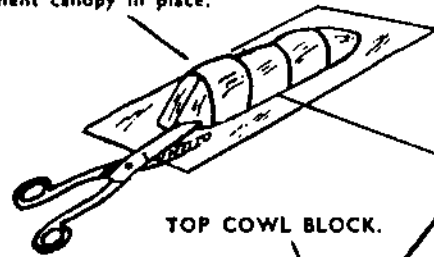


"SHORT SEAMEW"

22" SPAN S
RUBBER M
CAT. No. 7

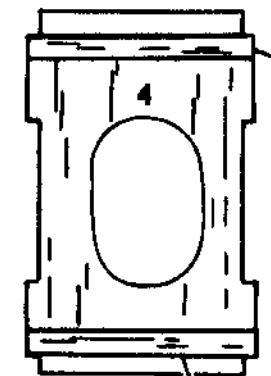
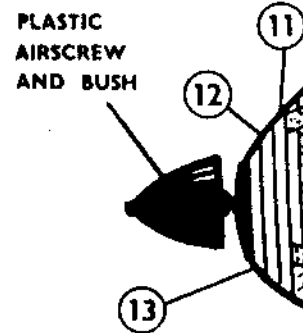
0 50 100 150 mm

Trim off excess material and cement canopy in place.



TOP COWL BLOCK.

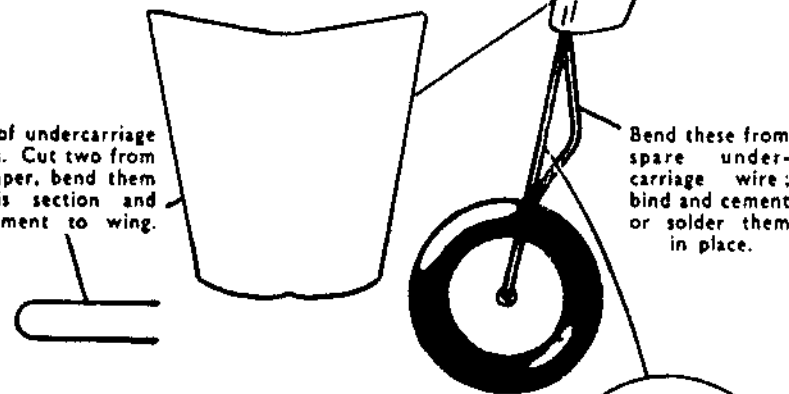
PLASTIC AIRSCREW AND BUSH



LOWER COWL BLOCK.

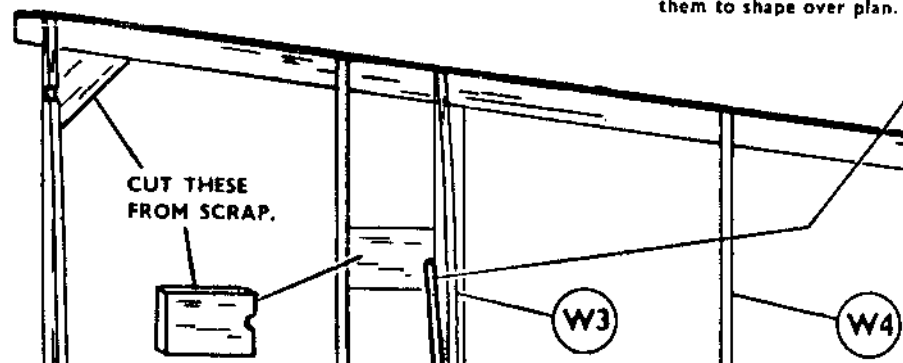
Strips of scrap sheet balsa cemented to bulkheads 4, 5, 7 and 9, where indicated on the side-view drawing.

Shape of undercarriage fairings. Cut two from stiff paper, bend them to this section and well-cement to wing.



Bend these from spare undercarriage wire; bind and cement or solder them in place.

Cut two undercarriage wires $4\frac{1}{2}$ " long, from the piece supplied, and bend them to shape over plan.



CUT THESE FROM SCRAP.

W3

W4

W6

PAINT THESE PARTS MED BLUE.

Two pieces of $3/32"$ x $1/16"$ strip cemented together to support part 14.

Fin base fairing: Cut two from stiff paper; bend and cement them to the fuselage between part 15 and the rear end.

FIN. Pin the leading and edges made from $1/8"$ strip to the drawing. Use various size strips to lend gusset piece to shape and cement them in place. Cement after assembly to fuselage.

CUT THESE FROM SCRAP.

CUT THESE FROM SCRAP.

