

SPAN 20"
LENGTH 25"
WEIGHT 4 oz.

Fig. 6 SIDES OF HATCH OPENING BUILT UP WITH 2 LAYERS OF 1/4" x 1/4"

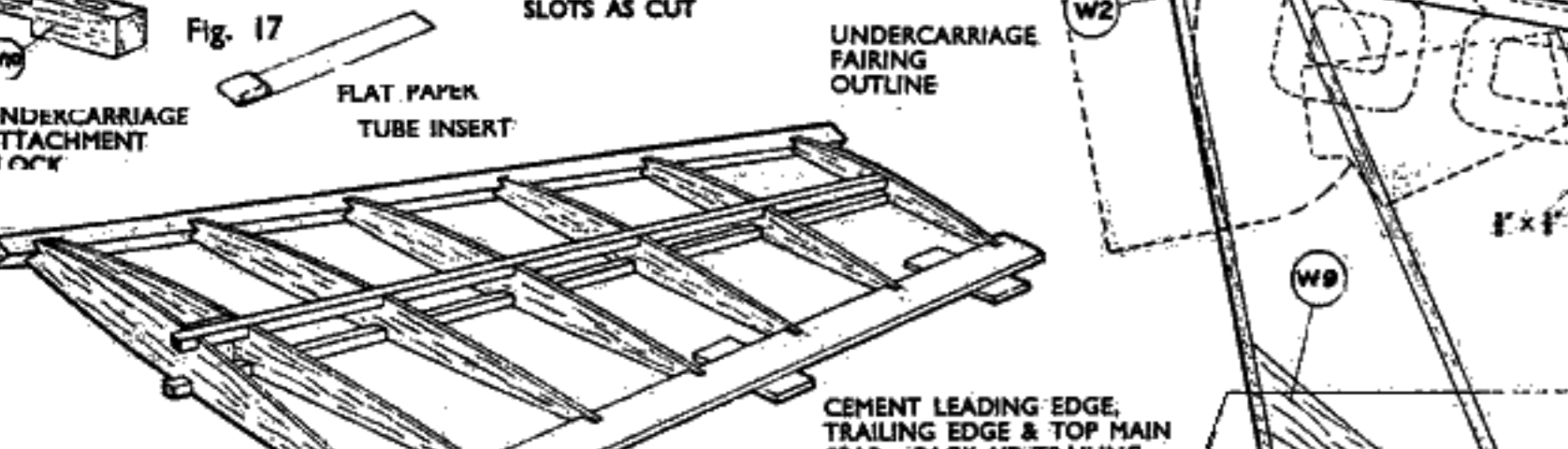
