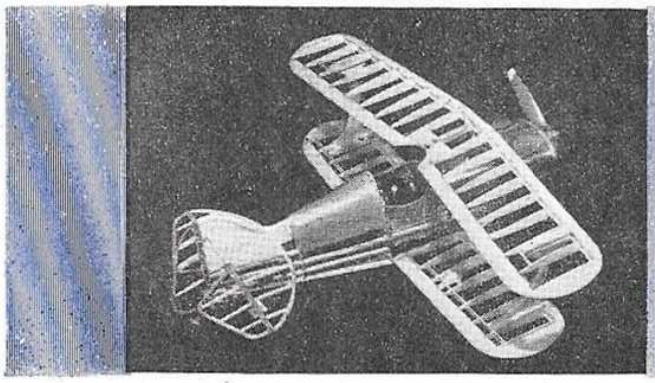
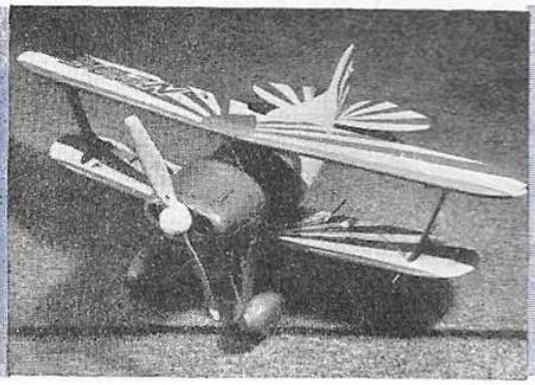
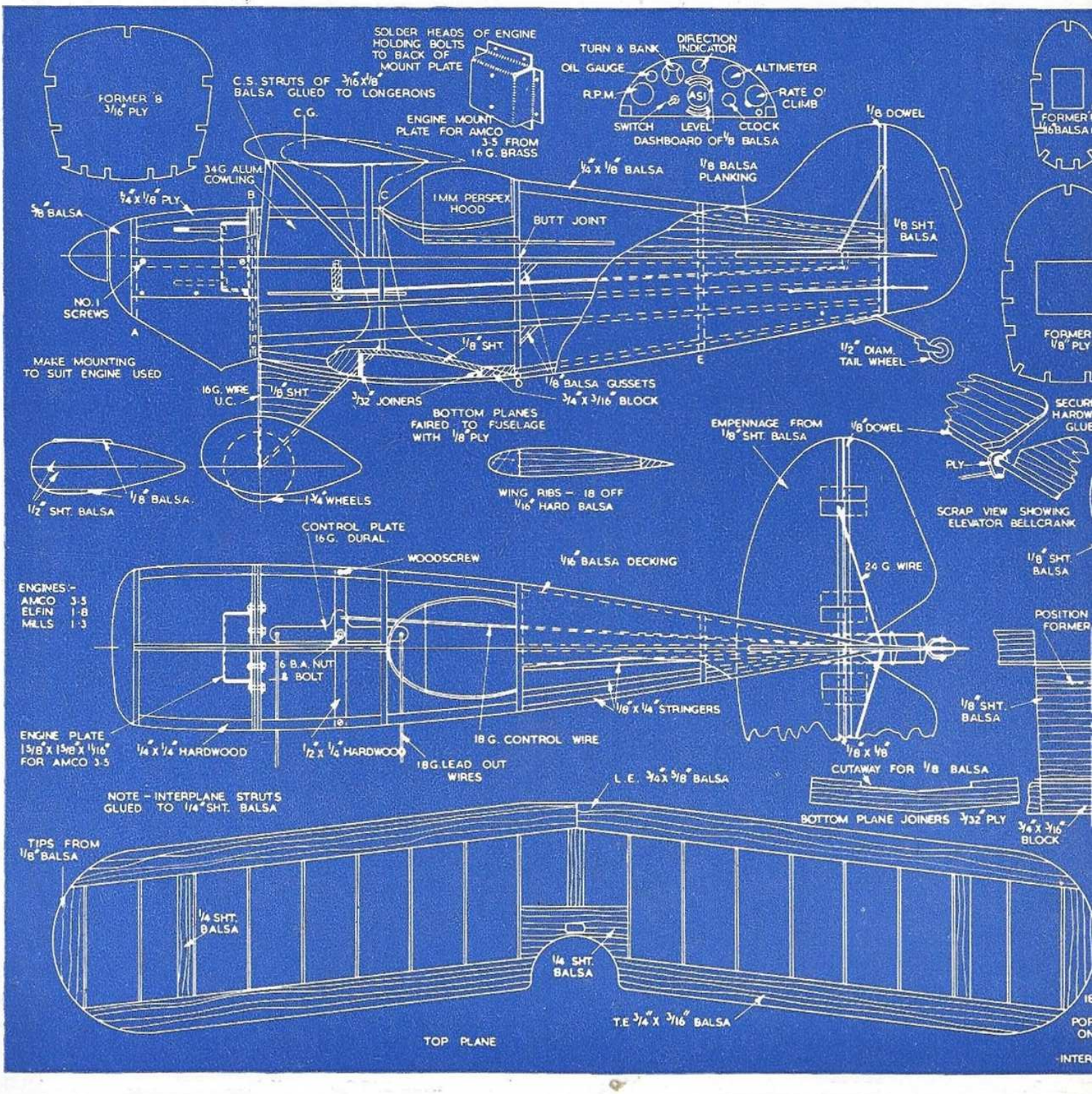
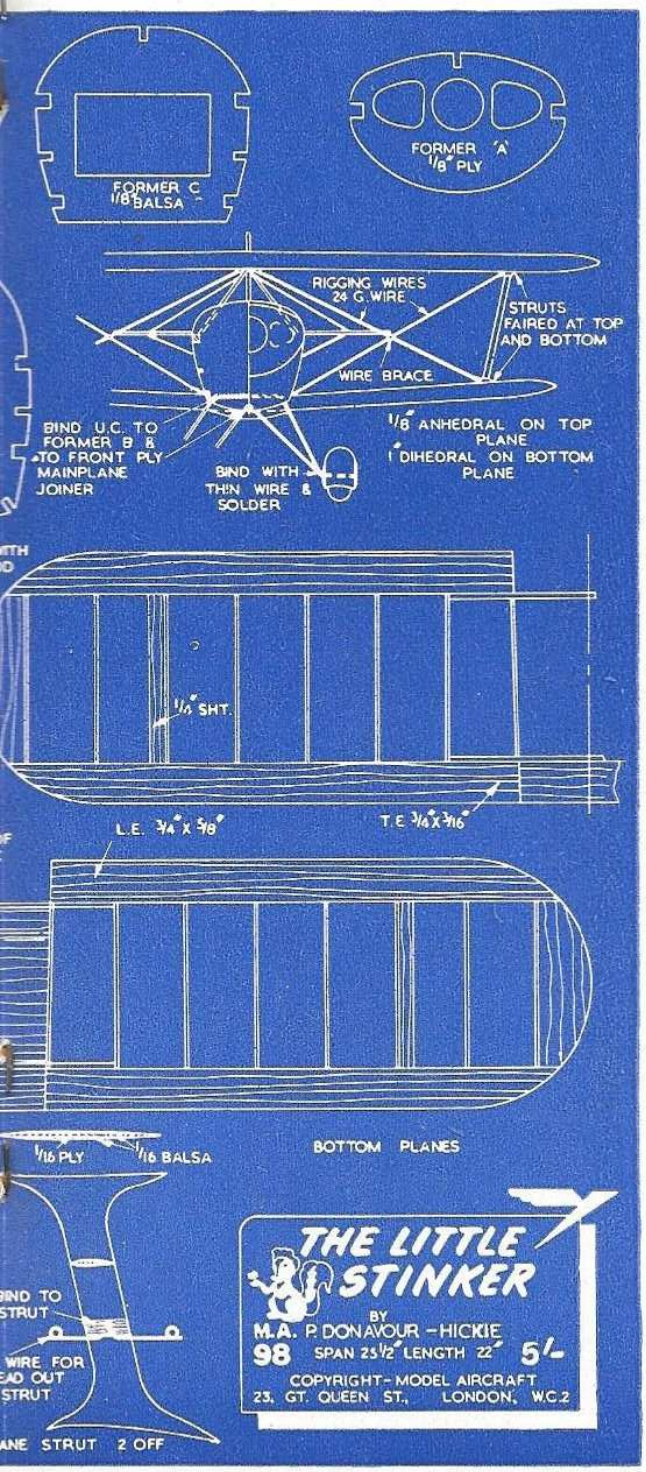





