

Featherweight Kayak

TALK ABOUT EASY construction. Here's a featherweight fun-boat that is basically nothing more than a big block of foam carved to shape. Of course, you'll have to add a plywood bottom and a couple of fat stabilizing sponsons before putting it in the water, but this \$36 floatabout is probably the simplest thing to drift down the pike since the dugout canoe.

Begin construction by laying out a template of the top curve of the hull on stiff cardboard. Transfer these lines to all four corners of the foam block. Once this is done, lay out the cockpit cutout on the foam and you're ready to start cutting.

A bandsaw is ideal for rough-cutting the outline of the boat. Your lumberyard may handle this for you. Naturally, you can also do the job with a handsaw, but it takes a lot more time. One shortcut when cutting the foam with a handsaw is to first go around the outline with a saber saw, using a long wood-cutting blade, and then let this cut act as a guide.

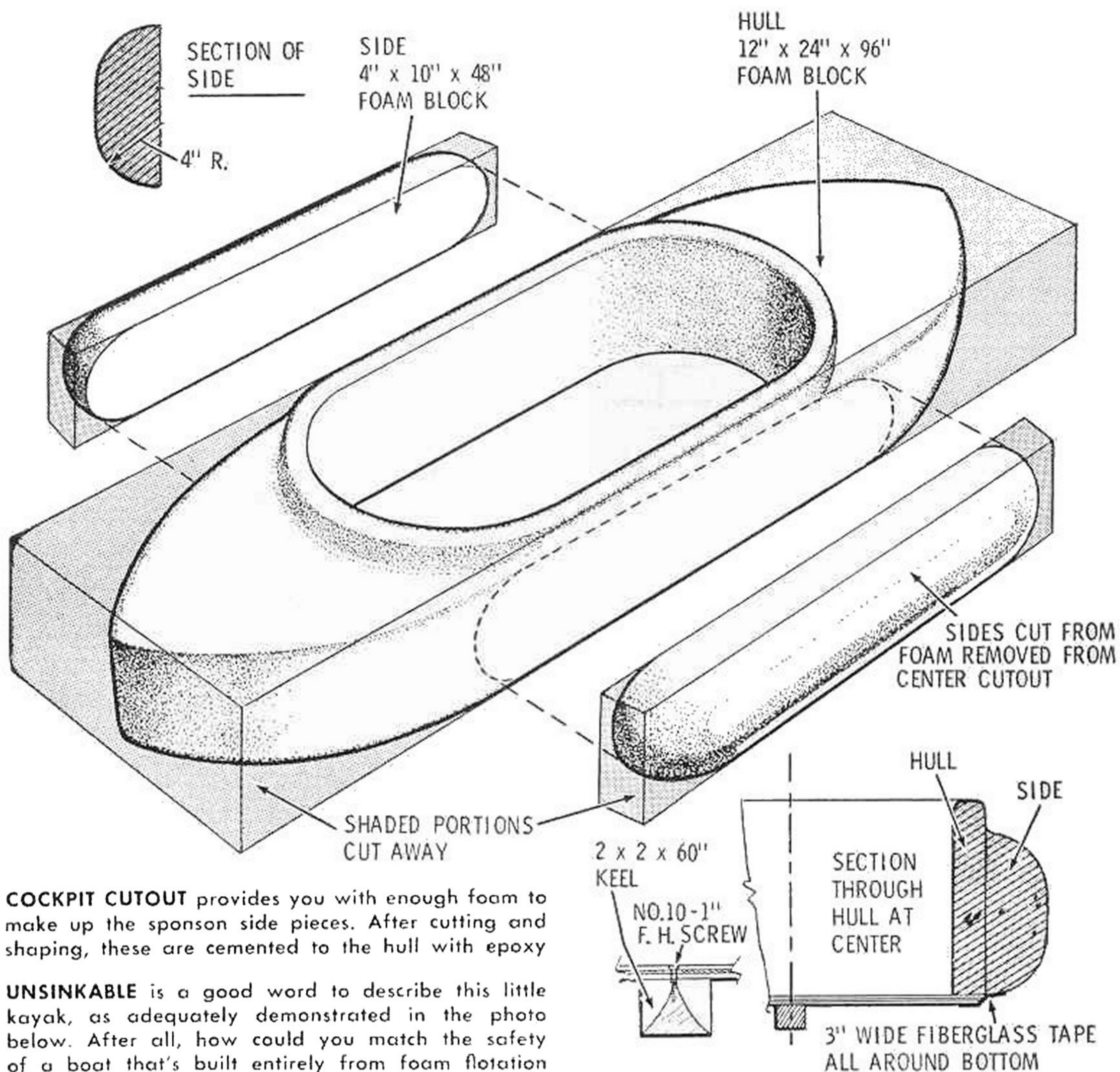
If you have a good eye, you can do the rest of the shaping without bothering to cut templates. Otherwise, make up templates and carve slowly, checking your progress frequently against the templates. A keyhole saw is fine for whacking off big chunks during initial shaping. For final

