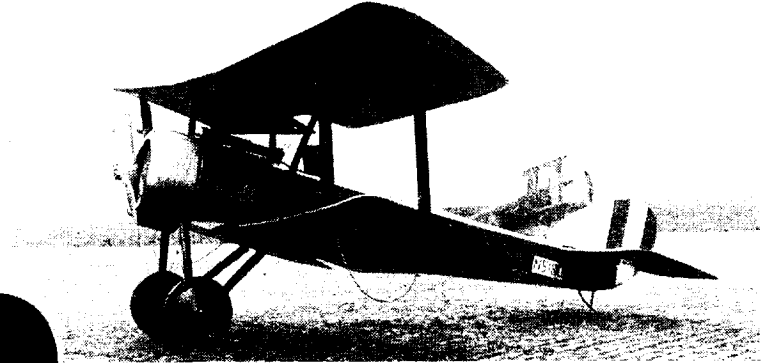


The photos on the opposite page show a line-up of three old timers with the Pup in the middle. The other two models were built by G. E. Fisher's friend J. M. Greenland, designer of the Bleriot Monoplane and D.H. Chipmunk recently featured in our scale series. The model on the left is an S.E.5, that on the right being a Camel.



1½ INCHES TO 1 FOOT  
FLYING SCALE

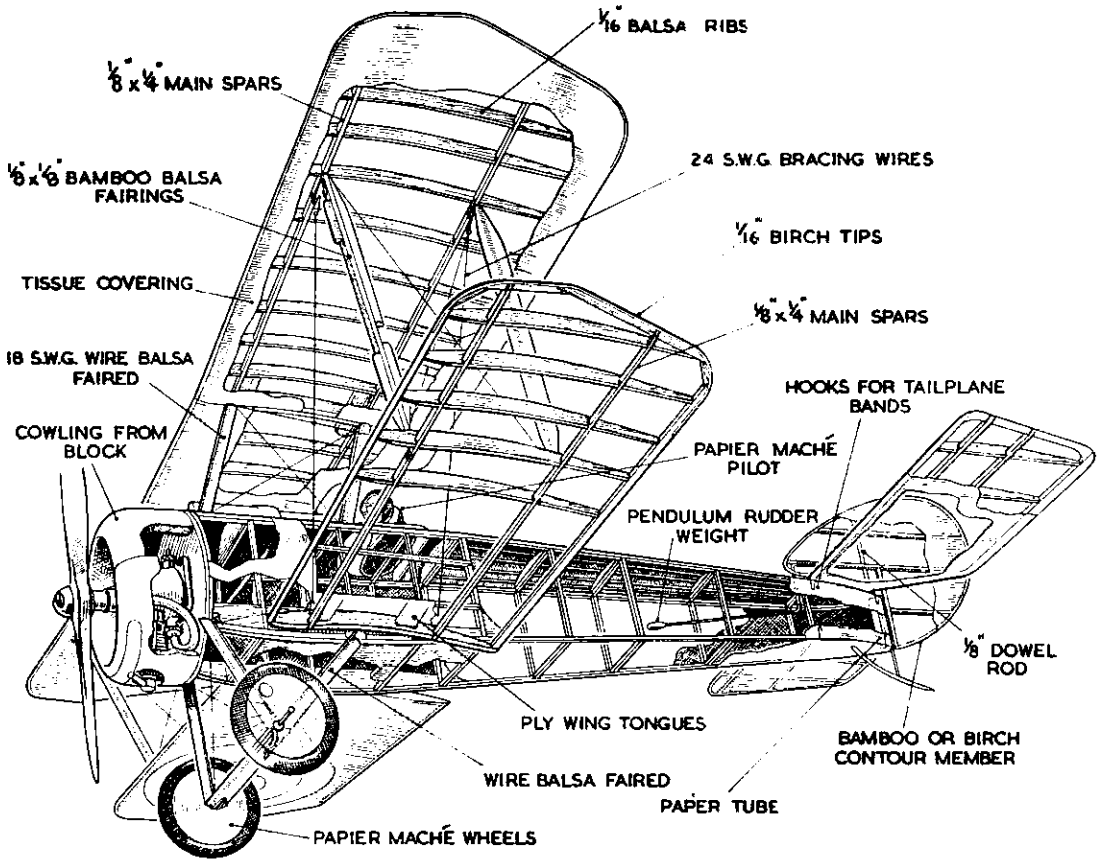
# SOPWITH PUP

BY G · E · FISHER

Neither gone nor forgotten this great aircraft survives the ravages of time—a Pup still flies today. And now, in many places the atmosphere of the 'old days' will again be recaptured by the flying of this superb power model whose flight faithfully follows that of the original machine. Following in the tradition of Bagley and his popular Bishop's Nieuport 17C, the model 'Pup' described in the pages of this article is equipped with the same built-in stability device, the automatic 'pendulum' rudder which makes light of one of the most difficult features of true scale model design.