SOLDER HEADS OF ENGINE HOLDING BOLTS TO BACK OF MOUNT PLATE
FORMER '8 3/16" PLY
C.S. STRUTS OF 3/16 X 1/8 BALSA GLUED TO LONGERONS
C.G.
ENGINE MOUNT PLATE FOR AMCO 3-5 FROM 16 G. BRASS
TURN & BANK
DIRECTION INDICATOR
OIL GAUGE
ALTIMETER
R.P.M.
ASI
RATE O' CLIMB
SWITCH
LEVEL
CLOCK
DASHBOARD OF 1/8 BALSA
1/8 DOWEL
34 G ALUM. COWLING
1/4 X 1/8 PLY
1/8 BALSA
1MM PERSPEX HOOD
1/4 X 1/8 BALSA
1/8 BALSA PLANKING
BUTT JOINT
1/8 SHT. BALSA
NO. 1 SCREWS
MAKE MOUNTING TO SUIT ENGINE USED
1/8" SHT.
1/2" DIAM. TAIL WHEEL
16 G. WIRE U.C.
1/16 SHT.
3/32 JOINERS
1/8 BALSA GUSSETS
3/4 X 3/16 BLOCK
BOTTOM PLANES FAIRED TO FUSELAGE WITH 1/8 PLY
EMPENNAGE FROM 1/8 SHT. BALSA
1/8 DOWEL
1/2 SHT. BALSA
1/8 BALSA
1 3/4 WHEELS
WING RIBS – 18 OFF 1/16 HARD BALSA
PLY
SCRAP VIEW SHOWING ELEVATOR BELLCRANK
CONTROL PLATE 16 G. DURAL
WOODSCREW
1/16 BALSA DECKING
24 G WIRE
1/8 SHT. BALSA
ENGINES:-
AMCO 3-5
ELFIN 1-8
MILLS 1-3
6 B.A. NUT & BOLT
POSITION FORMER
1/8 SHT. BALSA
1/8 X 1/4 STRINGERS
ENGINE PLATE 1 5/8 X 1 5/8 X 1/16 FOR AMCO 3-5
1/4 X 1/4 HARDWOOD
1/2 X 1/4 HARDWOOD
18 G. CONTROL WIRE
18 G. LEAD OUT WIRES
1/8 X 1/8
CUTAWAY FOR 1/8 BALSA
L.E. 3/4 X 5/8 BALSA
NOTE – INTERPLANE STRUTS GLUED TO 1/4" SHT. BALSA
BOTTOM PLANE JOINERS 3/32 PLY
3/4 X 3/16 BLOCK
TIPS FROM 1/8" BALSA
1/4 SHT. BALSA
1/4 SHT. BALSA
T.E 3/4" X 3/16" BALSA
TOP PLANE