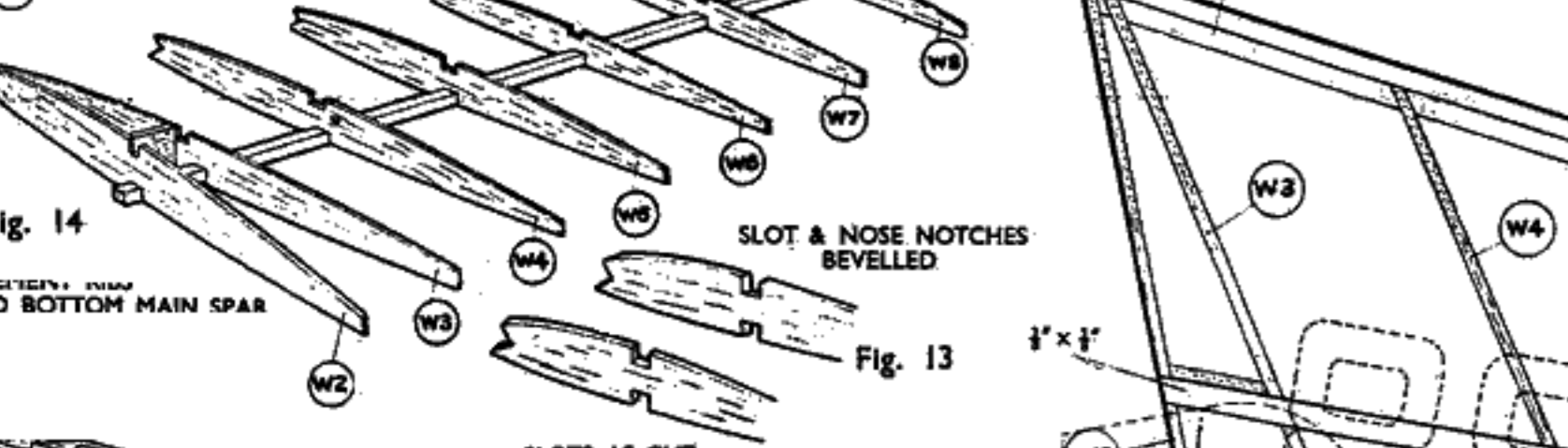
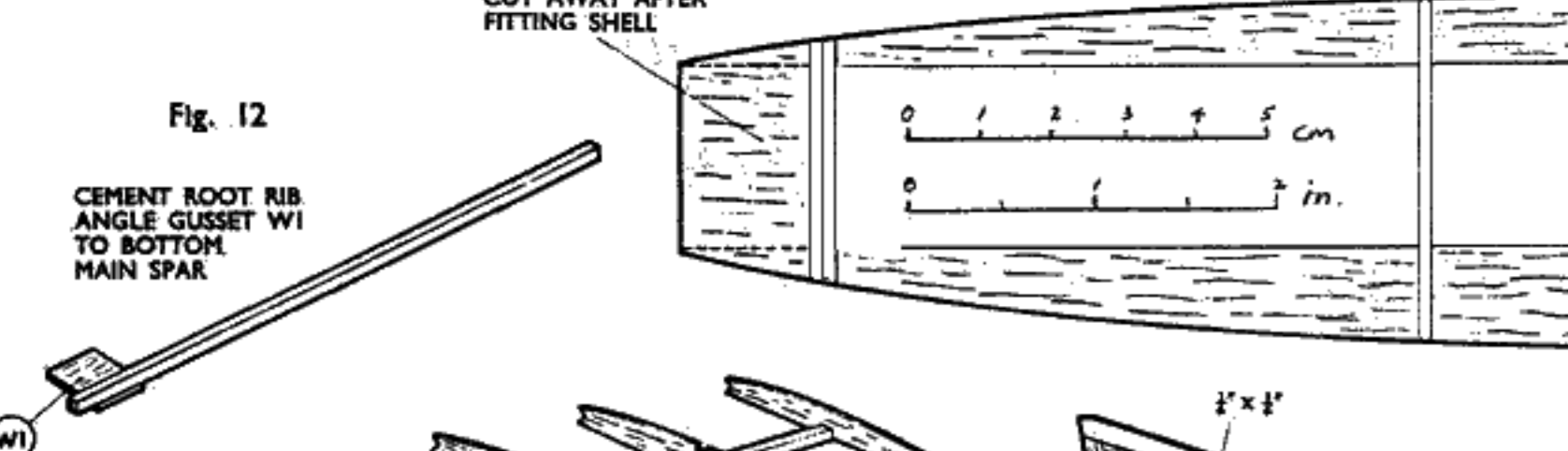
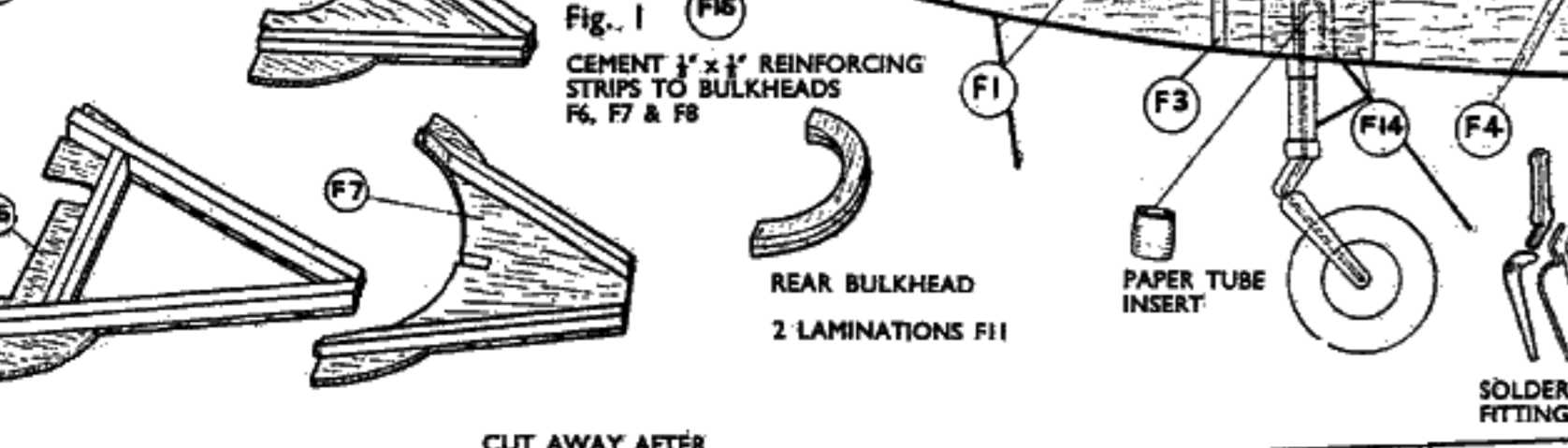
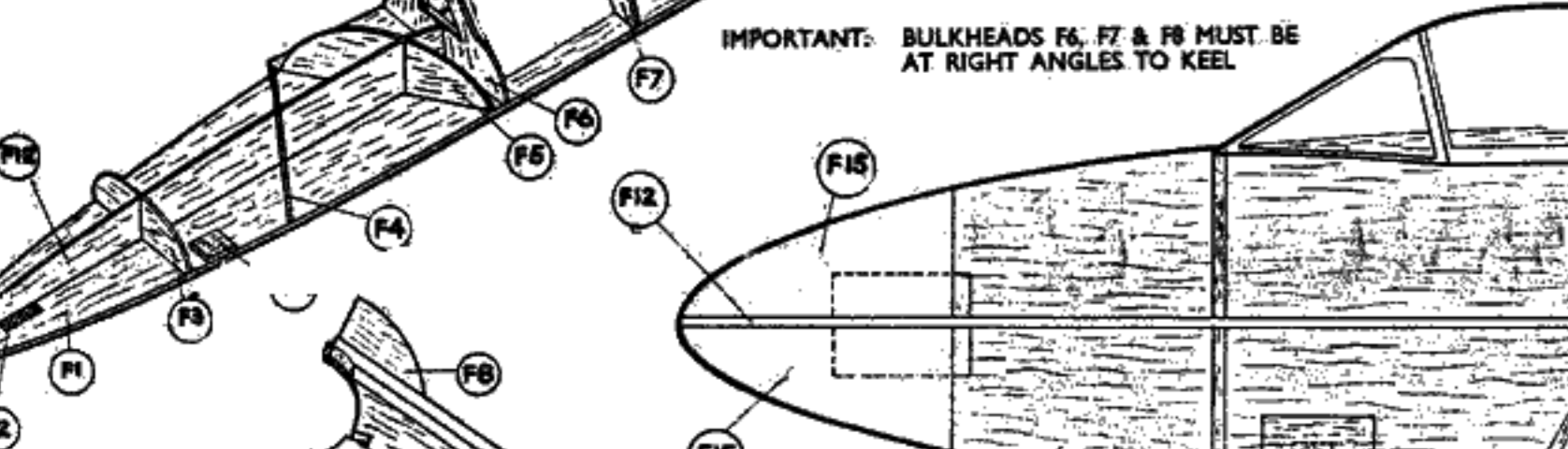