$3/32"$ in. x $1/16"$ in. STRIP

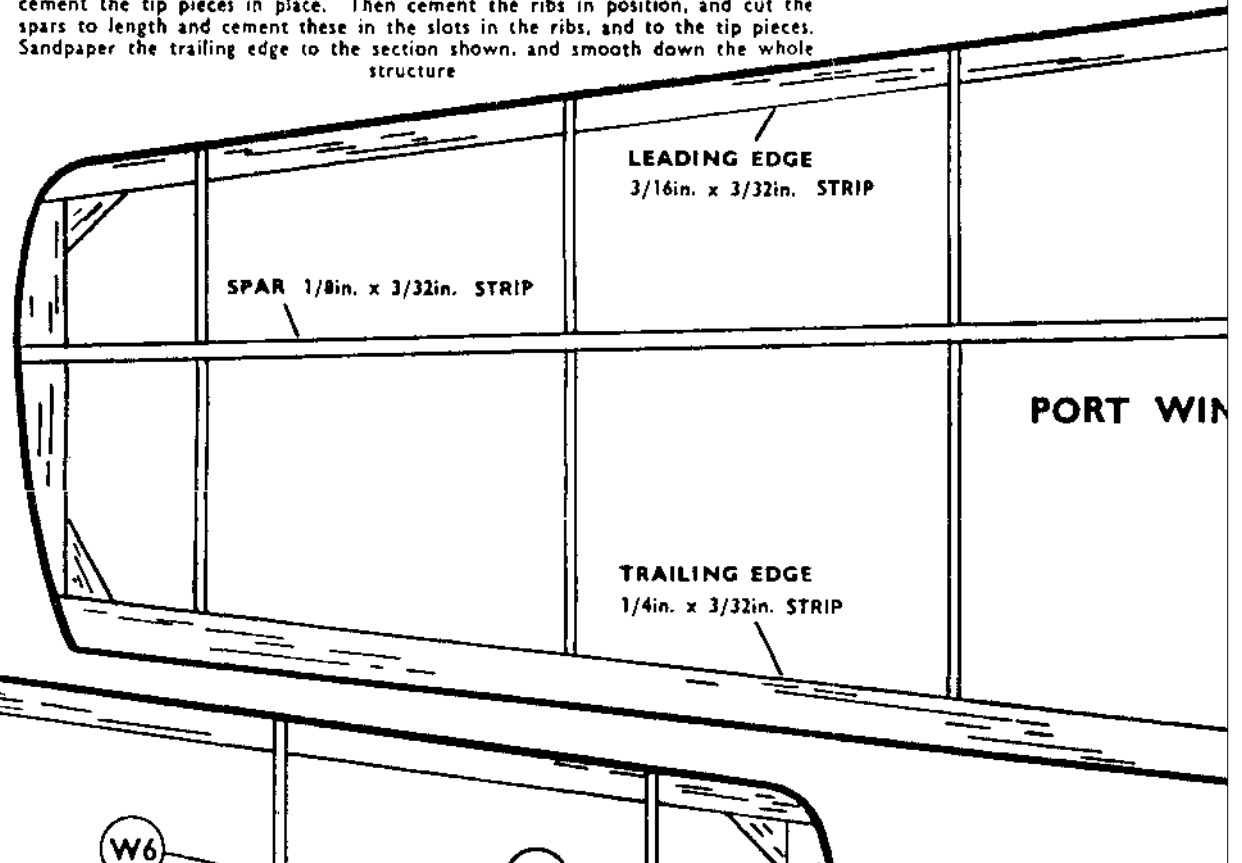
CROSS-STRUTS

CROSS STRUT

LEAVE THIS PART OPEN FOR ACCESS TO MOTOR.

Tail carriage made two Main benc

WING. Start by pinning the leading and trailing edges to the drawing, and cement the tip pieces in place. Then cement the ribs in position, and cut the spars to length and cement these in the slots in the ribs, and to the tip pieces. Sandpaper the trailing edge to the section shown, and smooth down the whole structure