The LITTLE STINKER

By P. Donavour-Hickie



A SCALE C/L MODEL OF BETTY SKELTON'S FAMOUS STUNT AIRCRAFT

THOSE who were present at the 1949 Gatwick International Air Show, will need no introduction to the 24 year old American girl from Florida, Miss Betty Skelton, and her trim little biplane, "The Little Stinker." The spectacular display of aerobatics which she gave were carried out with the skill and precision which has won her international fame.

The writer was particularly struck by the attractive lines of her tiny plane and thought what a fine flying scale model it would make—in fact, he could hardly wait to get started! Miss Skelton was most co-operative and enabled me to obtain the necessary plans, photographs and details.

In August, 1949, the first model of "The Little Stinker" was completed. It was built to a scale of 1 in. to 1 ft. and was powered by an Amco 3.5 c.c. diesel. During its ten hours of successful flying it was also fitted with Elfin 1.8 c.c. and Mills 1.3 c.c. diesels, but it was considered that the model was too small to be really practical. It was decided, therefore, to build another to 1½ in. to 1 ft. scale and it is this model which is dealt with in this article. Miss Skelton later sent me details of modifications which had been made to her plane, also the new colour scheme, and these have been incorporated.

As "The Little Stinker" is suitable, with necessary modifications to the mounting, for many engines at present on the market, no engine is indicated on the plan. The prototype was fitted with an Amco 3.5 which was mounted radially on the metal bracket shown.

It is not suggested that this model is a suitable one for beginners as the construction requires a certain amount of skill, but it does, however, make up into a very attractive model which will amply repay the care taken during building.

Fuselage

First cut out Formers A-E. A is cut from $\frac{1}{8}$th in. ply, B-$\frac{3}{16}$th in. ply, C-$\frac{1}{8}$th in. hard balsa, D-$\frac{1}{8}$th in. ply and E-$\frac{1}{16}$th in. balsa.