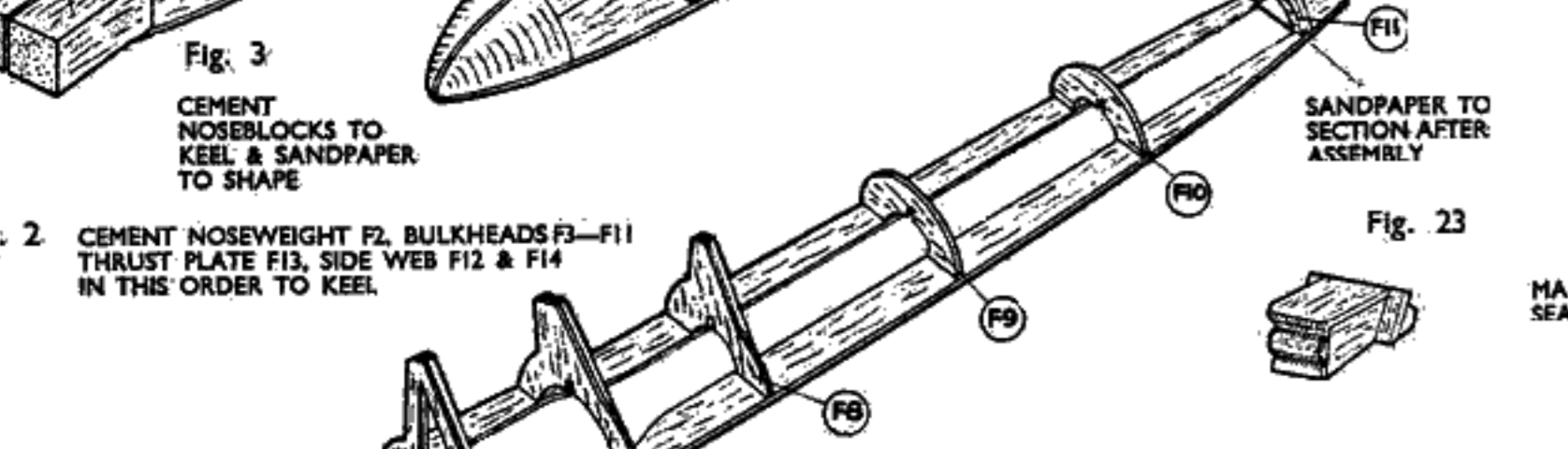
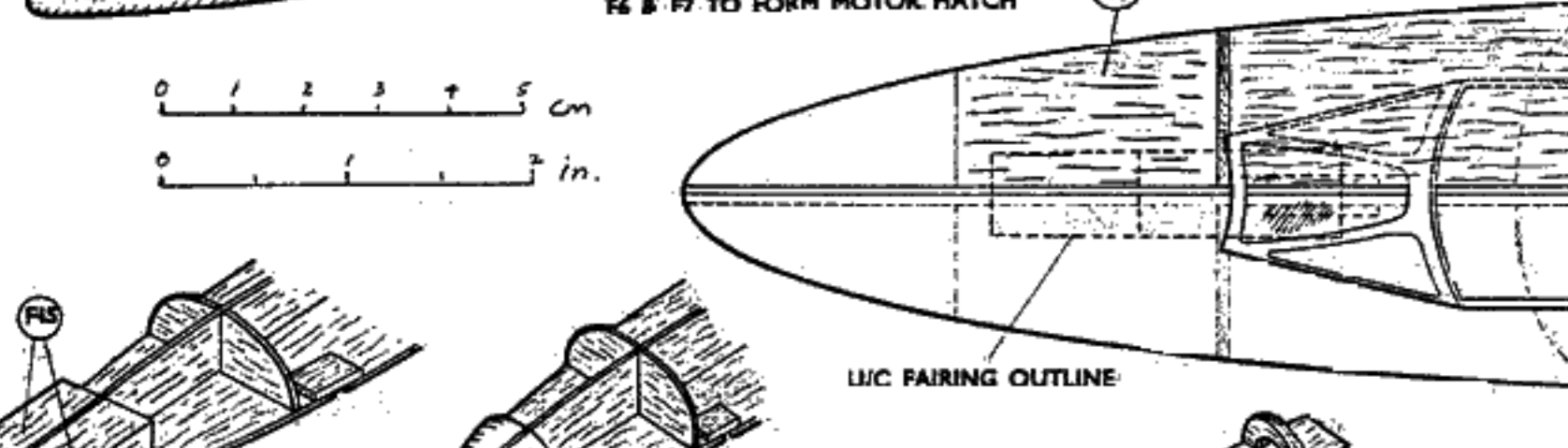
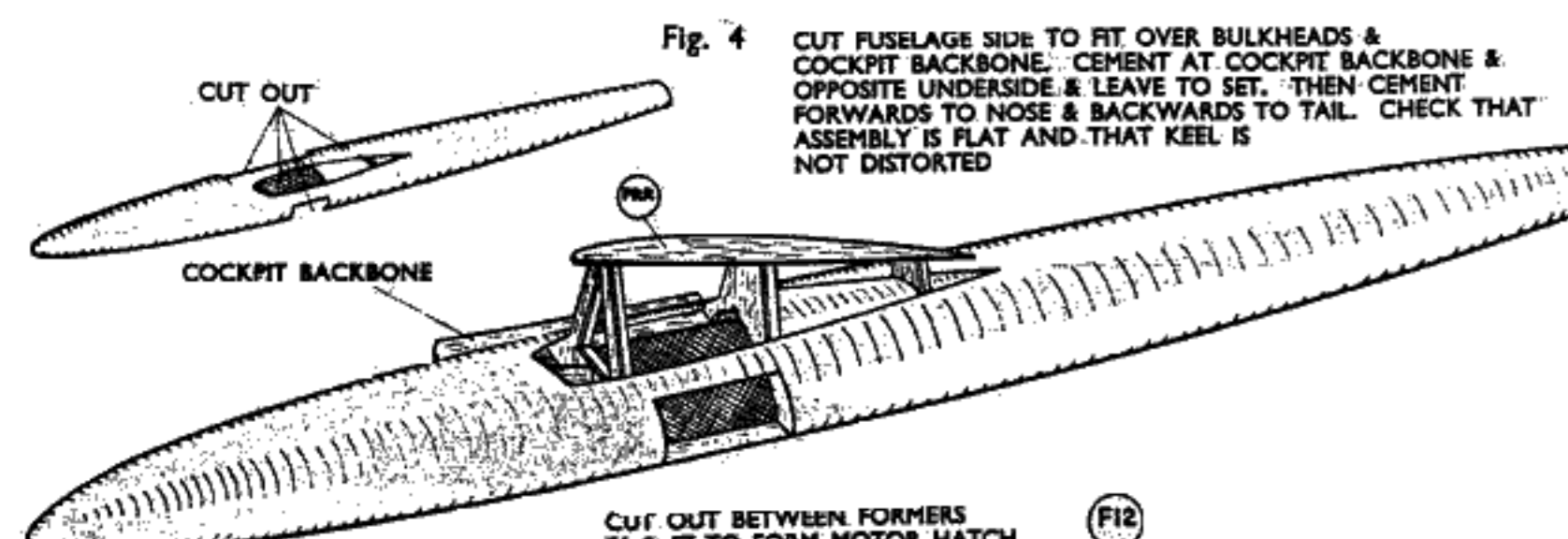
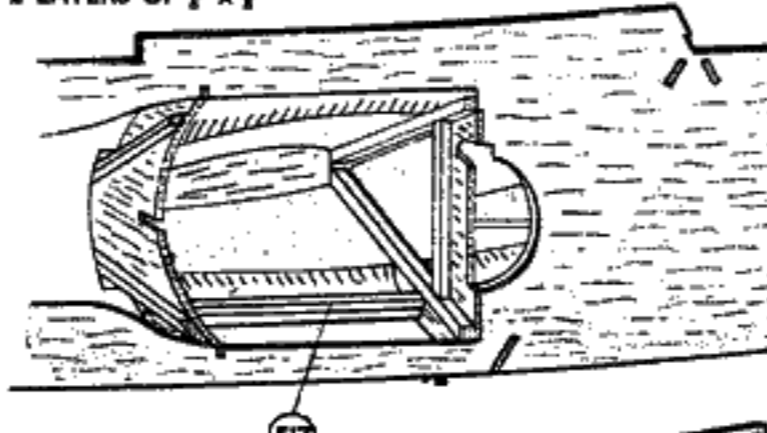