LEADING EDGE
 $3/16"$ in. x $3/32"$ in. STRIP

SPAR $1/8"$ in. x $3/32"$ in. STRIP

PORT WIN

TRAILING EDGE
 $1/4"$ in. x $3/32"$ in. STRIP

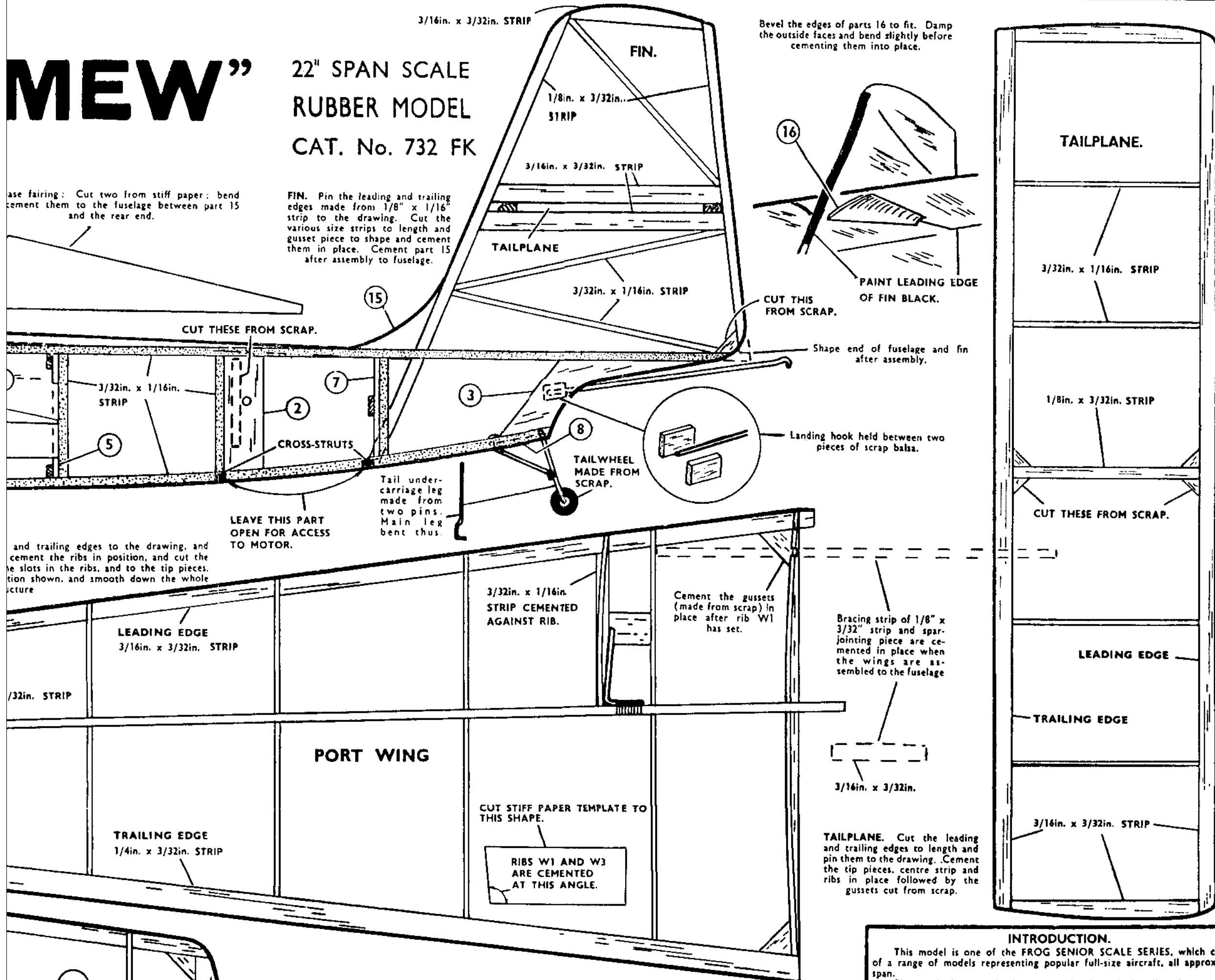
MEW

22" SPAN SCALE RUBBER MODEL CAT. No. 732 FK

base fairing: Cut two from stiff paper; bend and cement them to the fuselage between part 15 and the rear end.

FIN. Pin the leading and trailing edges made from 1/8" x 1/16" strip to the drawing. Cut the various size strips to length and gusset piece to shape and cement them in place. Cement part 15 after assembly to fuselage.

Bevel the edges of parts 16 to fit. Damp the outside faces and bend slightly before cementing them into place.



and trailing edges to the drawing, and cement the ribs in position, and cut the slots in the ribs, and to the tip pieces. Position shown, and smooth down the whole structure.

LEAVE THIS PART OPEN FOR ACCESS TO MOTOR.

Tail undercarriage leg made from two pins. Main leg bent thus.

Landing hook held between two pieces of scrap balsa.

Bracing strip of 1/8" x 3/32" strip and spar-jointing piece are cemented in place when the wings are assembled to the fuselage.

