



The now six-year-old "Peril" with designer S. Pearson. Ultra tough construction ensures long life, designed to bounce rather than bend at the moment of truth.

## PERIL Designed by S. Pearson

A tough little 24in. wingspan sports free flight model for 0.5 to .8cc engines. Designed to bounce away from prangs.

THE model was built in 1959 and is still flying powered with the original .46 E.D. which has been re-bored at least three times since first installed! The model has a very lively and somewhat unpredictable flight pattern under full power, beginning with a tight left turn frequently "beating up" the launcher, and gradually opening up as altitude is gained until a series of really clean, large diameter loops are performed. A fast though relatively flat glide follows with a wide right turn.

### Construction

Formers F1, 2 and 3 are cut from ply and assembled with the  $\frac{1}{4}$  in. and  $\frac{3}{8}$  in. hardwood bearers. Double cementing, "Aerolite" or "Araldite" are recommended here. Cut fuselage sides from medium to hard  $\frac{1}{8}$  in. sheet. When the bearer/former assembly is set, cement the two fuselage sides to F.2 and 3 and check for squareness.

Insert F.4 and  $\frac{1}{8}$  in. balsa cockpit floor. Pull the fuselage together at the tail, make up the tailpost and bind the skid to it and insert into the tail end. The rest of the formers can now be added. In the original the semi-circular tops were cut separately and cemented in place when the lower fuselage assembly has set.

Cement all the top half formers in place, add the  $\frac{1}{2}$  in.  $\times$   $\frac{1}{8}$  in. spine and cover the top with  $\frac{1}{2}$  in. sheet. Cement in the  $\frac{1}{8}$  in. cross grain piece running from the noseblock to F.3A. Tack cement the soft block piece

## YOUR TWO FREE PLANS

above it and carve and sand to shape, also the corresponding piece below the fuselage (cement this in permanently). The noseblock may also be added, carving and sanding to accept the engine. Sheet the wing position using  $\frac{3}{8}$  in. sheet cross grain and the underside of the fuselage from F.4 to the tailpost with  $\frac{1}{16}$  in. sheet (cross grain). Add the soft fairing at tailplane position, tack cement.

Thoroughly sand all over, blending the various block portions into the general lines of the fuselage, and brush on a coat or two of thin clear dope, sanding between and after each. Drill holes and cement the two  $\frac{1}{8}$  in. dowels for wing bands. You will now find that the fuselage has no side members from the nose block to F.2. This is remedied by fitting a piece of  $\frac{1}{8}$  in. balsa on the starboard side pressed in place at this stage until covering and doping has been finished. This should be regarded as an inspection panel giving access to the engine bolts. It is tack cemented in place for flight. In the space between F.2 and 2 fit a tank. Remove the soft block upper nose and hollow out to  $\frac{1}{8}$  in. thick.

The tailplane "ribs" are dark cotton doped on the top surface only. Both fin and tailplane are covered with light tissue doped and rubbed down well with very fine sandpaper. The fin and tailplane should now be (double) cemented together, stripping back the tissue covering at the joint. Check that the assembly is square.

Remove the block fairing from the tailplane position of the fuselage and cement (double) the tail assembly in place. Slot the block fairing (in plan view) to accept the L.E. of the fin and relieve the bottom of the fairing to accept the camber of the tailplane, then cement permanently in place. Cover the fuselage with lightweight tissue and rub down well.

Cut the wing plan form from  $\frac{1}{16}$  in. medium quarter grain balsa, butt joining to obtain a sufficient width. Strip  $\frac{1}{8}$  in. sheet into  $\frac{1}{4}$  in. strips and roll with a large section dowel or tube until the ends practically touch, then laminate around the tips until a sufficient thickness has been built.

Trim off the surplus tip material and cement in place the leading and trailing edge material on top of the  $\frac{1}{16}$  in. base. Do not cement the  $\frac{1}{4}$  in. sq. extreme leading edge at this stage. Cut all ribs from light  $\frac{1}{16}$  in. or harder  $\frac{1}{2}$  in. sheet, trimming the two tip ones in length and depth