Fig. 5 WING DUCT LEADING EDGES SHAPED FROM 1/4" x 1/4" Balsa

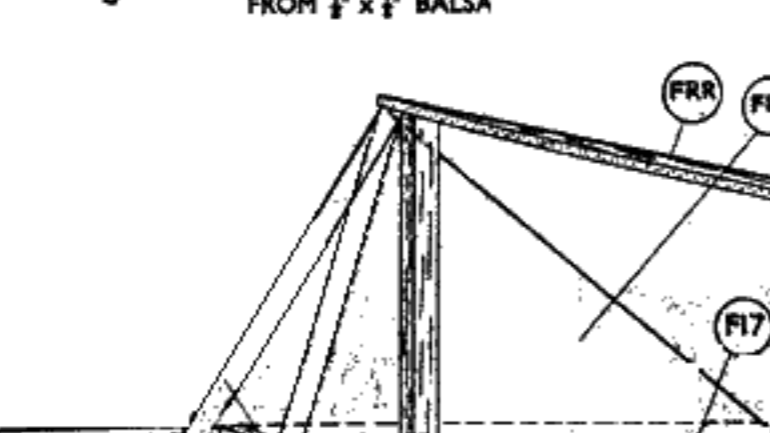


Fig. 7 PAPER FAIRING FOLDED TO FORM WING DUCT

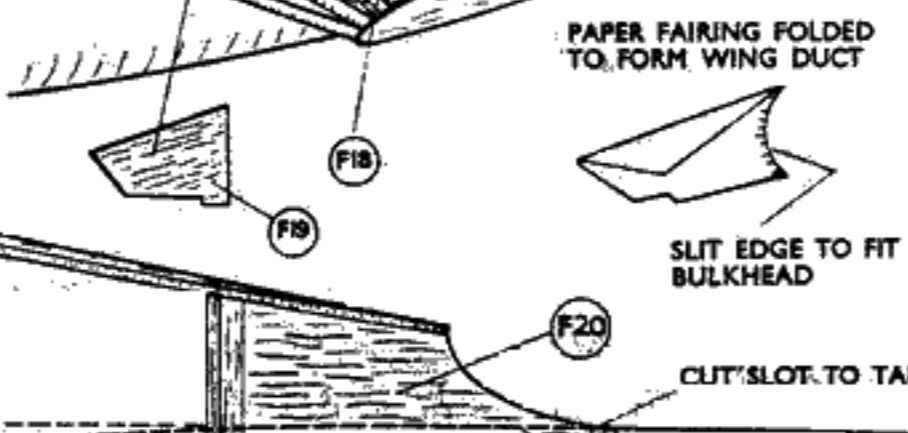