TAILPLANE. Cut the leading and trailing edges to length and pin them to the drawing. Cement the tip pieces, centre strip and ribs in place followed by the gussets cut from scrap.

INTRODUCTION.

This model is one of the FROG SENIOR SCALE SERIES, which consists of a range of models representing popular full-size aircraft, all approx. 22in. span.

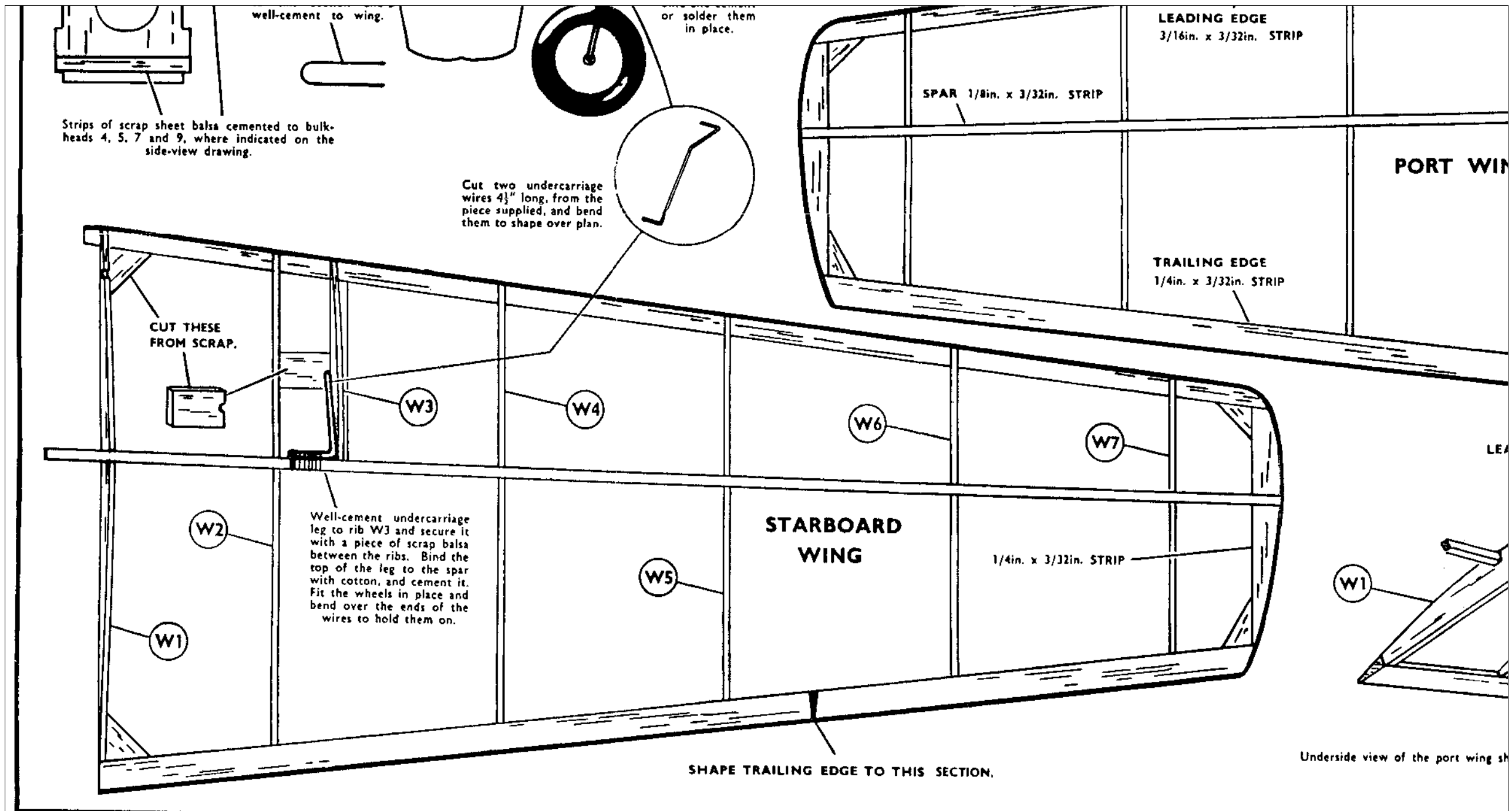


FIG. 1. Build the two side frames from 3/32" x 1/16" strip balsa supplied, together with parts 1, 2 and 3. Duplicate the strips and build the second side over the first, to ensure they are identical. A piece of tracing paper between them will prevent them adhering to each other.

