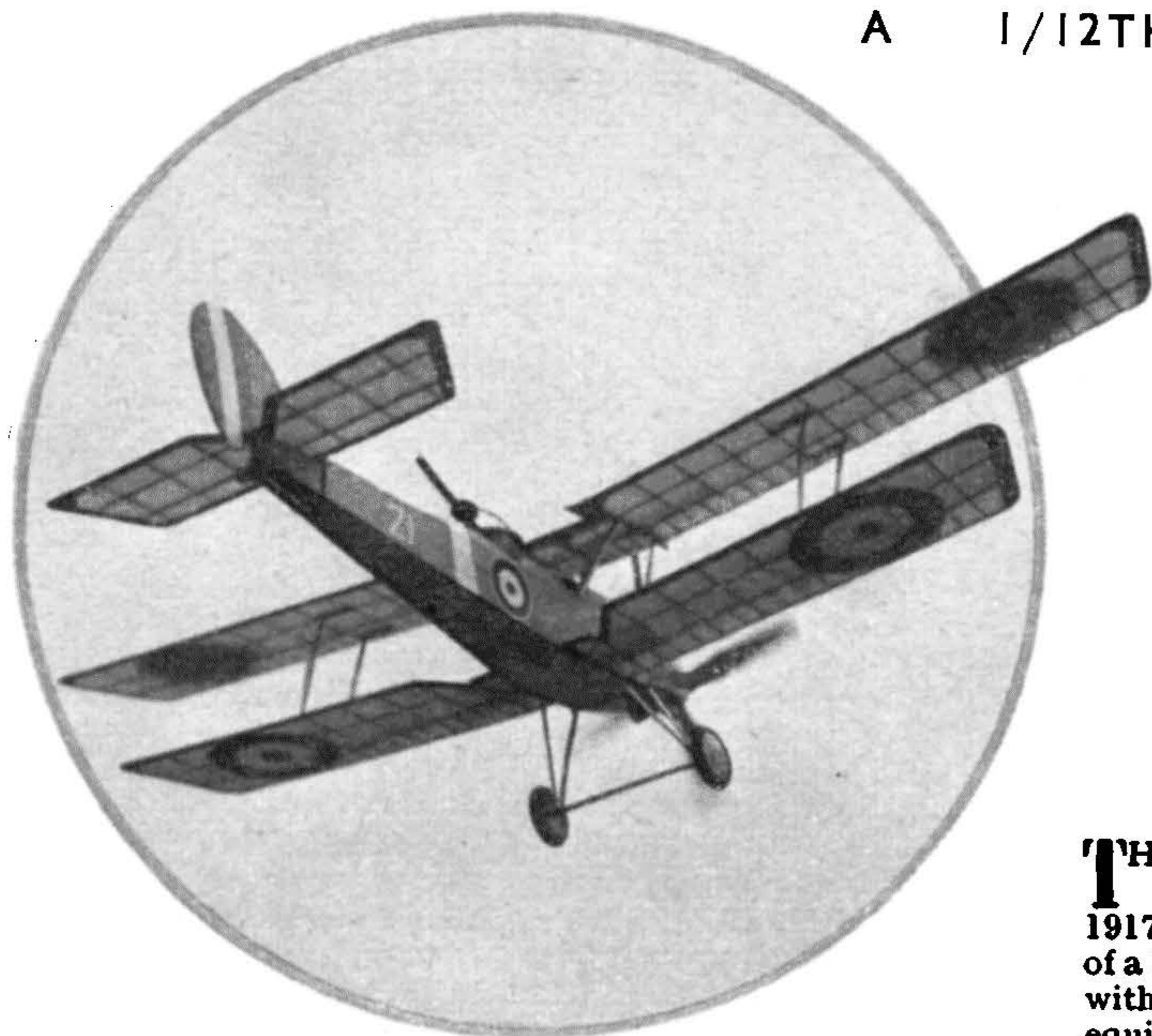
The "Harry Tate" (which was the sobriquet designated it in those days) was noted for its inherent stability, machines of this type having been known to fly for hours and land safely after their crews had been killed in action. Thus—apart from its natural attraction for the modeller which arises from its striking appearance—this machine is undoubtedly an ideal subject for flying scale. Any shortcomings of the prototype (such as parting with its wings if put into a steep dive!) have not emerged in the model, which is quite stable under power and possesses a good glide, being quite lightly loaded.

