

decking pieces, which are $12\frac{1}{2}$ in. by 2 in. by $\frac{1}{4}$ in. balsa sheet panels onto which the aft deck shape is marked. Cement in position leaving a gap between them of 3 in. When set, trim down to the correct outside shape and cut away for the cockpit, to the lines previously marked on these panels. (Photo 3)

Step 7 Now fair in the sides carefully with a sandpaper block so that the edges of

the deck and bulkheads blend together. At the same time the edges of bulkheads 1, 2, 3 and 4 must be chamfered to blend with the curvature of the deck—Fig. F, and photo 4

Step 8 Cut two 20 in. lengths of 3 in. by $\frac{1}{4}$ in. balsa sheet. These are cemented in place as shown in Fig. G, finishing at the front so that they overlap *half* the thickness of bulkhead 2. When set, trim down close to the deck and bottom of the chine shelf. (Photo 5)

Step 9 The remaining part of each side between bulkhead 1 and bulkhead 2 is then covered with a 3 in. wide piece of $\frac{1}{4}$ in. sheet with the grain running vertically—Fig. H. You will have to offer this piece up in position and cut and trim for an exact fit. When satisfied, cement securely in place. Trim off surplus sheet when set.

Step 10 Cut two bow blocks, each $2\frac{1}{2}$ in. long from 2 in. square balsa block. Now trim their height so that they fit exactly into the space between the deck and chine shelf alongside the bow piece and forward of bulkhead 1—see Fig. I. Then taper to the stem profile shape, as shown, and cement in place.

Step 11 The whole assembly should now be left for several hours for the cement to set (preferably overnight). Then you can carve and sand the bow blocks down to final shape—Fig. J—and also sand off any surplus side sheeting flush with the upper line of the deck panel and the bottom line of the chine shelf.

Step 12 Mark and cut out the keel piece from $\frac{1}{4}$ in. sheet balsa and then separate into two pieces by sawing along the angled line marked 'cut'. Cut the two doublers from $\frac{7}{8}$ in. sheet and mark on the lines indicated in pencil. Now assemble by cementing together as shown in Fig. K with a space of $\frac{1}{4}$ in. between the two parts of the keel piece, *taking special care to position the doublers so that the rear edge of each doubler corresponds to the front line of bulkhead 6A position* (i.e. $4\frac{1}{8}$ in. in from the extreme end of the keel).

Step 13 Lay the keel piece over the plan and mark the positions of formers 2A, 3A and 5A on each side of the keel assembly. Then cement the keel piece to the bottom of the chine shelf as shown in Fig. L.

Step 14 Cut all the triangular formers (two each off 2A, 3A, 4A, 5A, 6A and 7A) from $\frac{1}{4}$ in. sheet balsa, using the full size drawings given on the plan. Cement in position as shown in Fig. M.

Step 15 When set, fair off the bottom edges of the sides from former 2A aft so that the sloping edges and bottom edge of the sides line up, as shown in Fig. N. Use a sanding block or a sanding stick for this job. Now fit the $\frac{7}{8}$ in. doubler behind former 2A.

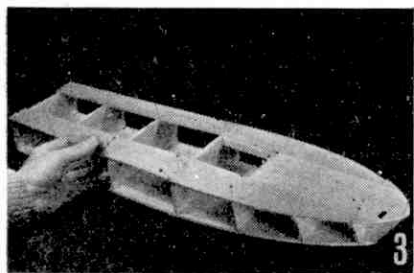
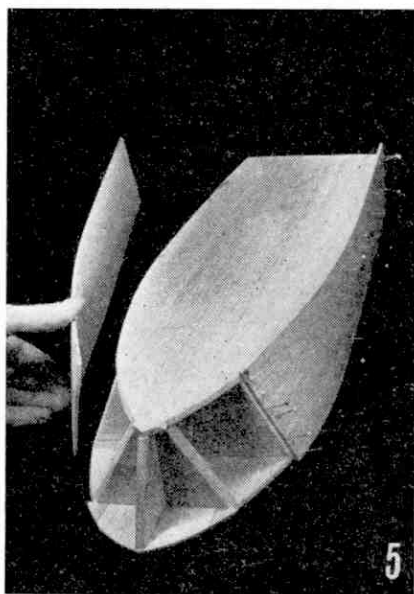
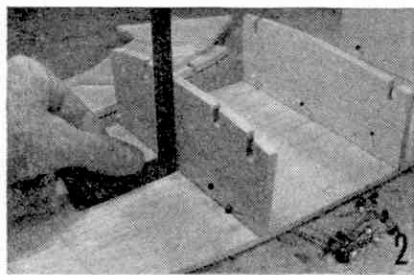
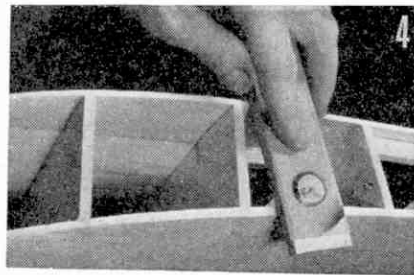
Step 16 For covering the bottom you need two panels of $\frac{1}{4}$ in. balsa $19\frac{1}{2}$ in. long by $3\frac{1}{2}$ in. wide. You can buy 4 in. wide sheet for this, or work as follows. Cut two $19\frac{1}{2}$ in. lengths of 2 in. by $\frac{1}{4}$ in. sheet and one $19\frac{1}{2}$ in. length of 3 in. by $\frac{1}{4}$ in. sheet and cement together edge to edge. When dry, cut down the centre to give two $3\frac{1}{2}$ in. wide panels. Chamfer one edge of each panel and cement the bottom panels in place as shown in Fig. O. Don't remove too much balsa in the chamfering operation—as a $3\frac{1}{2}$ in. sheet is just wide enough!