Fig. 9 FLATTEN SEAM AT END OF AUGMENTER TUBE

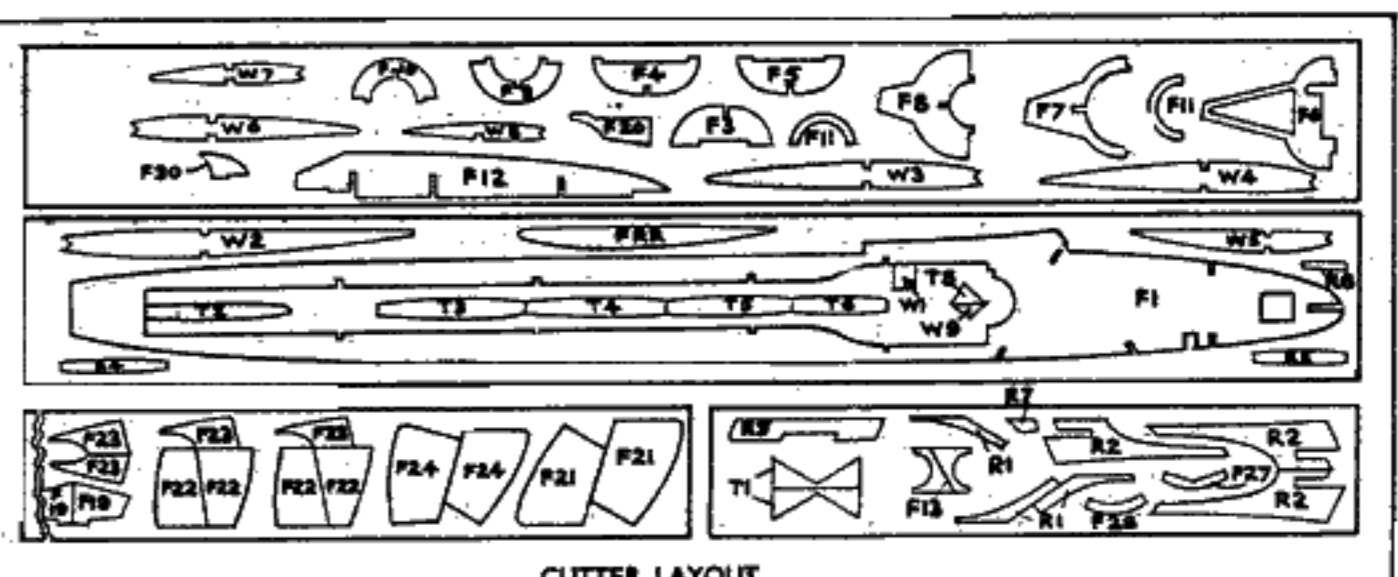
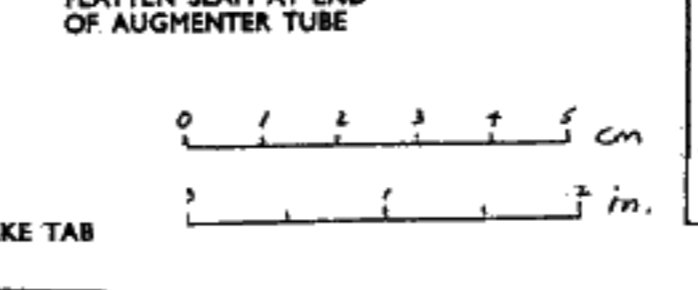
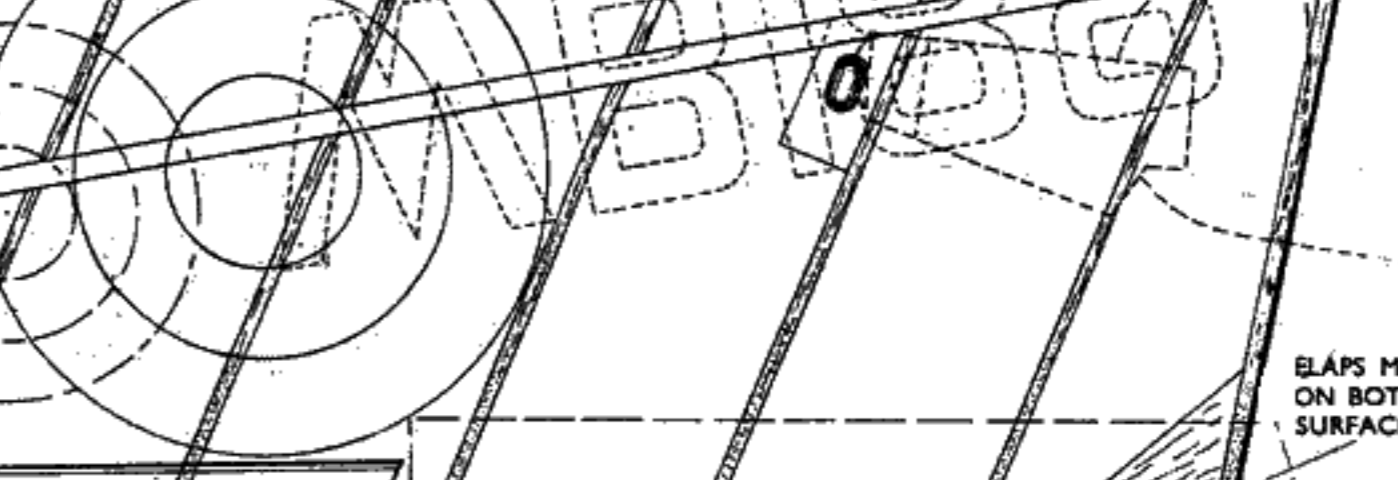
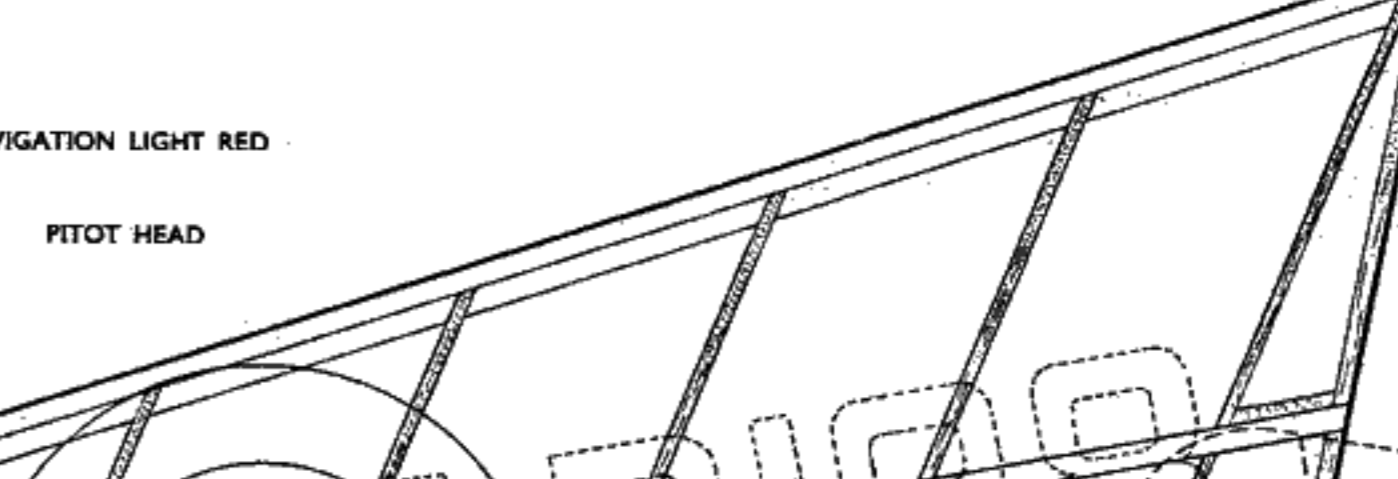