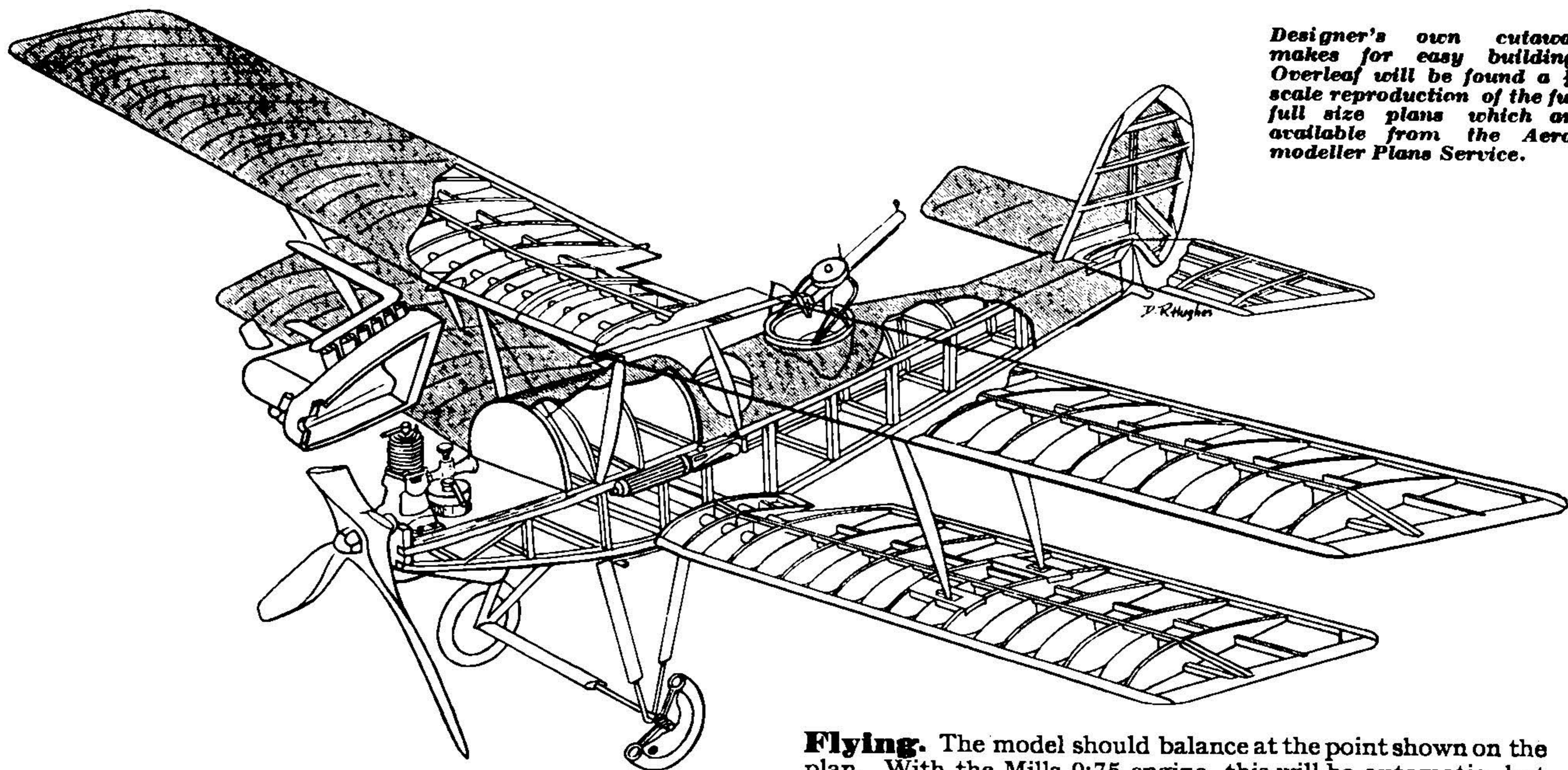
CONSTRUCTION

Fuselage. The basic framework is built up from 3/16 in. square balsa, with joints in the places indicated on plan. The nose portion is steamed to the required curve (plan view) prior to assembly of the fuselage sides. The formers are next added to the top of this box structure, the wire centre-struts being bound and cemented to the longerons, and the brass tube for the U/C bound and cemented to the spacer indicated. The whole fuselage is now covered with 1/32 in. sheet balsa, except for the top decking forward of former 2, where the engine and removable cowling will be fitted. This can be clearly seen from the illustrations. The remaining details (guns, skid, etc.) are now made and fitted. The ply engine mount is fitted temporarily whilst building up the cowl and dummy engine. Before cementing permanently in place, this plywood mounting is given several coats of banana oil and fuel-proofer, as is the interior of the fuselage directly underneath it. Note the sloping bulkhead (1/4 in. sheet, shown dotted on plan), and small door for fitting and removing engine bolts. This door also enables excess fuel to be drained off after flying.

Undercarriage. This is formed from 18g. wire, as shewn in the sketch on plan—first being threaded through the brass tube on fuselage. The 16g. axle is soldered inside the "vees" and the 18g. spreader-bar soldered across the "knees" of the U/C at the front, as shewn.

Close-up left, and general views above, leave no doubt as to the true scale appearance of this splendid model. Those of our readers who have not spun a four-blader before had better watch out for their fingers.





Designer's own cutaway makes for easy building. Overleaf will be found a 1/4 scale reproduction of the full size plans which are available from the Aeromodeller Plans Service.

Wings. The wings are very straightforward, the only points to note being the strut attachments. These require the metal parts to be soldered up and assembled to the wood before glueing in position. Make sure that the dihedral is correct before fitting the 1/16 in. sheet webbing across the spars.

Tailplane and Fin. The outlines are built in the normal way, from 1/8 in. sheet, etc. The tailplane "ribs" are 1/32 in. x 1/8 in. laid flat across the L.E., spars and T.E., when it will automatically take the desired curve. When set, remove the tailplane from plan and insert the strips of 1/32 in. x 1/8 in. upright, from underneath. The fin is quite orthodox, being 1/8 in. sheet outline with strips of 1/32 in. x 1/8 in. each side of the spar, or rudder post.