Step 17 Trim off the bottom sheeting square and flush with the sides, Fig. P.

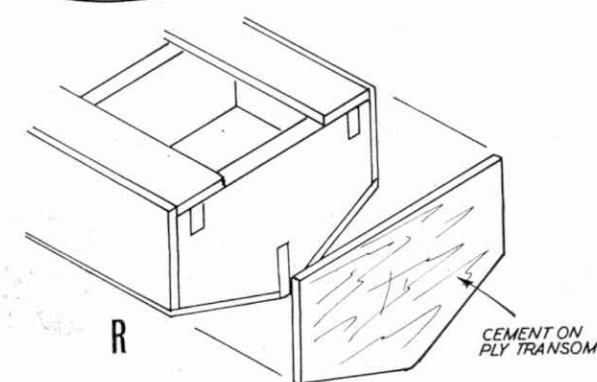
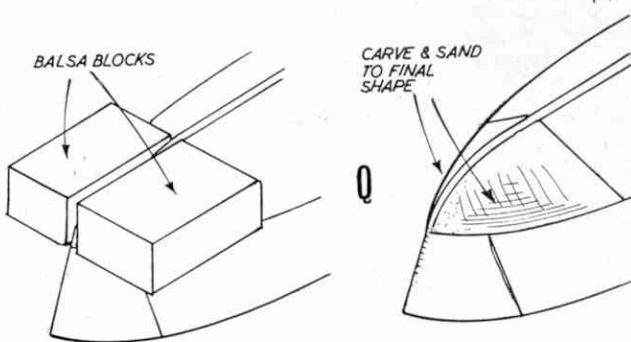
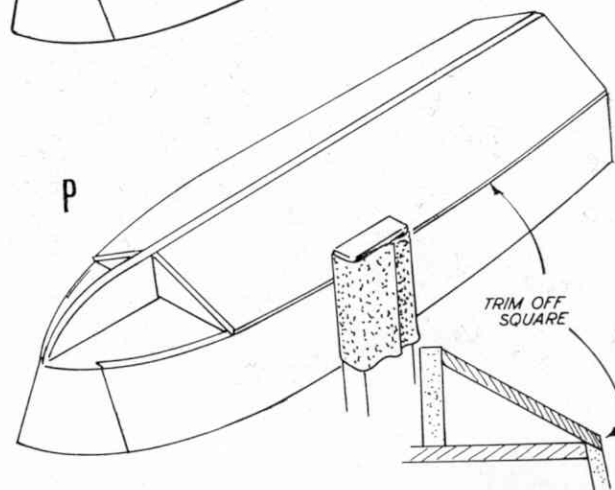
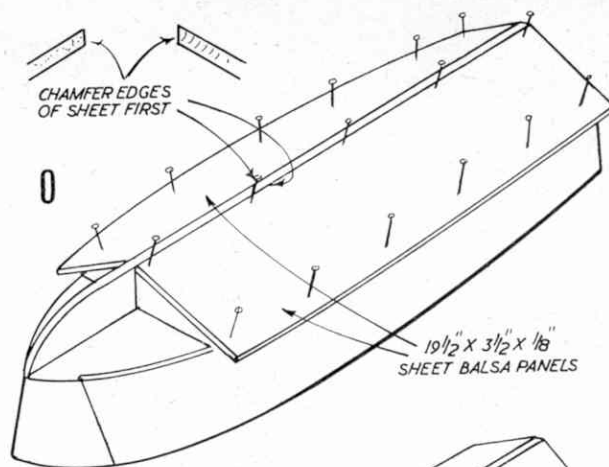
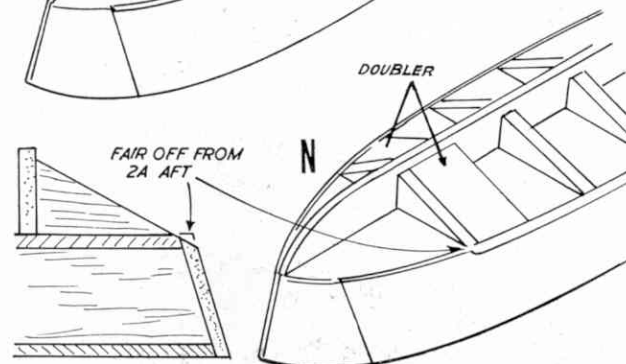
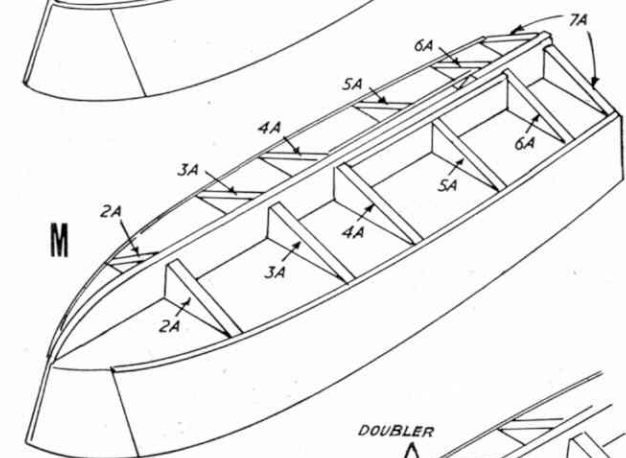
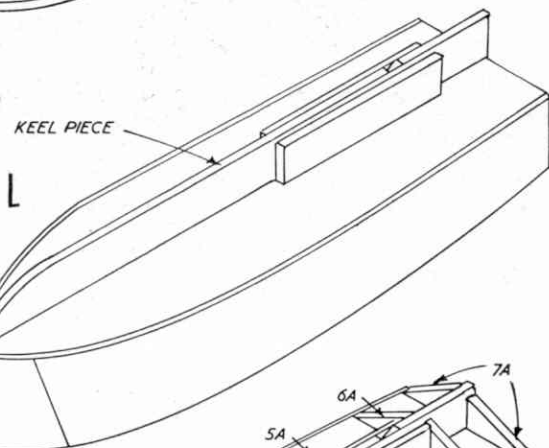
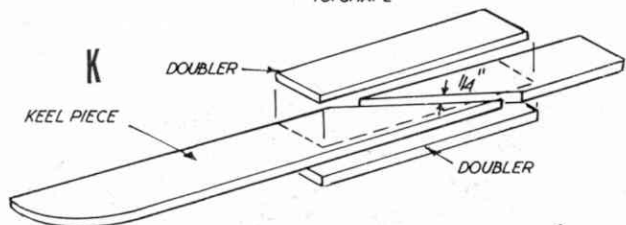
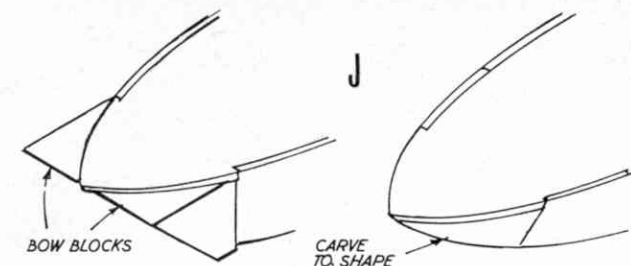
Step 18 Cut two 3 in. lengths from 2 in. by $1\frac{1}{2}$ in. balsa block and cement in position as shown in Fig. Q. When set, carve and sand down to final shape to blend with the hull lines.