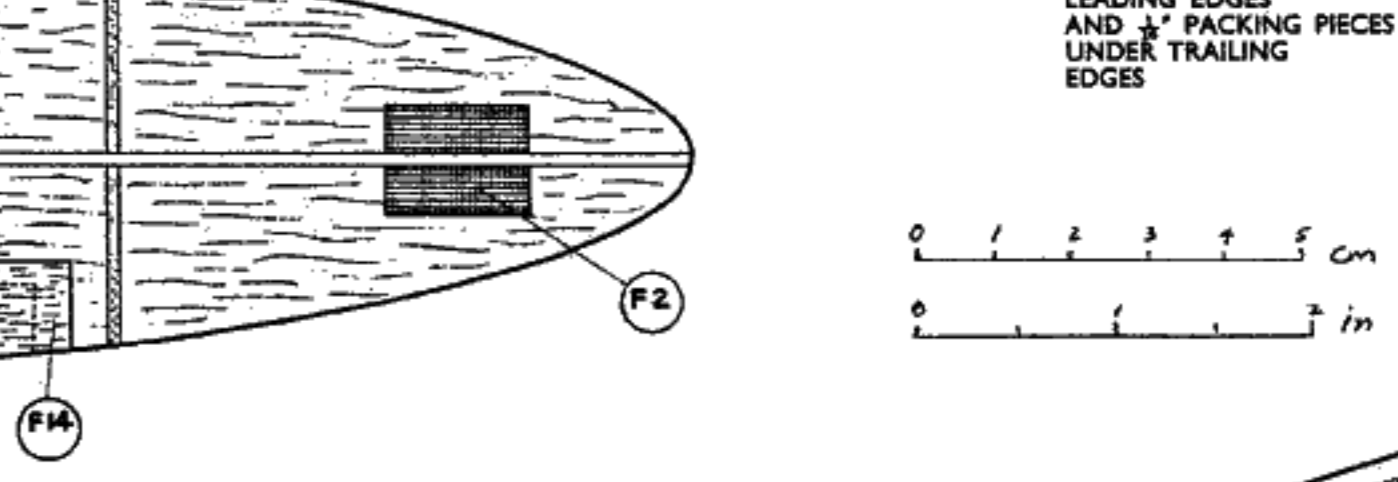
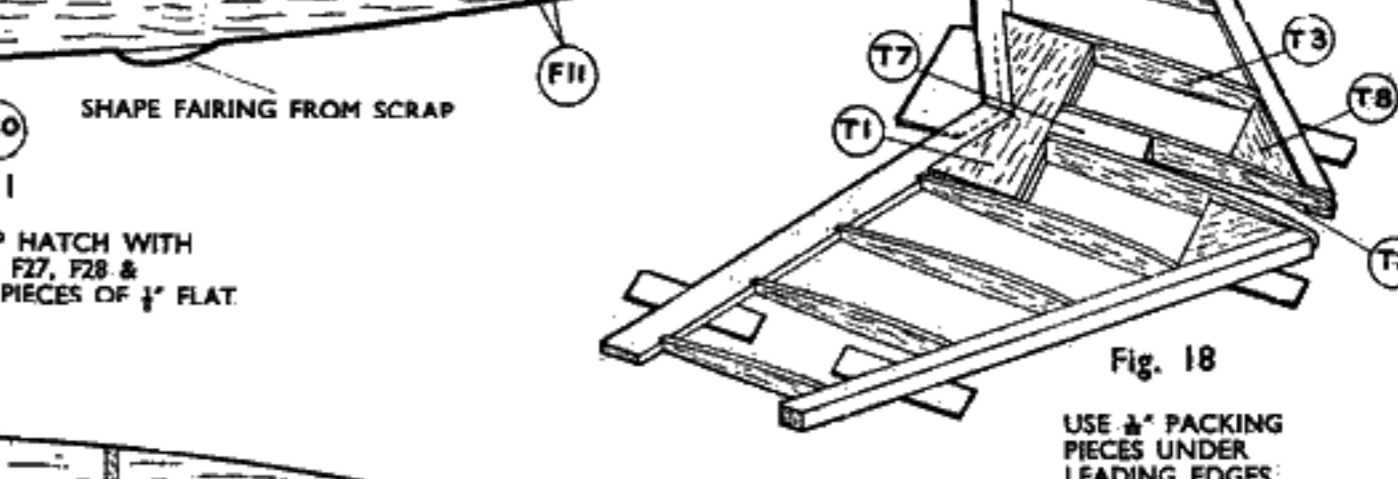
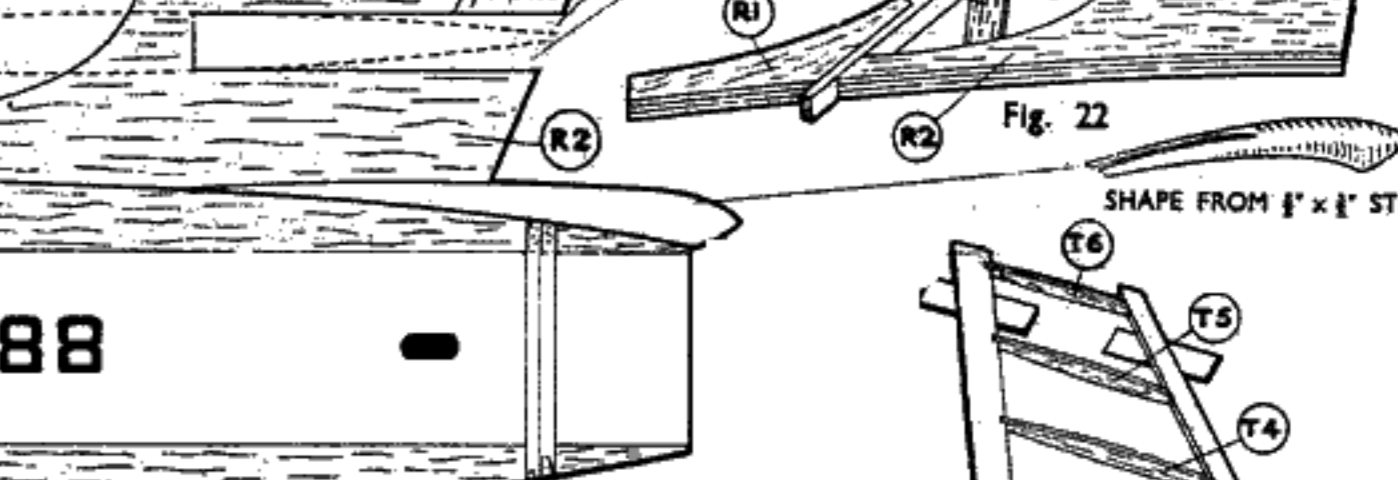
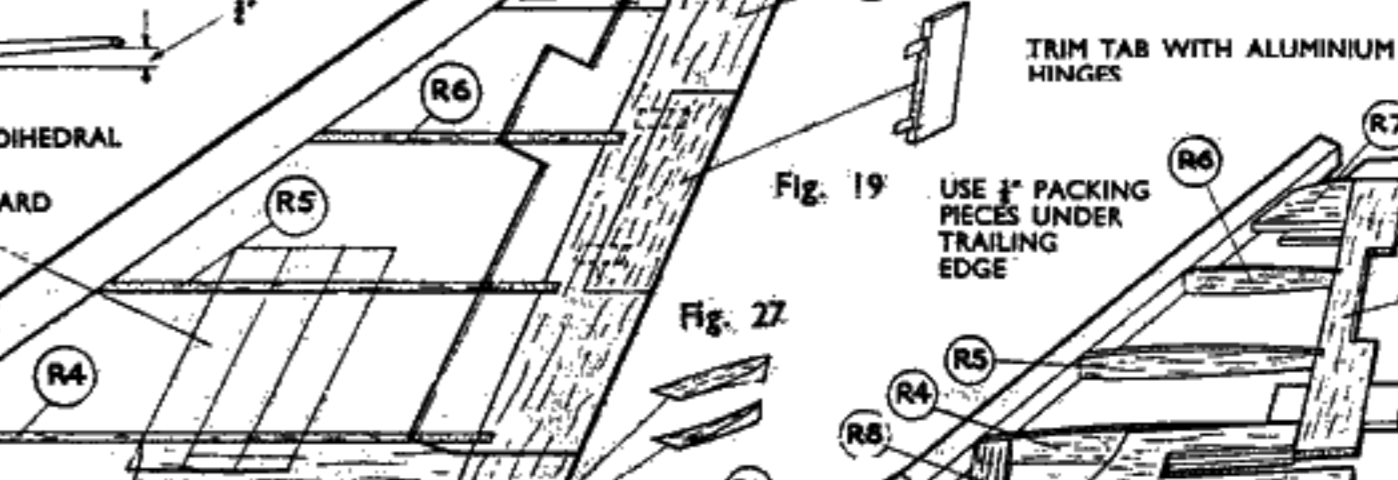
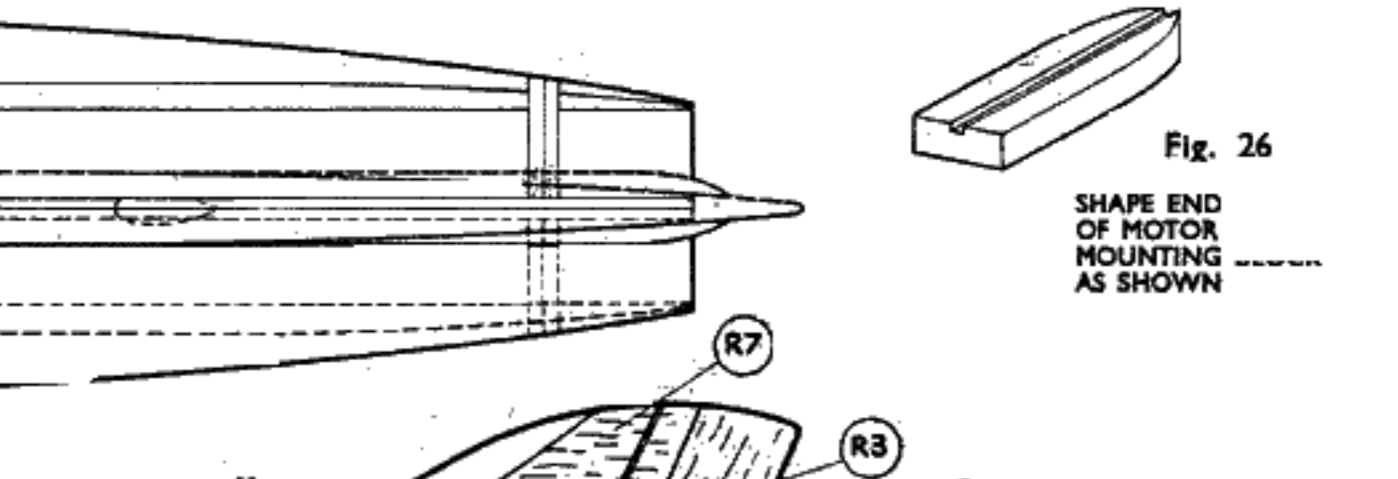