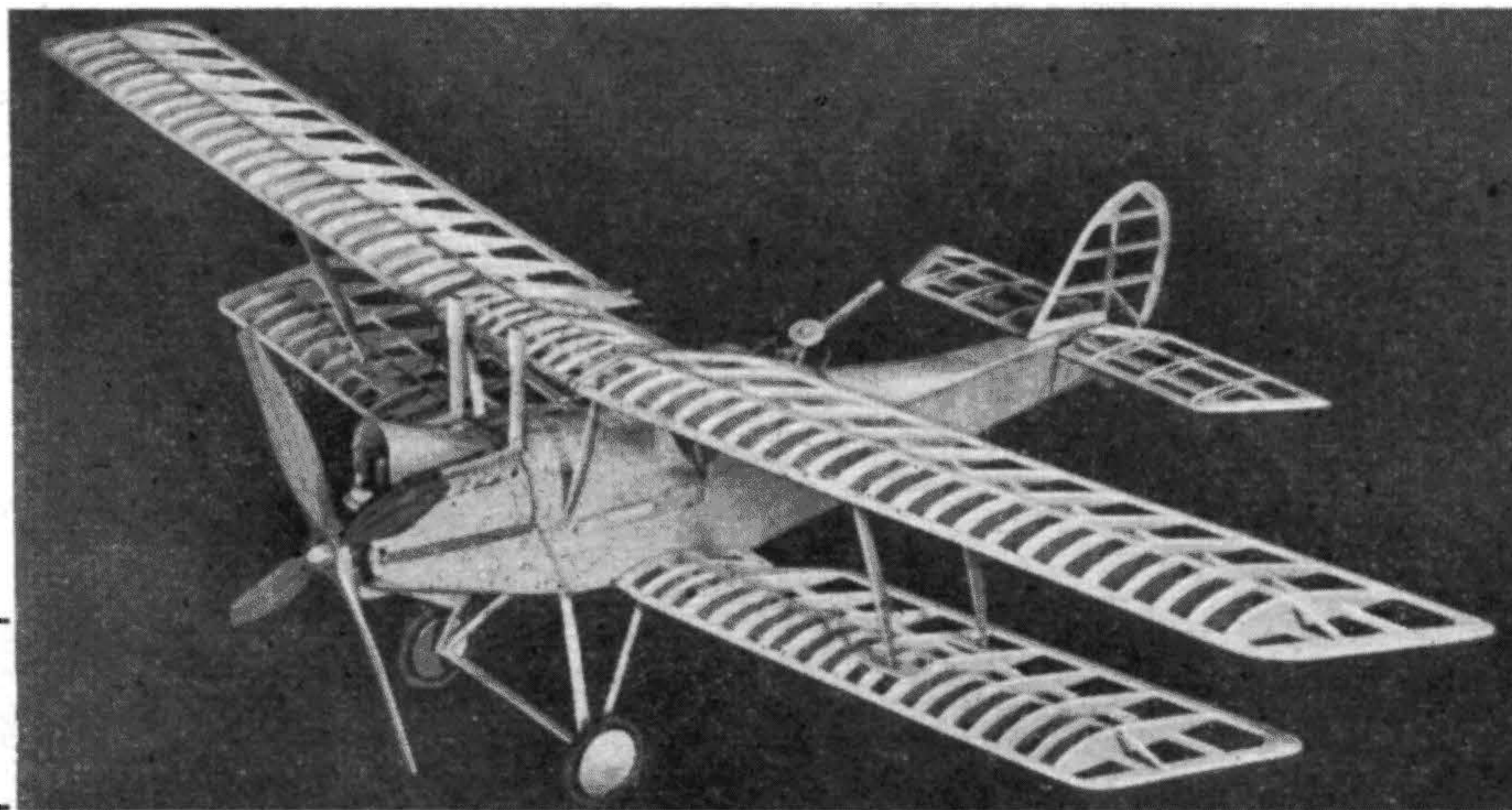
Covering. The whole model, including the fuselage, is covered with jap tissue or similar, and given two coats of clear dope. If desired, the upper surfaces may be coloured but this is somewhat tricky if a spray is not available. Brushmarks are unsightly when the model is viewed against the light, and so it may be preferred to use green tissue. The undersurfaces, in any case, are left clear-doped.

Rigging. The wings are sufficiently strong not to rely upon bracing, and so for flying purposes this has been kept to a minimum. Even if fully rigged (and the R.E.8 had a lot of wires!) it is doubtful if this would be seen in flight. The "wires" indicated on the plan are of 1/32 in. diameter grey rubber, and fix around the interplane struts, helping to keep them securely in position. Golf ball rubber or Dunlop indoor strip will do.

Flying. The model should balance at the point shown on the plan. With the Mills 0.75 engine, this will be automatic, but ballast at nose or tail may be needed for other motors. A calm day should be chosen for test glides. These should be made over long grass. The model is rather sensitive to rudder movement, and so all the adjustment for directional trim can be made by packing (not more than 1/32 in.) at either side of the tailplane leading edge, thus slewing the whole empannage round slightly.

To commence flying, get the engine running evenly—having removed the cowling for making adjustments, fuelling and so on. Now stop the engine, choke, replace the cowling and re-start. With the four-bladed airscrew, the Mills .75 "ticks over" at a speed which is ideal both for test flying and for realistic scale flight. If, however, it is desired to fit a two-bladed one, an 8 in. x 5 in., or 9 in. x 5 in. is recommended. Increased sidethrust will be required and it is advisable to fly with the engine well throttled-down at first. The glide is a little better with the two-blader.

With a little practice, and if there is a smooth surface handy, one can achieve that ambition and rich reward of the painstaking scale modeller—seeing this grand "old stager" gliding down to a beautifully gentle "deadstick" landing.



View prior to covering shows simple construction. Engine used on prototype was a Mills .75, other suitable motors are the Allbon Dart, E.P.C. Moth, Amco .87 and the E.D. Bee.