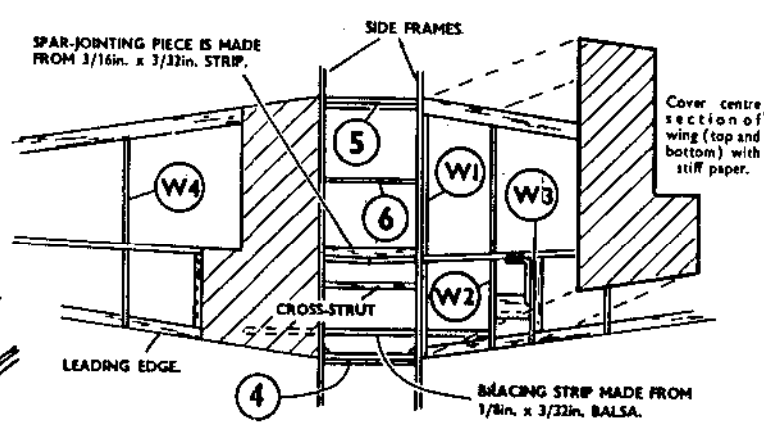
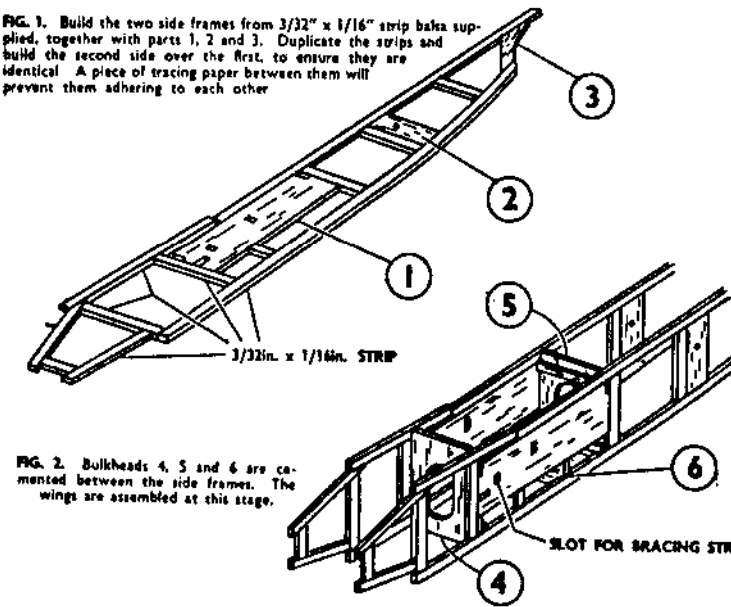


FIG. 3. Cut the bracing strip to the length shown on the plan above, and cement it into place in the fuselage. Assemble the wing halves using plenty of cement. Hold them in position with pins pushed into rib W1 and the side of the fuselage. Cut the spar-jointing piece to shape and cement it into place behind the spar.