Fig. 10 CEMENT AUGMENTER TUBE & FUSELAGE HALVES TOGETHER



BUILDING INSTRUCTIONS

INTRODUCTION
Developed from the P.1040 and P.1081, the Hunter was first seen publicly at the 1951 S.E.A.C. display at Farnborough where, in the skilled hands of Neville Duke, O.B.E., it gave a brilliant display of aerobically speeds which at times exceeded 700 miles per hour.
The "1040" as it was then known, was ordered "off the drawing board" and quantity production was already being planned when the prototype had left the experimental shop. Like its predecessors the Hunter was designed by the team led by Sydney Camm, C.B.E.
Together with the Vampire, the Yakovlev, the Hunter forms the first line of defence against possible air attacks by hostile forces.
The model is a near scale reproduction of the prototype Hunter WB188 and, if built carefully, is capable of the same smooth fast flight which are characteristic of the full-scale machine.

CONSTRUCTION
Before starting to build the model, read the instructions carefully and study the drawing, so as to identify each part and become familiar with the method of construction.
Begin by carefully separating the cut out parts from the various panels. The outline and position of each part is shown on the outer layout drawing on the plan. If necessary, use insect files to ground parts with a razor blade.
As all components are built on the plan, protect it from cement by placing a sheet of grease-proof paper over it.

FUSELAGE
The fuselage consists of two separate half shells, complete with wing roots and ducts, which are cemented together around the Augmenter tube.
Begin by cementing the 1/4" x 1/4" balsa reinforcing strips to bulkheads F6, F7 and F8 and laminating, crossgrained, the parts of F11—see Fig. 1. Note that the ends of the reinforcing strips must be shaped to coincide with the outline of the bulkheads.
Next cement the bulkheads F3-F11, one noseweight F2, motor and thrust plate F12 and front side web F13 to the nose cap as shown in Fig. 2. Check that bulkheads F6, F7 and F8 are exactly at right angles to the keel. Cut the noseweight side plate F14 from 1/4" x 1/4" scrap and cement it in place. Next cement the noseblocks F15 in position and when dry sandpaper or shape as shown in Fig. 3. The next step is to fit the moulded bulb to the keel assembly. Cut off the excess flange from the moulded bulb, then study Fig. 4 which shows where the embossed wire root outline is cut to fit over bulkheads F6, F7 and F8.
Slide the fuselage over the keel and check that the front of the wing root opening coincides with the front edge of bulkhead F3—see side elevation drawing. If necessary, adjust the size of the cut out until the correct location is obtained. Next mark with a pencil the position of the cockpit backbone and cut a shallow slot to fit round it. Cut out also the bottom hatch opening. The moulded bulb held down firmly to the building board and the keel assembly, then take apart, apply cement to the keel face, mouth and end of the Augmenter tube, then fit together—see Fig. 10. When dry, roll a flat paper tube for the nose wheel assembly and cement it in place.
Cut away the bottom keel between bulkheads F6 and F7, then make up the motor hatch with bulkheads F6 and F7 and scrap pieces of 1/4" flat balsa. Cover inside face with paper F28—see Fig. 11. The hatch should be a fairly tight fit and no further fitting is required.

