

A SNAPPY
FLAPPED
STUNT C/L
MODEL FOR
5 c.c. ENGINES



SKIPPER by B. Murray

START construction on the fuselage, by cutting out the two basic fuselage sides from $\frac{3}{32}$ in. medium sheet balsa. Clearly mark the position of the wing, but leave the cutting out of this portion until the wing is completed. Cement $\frac{1}{4}$ in. sq. stringers to inside of fuselage where shown. Cut out all fuselage formers from $\frac{3}{32}$ in. sheet and cut the bearers to size. Assemble formers F1, F2, F3, to bearers, noting that the fuel tank passes right through F2. Firmly cement this assembly to fuselage sides, pre-cementing where necessary. When this has set, clip the fuselage sides together at the tail with a clothes peg or rubber band and add the remaining formers and fasten the undercarriage to F2 with tin plate and two 6-B.A. nuts and bolts. Now leave the fuselage for the present and start on the wing.

Wing

First stage in making the wing is to make the trailing edge from two pieces of $\frac{3}{32}$ in. \times $\frac{1}{4}$ in. \times 35 in., cementing in between them a piece of tape 1 in. wide which will be the elevator hinge. Now pin down the lower main spar and the t.e., packing to the necessary level in each case. Next add wing ribs, top main spar and leading edge. Fix the bell crank support (making sure of a strong joint here) and the bell-crank, threading lead-out wires through port wing. Leave the push-rod projecting. Carefully sand t.e. to shape as this helps to give the reflex to the wing section. The $\frac{1}{16}$ in. sheet covering can now be added, cementing first to the main spar and then to the leading edge. Cellotape and clothes pegs of the sprung variety can be of great help here. The $\frac{1}{16}$ in. sheet covering for the t.e. can be fixed on in the same fashion. Add the wing-tip weight and the wing tips. Make two saddles for the wing elevators from 16 g. wire and solder on the tin elevator horns. The wing elevator horn has two holes and is fixed above the wing. The tail elevator horn has one hole and goes on below the tail in the usual position. Groove the inner sides of the elevators to take the saddle and fasten one port and one starboard elevator in position on hinge. Now cement on saddle using

plenty of cement, then add top elevators. Cut the push-rod to exact size and fix in lower hole of wing elevator. Sand smooth the whole structure.

Cut the fuselage sides where you have marked them to take the wing, retaining pieces "X" and "Y". Cement wing firmly in place using $\frac{1}{4}$ in. as packing. Make tailplane and elevators from $\frac{3}{32}$ in. sheet (two layers) and hinge by the sandwich method. Insert push-rod in top hole of wing elevator horn, cut to size and fix to tail and fasten completed tailplane to fuselage.

The fuselage structure is now ready to be finished. Cement a piece of $\frac{1}{16}$ in. sheet to the bottom of the fuselage, and trim off excess when set, then replace pieces "X" and "Y". Plank top of fuselage, add rear sides and top. Sand shape and cut out fin and the pieces which comprise canopy and cement in position. Before going any further check to see that all flying surfaces are lined up correctly. Make top cowl from soft block and the lower cowl from four pieces of $\frac{1}{4}$ in. sheet. The cylinder head of "500" engine as shown on plan has been exposed for cooler running.