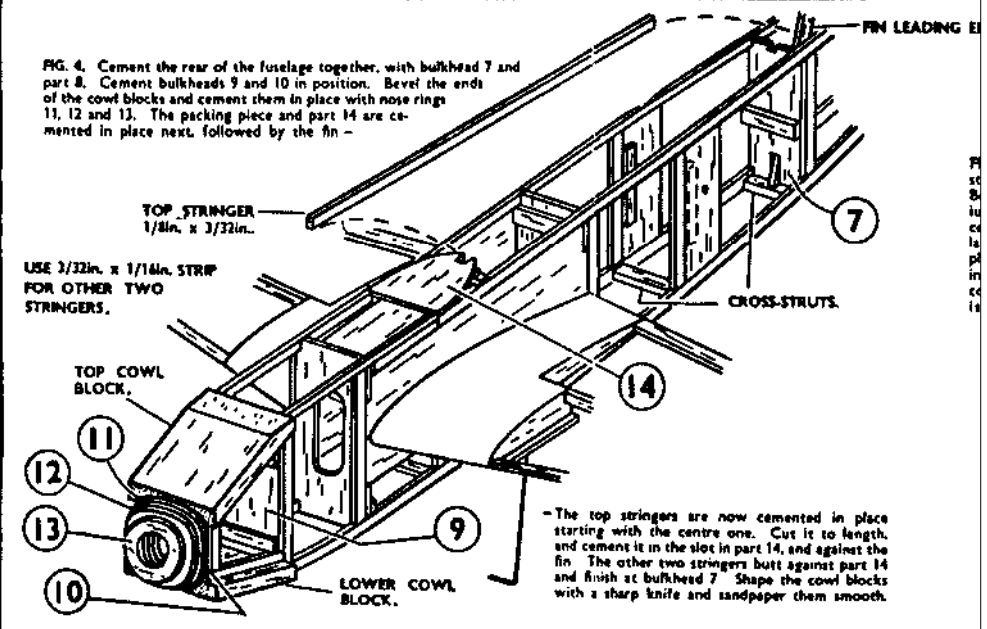
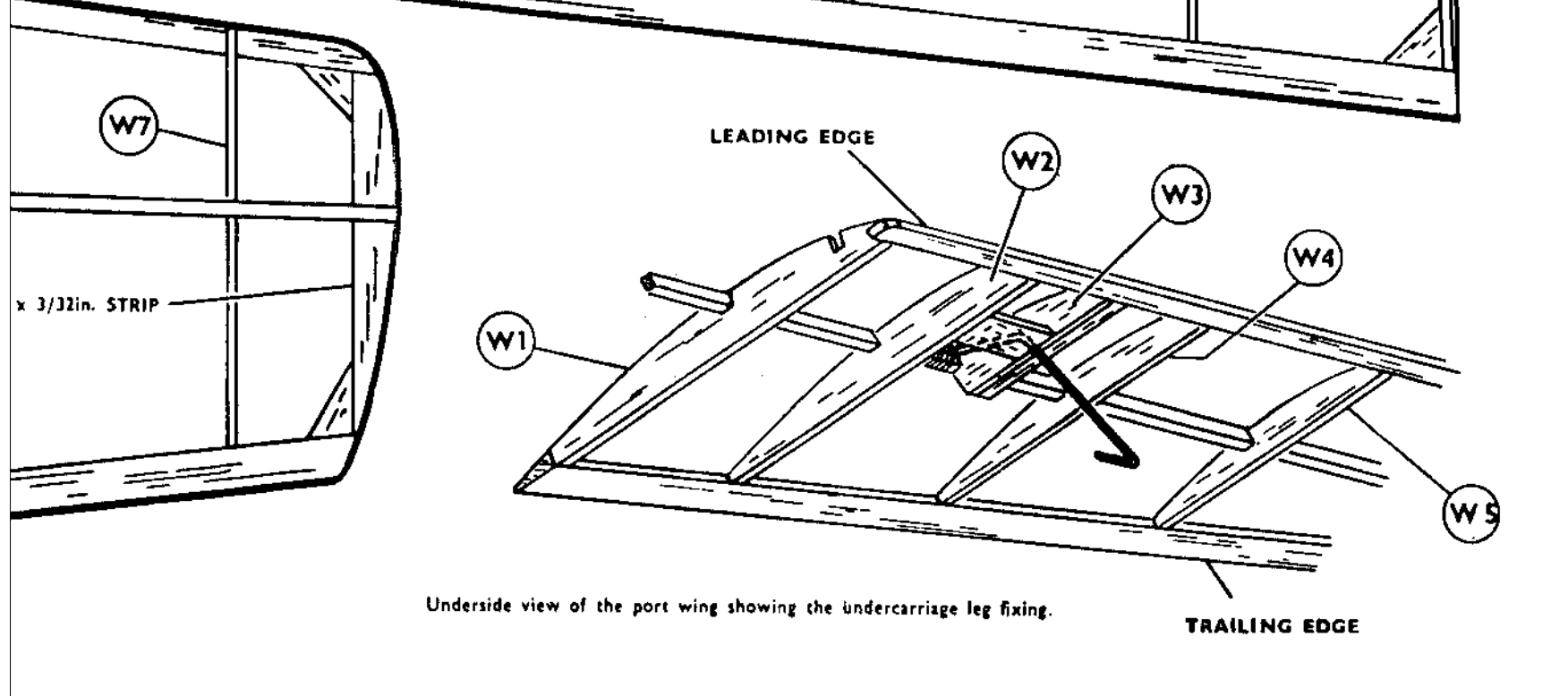
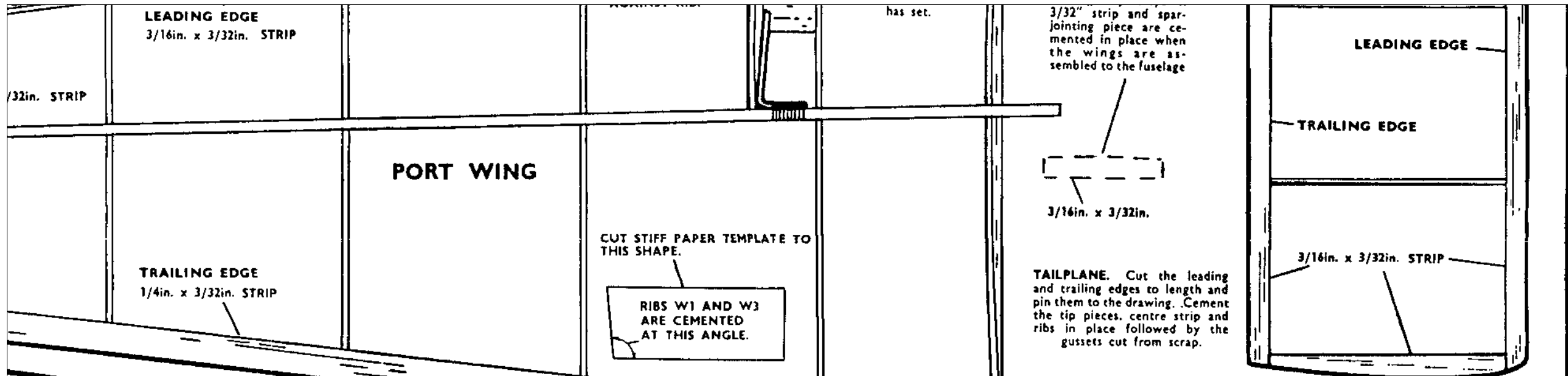