The nose piece is cut from $\frac{5}{8}$th in. block balsa. Assemble fuselage framework in the normal manner, gluing the stringers into the notches in the formers. Care must be taken at this stage to keep the assembly true by frequently placing it over the plan during construction.

THE DESIGNER . . .

Age 29 . . . Single . . . In Experimental Department of F. G. Miles (Aircraft) Ltd., at Redhill Aerodrome, Surrey . . . Born in Galway, Ireland, and came to England in 1940 . . . Member of the Zombies Club . . . Started modelling 15 years ago . . . Mainly interested in detailed flying scale control models and would like to see more contests held for this type . . . Keen on photography, riding and cycling.

The top stringers carry $\frac{1}{2}$ in. × $\frac{1}{2}$ in. hardwood block which holds the bellcrank. This should be glued and screwed into place. The bellcrank is made from 16 gauge duraminium (*not* aluminium) and all hardwood joints must be made with a good slow drying glue (*not* balsa cement).

The windscreen and cockpit cover are made from 1 mm. Perspex sheet moulded round a balsa wood former. Cowlings are bent from 34 gauge aluminium and attached to the bulkhead by means of $\frac{1}{4}$ in. No. 1 brass wood screws.

Wings

The construction of these is quite simple, all ribs being of the same size and cut from hard $\frac{1}{16}$th in. balsa. Two 3/32nd in. plywood joiners are used to hold the dihedral in the lower wing which should be 1 in. at the wing tips. The upper wing has $\frac{1}{8}$th in. anhedral at the tips. The trailing edge of the lower wing should be left rectangular in shape at the centre-section where it passes through the fuselage.

Centre-section struts are made from four $\frac{3}{16}$th or $\frac{1}{8}$ in. hardwood or bamboo and are let in and glued to the top longerons. The outer wing struts are made from $\frac{1}{16}$th in. ply sandwiched between pieces of $\frac{1}{16}$th sheet balsa and sanded to section. They are glued to the $\frac{1}{4}$ in. sheet hard balsa in the wings.

Rigging wires are made from 24 gauge piano wire and are hooked at the ends into $\frac{1}{16}$th inch plywood tabs which are glued into the wings.

Undercarriage

The undercarriage struts are shaped from 16 gauge piano wire, the joints being bound and soldered. They are bound to Former B and lower wing plywood joiner with soft iron wire. Fill in strut legs with $\frac{1}{8}$th in. sheet balsa and sand to streamline section. If desired the V shaped spreader bar between the undercarriage struts may be attached to a short strong spring to the back of former B to assist springing. The spats are built up from soft balsa sheet as indicated on the plan and $1\frac{3}{4}$ in. diameter treaded wheels were used on the prototype.

Tailplane and Rudder

These are cut from $\frac{1}{8}$th sheet hard balsa, the elevators being hinched in the usual manner with tape. A $\frac{1}{8}$th in. dowel is glued along the front edge of the elevator with a 3/32nd in. plywood horn firmly glued in the centre. A hardwood $\frac{1}{8}$th square spar is glued along the back of the stabiliser.

Tail Wheel

A $\frac{1}{2}$ in. diameter solid tail wheel is used, the bracket for this being shaped from thin tin. A piece of 18 gauge wire is soldered in for the axle. 18 gauge wire or a piece of clock spring is used for the tail wheel struts and this bound to the $\frac{1}{8}$th in. dowel in the tail.

Finishing

The model should preferably be covered with light weight silk, or failing this, with strong tissue. If the latter is used double cover fuselage. Silk covering should be given two coats of full strength clear dope and tissue three or four coats of ordinary strength clear dope. Two coats of coloured dope should be sufficient for the markings.

The top of the upper wing is finished white with red flashes, the registration number being black with a white margin on the red flashes. Undersurface of the top wing, struts, undercarriage, spats, bottom of fuselage and front half of fuselage are all bright red. Rear half of fuselage is all white. The top of the lower wing is white with red flashes. Fin, rudder and tailpiece are white with red flashes. Registration number, black. The Skunk insignia and all printing is also in black and there is a very thin black dividing line between the red and white flashes. Spinner, white. Underneath bottom wing and tailplane is finished in red and white checker board with the registration number in black. Finally a coat of banana oil should be applied all over to give a glossy finish.

The completed model should weigh between 16 and 18 oz. all-up and, if well constructed and finished, it makes an excellent scale stunter with a good aerobatic performance.