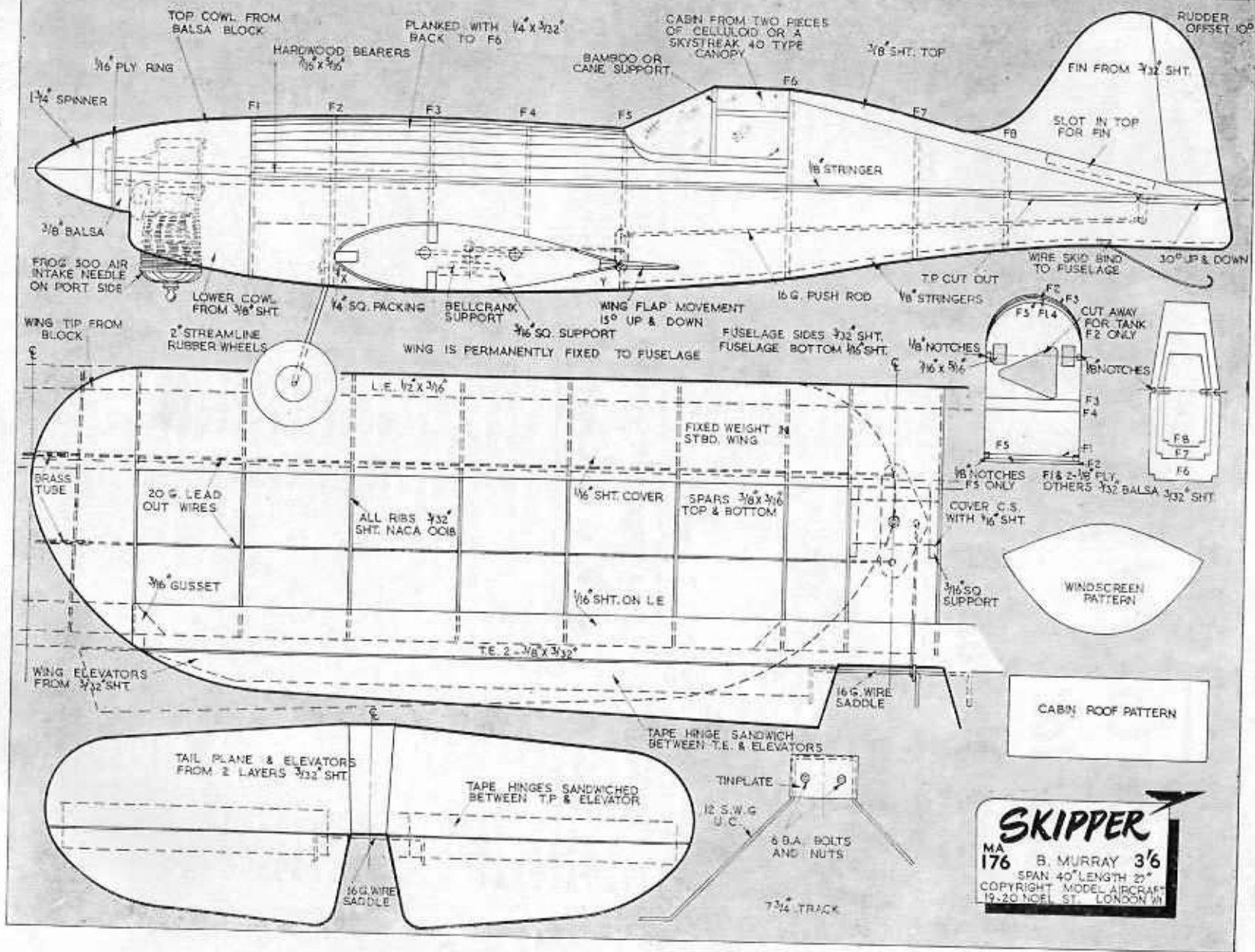
Finish

Check over completed airframe for any loose joints, then carefully sand smooth all over. Give one thick coating of clear dope then lightly sand smooth again. Cover wing with heavy rag tissue and water shrink. All other surfaces can be covered with light rag tissue, applied with cellulose thinners, then another coat of dope. Model can be colour doped all over to individual choice. When dry brush on a thin coat of fuel-proof varnish.

Flying

The all up weight of the original (with Frog "500") was 25 oz. which did not prove too heavy. The finished model should balance between l.e. and front line. A 9 in. \times 6 in. propeller should be used for flying. Use slight up-elevator for take-off. This model flies fairly fast but the glide is very slow when the engine cuts, so be careful not to use too much up-elevator when gliding.

FULL SIZE WORKING DRAWINGS ARE OBTAINABLE FROM YOUR LOCAL DEALER, OR BY POST FROM THE "MODEL AIRCRAFT" PLANS DEPARTMENT, 19-20, NOEL STREET, LONDON, W.1, 3s. 6d., POST FREE



SKIPPER

MA 176 B. MURRAY 3/6
 SPAN 40" LENGTH 21"
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