FIG. 4. Cement the rear of the fuselage together, with bulkhead 7 and part 8. Cement bulkheads 9 and 10 in position. Bevel the ends of the cowl blocks and cement them in place with nose rings 11, 12 and 13. The packing piece and part 14 are cemented in place next, followed by the fin.



INTRODUCTION.

This model is one of the FROG SENIOR SCALE SERIES, which consists of a range of models representing popular full-size aircraft, all approx. 22in. span.

They embody very simple constructional methods, all main parts being ready-cut to shape. To ensure a satisfactory job, study the plan and check the parts with it before commencing.

Cement and dope are not included in this kit, but they can be bought at any model shop. Use quick-drying balsa cement such as FROG UNIVERSAL. You will also need a sharp knife or razor blade, and a few pins.

ORDER OF ASSEMBLY.

Build the fuselage as far as Fig. 2, then build the wings and assemble them to the fuselage as shown in Fig. 3. Finish the fuselage with the exception of the top stringers. Next build the fin and assemble it to the fuselage followed by the top stringers. The tailplane is cemented to the fin after it is covered.

COVERING.

Cover the model with the paper supplied, in the following order—fuselage top and bottom, then sides. Wing and tailplane under-surfaces, then top. Use office paste or dope for fixing it. Cut the paper to the approximate shapes first, leaving a 1/4" margin all round. Apply paste to the edges of the frame, then lay the tissue over it and pull gently all round. Do not attempt to get it drum tight, but aim at getting an even surface, with no deep wrinkles. The water-spraying and doping will tighten it.

Before doping, lightly brush or spray each part with water and leave to dry. Spray the tailplane and pin it down to a flat board to prevent warping whilst it is drying. When they are completely dry, give each part a coat of dope, and pin down the tailplane again, when the dope begins to dry.

The tailplane can now be cemented in place, followed by part 16.

MOTOR.

This is composed of two 9in. elastic bands which are supplied. Lubricate them with Frog Rubber Lubricant or Castor Oil, and insert them into the fuselage with the help of a length of wire or thread. Bend a hook at one end of the wire and insert it into the front end of the fuselage. (If a thread is being used, tie a weight to one end and drop it through).

Hook the bands on to it through the opening at the rear and insert the rear motor pin (cane) through the holes in the fuselage and through the loops of elastic. Pull the bands out through the front, and hook them on to the airscrew shaft (complete with Airscrew).

The model is now complete and ready for flying. A drop of thin oil on the airscrew shaft will improve the running.

FLYING.

This model is intended to be flown out of doors, but choose a calm day for your first test.

Test-ride the model first to check the balance. Hand-launch it in a slight downward direction. If it dives to the ground, carefully glue a small weight in the rear end of the fuselage. If the model climbs steeply and stalls, add a small weight to the nose of the fuselage. A small nail or drawing pin can be pushed into the cowl block for this.

When the glide seems satisfactory, put a few turns on the motor and launch the model (into wind) if any. The turn can be adjusted by bending the fin, or by twisting the wing slightly.

Increase the turns on the motor gradually, up to a maximum of approximately 350; if the motor is not lubricated, the turns must be limited to 200. An unlubricated motor will wear and break very quickly. Stretching the elastic while winding will enable more turns to be obtained.