Step 19 Cut the plywood transom (part 7B) and cement to the rear of bulkhead 7, as shown in Fig. R.

On this PICTURE PAGE you can see how the Editor's hull is progressing. Visitors to the Schoolboys and Girls Exhibition will be able to study his finished model on the Meccano Magazine stand.



- 1 A Razor-Saw will cut beautifully straight lines in $\frac{1}{4}$ in. sheet
- 2 Use a 'Square' to ensure upright bulkheads
- 3 Glass-Headed Pins are useful for holding cemented parts
- 4 The secret of good balsa construction is always to use sandpaper wrapped round or stuck to, a piece of wood. Make up several such 'Sanding Sticks' with both flat and curved wooden shapes
- 5 The curved side sheets may be steamed to approximate shape before cementing in place. Balsa becomes quite flexible when held in the steam from a boiling kettle—mind your hands!
- 6 Using Clear Dope as an adhesive for attaching the Heavyweight Modelspan tissue to the hull. Dope the hull first, sand lightly when dry, then dope OVER and THROUGH the tissue, rubbing it firmly into contact before it dries



Finishing

The whole hull should now be worked over carefully with fine sandpaper, finishing to an extremely smooth finish. The edges of the chine should be left sharp, not rounded. Where the bottom sheeting meets the keel, however, round off

slightly until sheeting and keel blend uniformly. You can also work a little 'flare' into the bow blocks if you like by sanding to a slightly concave surface, but do not overdo this as you may sand right through the side sheeting. Finally we recommend that the complete hull (bottom, sides and

deck) should be covered with thin nylon or heavyweight model aircraft tissue, pasted down all over with tissue paste. This will add considerably to the strength of the hull and also provide an excellent surface for subsequent paint finishing. The little extra time that this job takes is well worth the effort. The Editor is

using a cellulose finish and so he stuck his tissue covering on with dope—see photo 6. Polyurethane finishes however, will take better to pasted-on tissue.

NEXT MONTH:—
FITTING OUT AND FINISHING THE HULL, AND MOTORISING.