The true to scale appearance of the model Pup is well brought out by the three photographs on this page. Shown at rest and in the flying shot at the top of the page these photographs by E. J. Riding convey much of the realism of G. E. Fisher's 1/8th scale model.





**The Model.** Powered by a "Frog 100" diesel, but will fly with any engine of similar capacity; it was tested with a .9 c.c. "Clan" engine which proved to be lacking in sufficient power. Simplicity and strength were the keynotes in the design, the undercarriage being sprung in the true scale fashion, i.e., with rubber band shock absorbers. The wings and engine mounting can knock off in the event of a crash.

**Fuselage.** The fuselage is built as a normal slab-sided box structure of 1/8 inch square hard balsa. Commence by building the two sides flat on the plan, afterwards joining them together with the various top formers, cross spacers, etc. Then bend the centre section struts to the shape shown on the plan from 18 s.w.g. wire and bind in place. Next, add the side formers, stringers and sheet. The cowling is carved out of hard balsa in two halves the top half being plugged into the lower half which is cemented to the 1/8 inch ply front former, which is in turn held to the fuselage by means of strong rubber bands. The engine is bolted to this former, 5 degree sidethrust being obtained by packing with washers.

**Wings.** First pin down T.E. and L.E. to the plan. The mainspars will have to be packed up with pieces of sheet to allow for the undercamber, when this has been done add the ribs, then build up the tips with 1/16 x 3/16 inch hard balsa, when dry steam 1/16 inch square bamboo to shape and cement on. Next, make the 20 s.w.g. wire strut lugs to shape shown on plan, then bind and cement firmly in place at an angle allowing for the stagger and dihedral of the wings.

**Undercarriage.** The undercarriage is built up by bending 16 s.w.g. wire to the shape shown on the plan, then add hard balsa fairings bound with thread at the ends, and cover with four layers of tissue. The spreader bar is fixed to the "Vees" of the legs, the springing is obtained by retaining the axles into the "Vees" with rubber bands.

**Centre Section.** The centre section is built as per the wings and bound on to the ends of the centre section struts with thread.

**Tailplane and Rudder.** An automatic rudder was fitted experimentally and proved to be very successful, its construction being simple as is the tailplane's and needs no explanation.

N.B.—It is essential that nothing can jam it to one side or the other of its celluloid slot.

**Covering and Finish.** The whole model is covered in rag tissue and given one coat of clear dope, the colour scheme being as follows:—The cowling and top decking of the fuselage is painted aluminium back as far as the cockpit, the rest of the fuselage and upper surfaces of the model being painted khaki-green, all under surfaces being dirty cream to represent clear doped fabric. The red, white, and blue roundels are drawn on with compasses and then painted, the fin is painted white with the Sopwith name and address printed on it in black, the rudder is painted red, white, and blue with the blue adjacent to the fin post.

**Rigging.** Attach the wings to the fuselage and pack up to the correct angles of dihedral and incidence, then bind the struts to their respective lugs, and cement on balsa fairings. Next, attach the landing and flying wires, and the cross tie wires between the struts which are soldered to the lugs.

**Flying.** The prototype has a considerable number of minutes to its credit and was tested as follows:—Make sure that the model balances on its correct C. of G. (shown on the plan) then glide as near to the ground as possible. Should it stall add pieces of packing under the leading edge of the tailplane, if it dives pack up the trailing edge. Continue until a flat glide is obtained. When gliding it is advisable to fix the rudder central, when ready for power flight allow the rudder to move freely and let the model R.O.G. with about 30 seconds motor run to get model well clear of ground. If the model stalls under power add downthrust, should it turn steeply in the anti-torque direction cut down the amount of rudder travel, but if it turns in the torque direction add more sidethrust.

Full size plans ( $\frac{1}{2}$  scale opposite) may be obtained from Aeromodeller Plans Service, The Aerodrome, Stanbridge, near Leighton Buzzard, Beds. Price 5/-post free.