Designed and Produced in England by
INTERNATIONAL MODEL AIRCRAFT LTD.
 Morden Road : Merton : London, S.W.19.
 PRINTED IN ENGLAND.

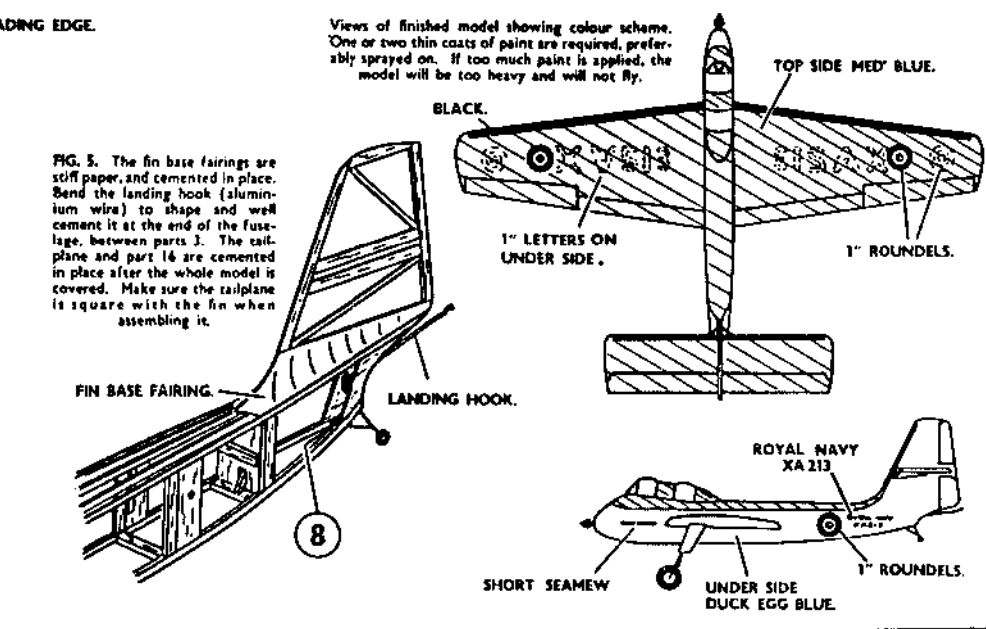
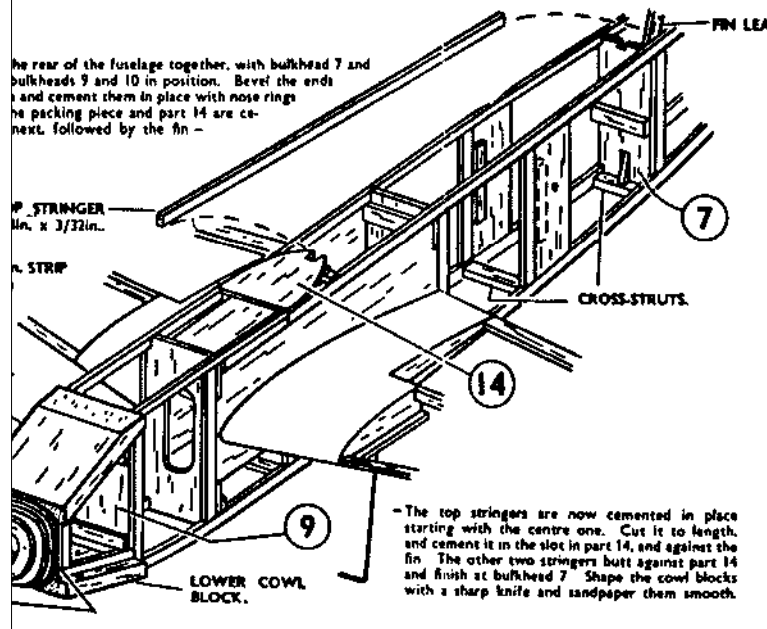


FIG. 5. The fin base fairings are stiff paper, and cemented in place. Bend the landing hook (aluminum wire) to shape and well cement it at the end of the fuselage, between parts 3. The tailplane and part 14 are cemented in place after the whole model is covered. Make sure the tailplane is square with the fin when assembling it.

The top stringers are now cemented in place starting with the centre one. Cut it to length, and cement it in the slot in part 14, and against the fin. The other two stringers butt against part 14 and finish at bulkhead 7. Shape the cowl blocks with a sharp knife and sandpaper them smooth.