WINGS
Cut the 1/4" x 1/4" bottom main spars to the root rib angle gussets W1—see Fig. 12. When dry, pin the spars in position over the drawing then level the slots and nose notches in the ribs—see Fig. 13—and cement them in place—see Fig. 14. Next, dry 1/4" x 1/4" trailing edge strips should be cut to the rib angle and cemented in place. The ribs must be placed under the trailing edge of the Augmenter tube. Check that the remaining half fuselage will fit correctly, then take apart, apply cement to the keel face, mouth and end of the Augmenter tube, then fit together—see Fig. 10. When dry, roll a flat paper tube for the nose wheel assembly and cement it in place.
Cut away the bottom keel between bulkheads F6 and F7, then make up the motor hatch with bulkheads F6 and F7 and scrap pieces of 1/4" flat balsa. Cover inside face with paper F28—see Fig. 11. The hatch should be a fairly tight fit and no further fitting is required.

TAILPLANE
Fig. 18 shows the general construction of the tailplane. Start by cementing the two 1/4" x 1/4" thick balsa edge reinforcing strips T1 together. Next cut and slot the 1/4" x 1/4" trailing edges to fit the ribs, then cement them to the reinforcing strips. Pack 1/4" pieces under the trailing edges as shown in Fig. 18.
Next level the front ends of the ribs T2-T4 to fit the 1/4" x 1/4" leading edges and cement them in place following the leading edge. Note that 1/4" packing pieces must be placed under the leading edges R3 and tip R7. Cut the trim tab from 1/4" x 1/4" scrap, insert the aluminium hinges and cement in place. Cut the leading edge to length, slot cut R8 from 1/4" x 1/4" and cement in place, then sandpaper the complete structure to section. (Although on the balsa panels the fin ribs are duplicated only one is actually required.)
Next shape the motor mounting block—see Fig. 26—and screw the motor clip in position. Slide the motor in place and insert the complete assembly into the fuselage—see Fig. 26. Check that the motor is central by sighting down from the end of the Augmenter tube. Some slight adjustment, either to the motor mounting slide, or to the motor slide, may be necessary to ensure that the motor is horizontal and in line with the centre of the tube. When the correct position has been obtained cement the motor mounting block in place.

COVERING
The fuselage including the wing roots should be covered without materially affecting the weight. Dope on the tissue using pieces as large as possible which can be put on without wrinkling badly. Do not attempt to "brush" the tissue onto the fuselage as the overlaps can be carefully rubbed down with very fine sandpaper or flourpaper, when they will become invisible.
Cover the undersides of the wings first. Cut the tissue allowing approximately 1/4" overlap all round and apply dope to the wing root, leading and trailing edges only. Attach the tissue to the root, then work over towards the tips, pulling evenly and evenly in all directions. Do not attempt to pull the tissue drum tight but make sure that there are no bad wrinkles. When dry, trim off the excess tissue evenly with a razor blade, then cover the top surfaces.
Before covering the tailplane cut a 1/4" wide spacing strip from 1/4" thick scrap and insert it between the two centre ribs T2. This will prevent the slot from closing when the tailplane is doped. Cover in a similar manner to the wings, working from the centre out to the tips. Cover both sides of the fin.

WATER SHRINKING AND DOPING
Lightly brush or spray the wings, tailplane and fin with water. When dry, apply one coat of clear dope to the complete aircraft. Check to see that no warps have developed whilst drying. If necessary, correct any errors by holding the affected part either in a jet of steam from a kettle, or in front of an electric fire, and twisting gently in the reverse direction. Lightly sandpaper the fuselage and apply another coat of dope to the only.

PAINTING
Give the complete aircraft a coat of very pale green dope. This can be made by mixing a very small quantity of Colton Green with Colton Cream dope. Again check and correct for any warps. The Cockpit Cover is lined with pale green. The ailerons, flaps, elevators and various vents, etc., should be lined in with Indian ink.
FLYING
Before test flying the model, check the position of the Centre of Gravity, or balancing point. Insert an empty motor and see that the model balances where shown on the drawing. Cut two small wedges to fit one on each side of the tailplane—see Fig. 27—and adjust the incidence on the tailplane as shown on the drawing. The model is now ready for test flying, which should be done on a calm day, preferably over long grass.
The glide will be fairly fast but very flat. Launch the model parallel with the ground. If correctly trimmed and launched, the glide will be long and flat with no tendency to turn either to the right or left. If over-trimmed or too heavy, the model will tend to nose up towards the end of the glide, and stall. If under-trimmed, or too light, the model will glide steeply to earth. Do not be too hasty in test flying as perfect results depend on how the model is launched.
The trim should be double checked before making any adjustments. After checking, the model appears to be tail heavy, correct this by adding a little plasticine to the nose. (This can be carefully weighed and replaced with a lead weight in the nose.) If however, the model is nose heavy, increase the negative incidence on the tailplane (i.e. raise the trailing edge of the tailplane approximately 1/4"). Correct any tendency to turn with the trim tab.
When the glide is satisfactory, load the motor.
For the first flight we recommend that standard "100" fuel is used as this will give a lower thrust and will make it easier to control. The motor is ignited with a cigarette or fuse in the igniter wire which is inserted down the tube from the tail end.
The trim should be checked after each flight and the same trimming instructions apply. For best results the model should fly in large diameter circles either to the right or left.
IMPORTANT: The jet must be covered with the jet cover and each flight is in order to prevent the jet from becoming blocked, which causes excessive temperatures, cause damage to the model. Instructions for the general use of the motor is given with each motor unit.
When correctly trimmed, "Red Spot" fuel can be used as it gives maximum performance. After each day's flying, carefully clean the inside of the Augmenter tube with cotton wool moistened with soap water. This will prevent corrosion of the thin aluminium by the jet gases.

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TOTTEN
HANTS

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