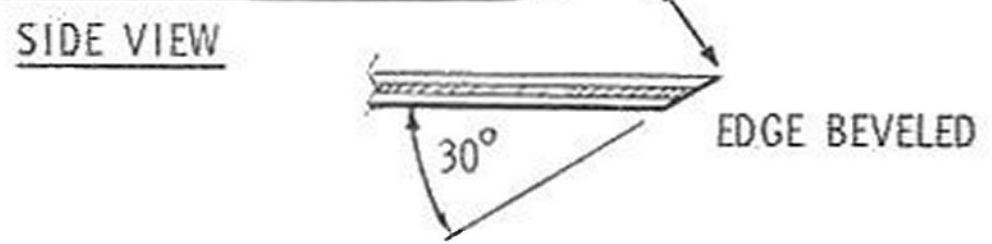
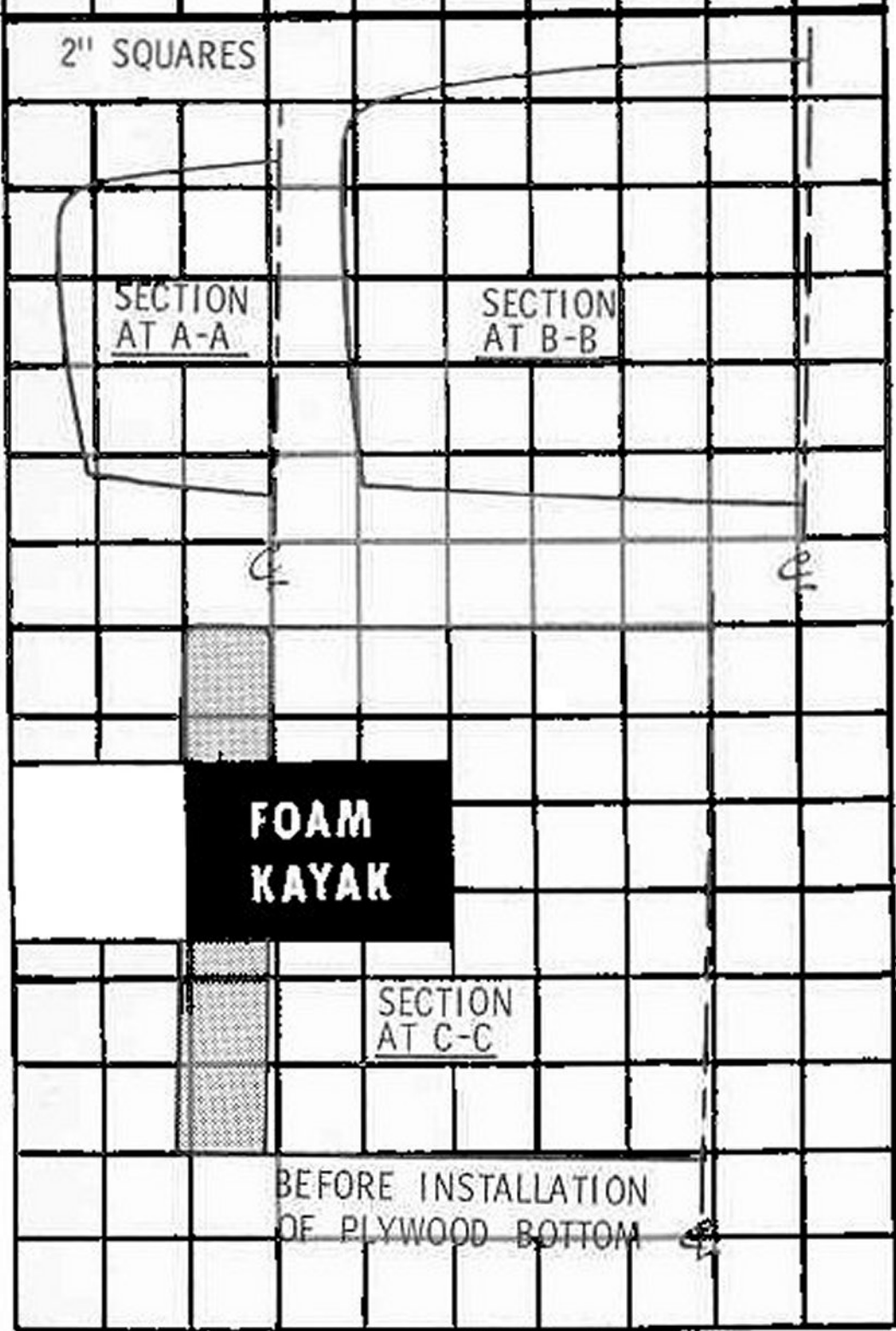
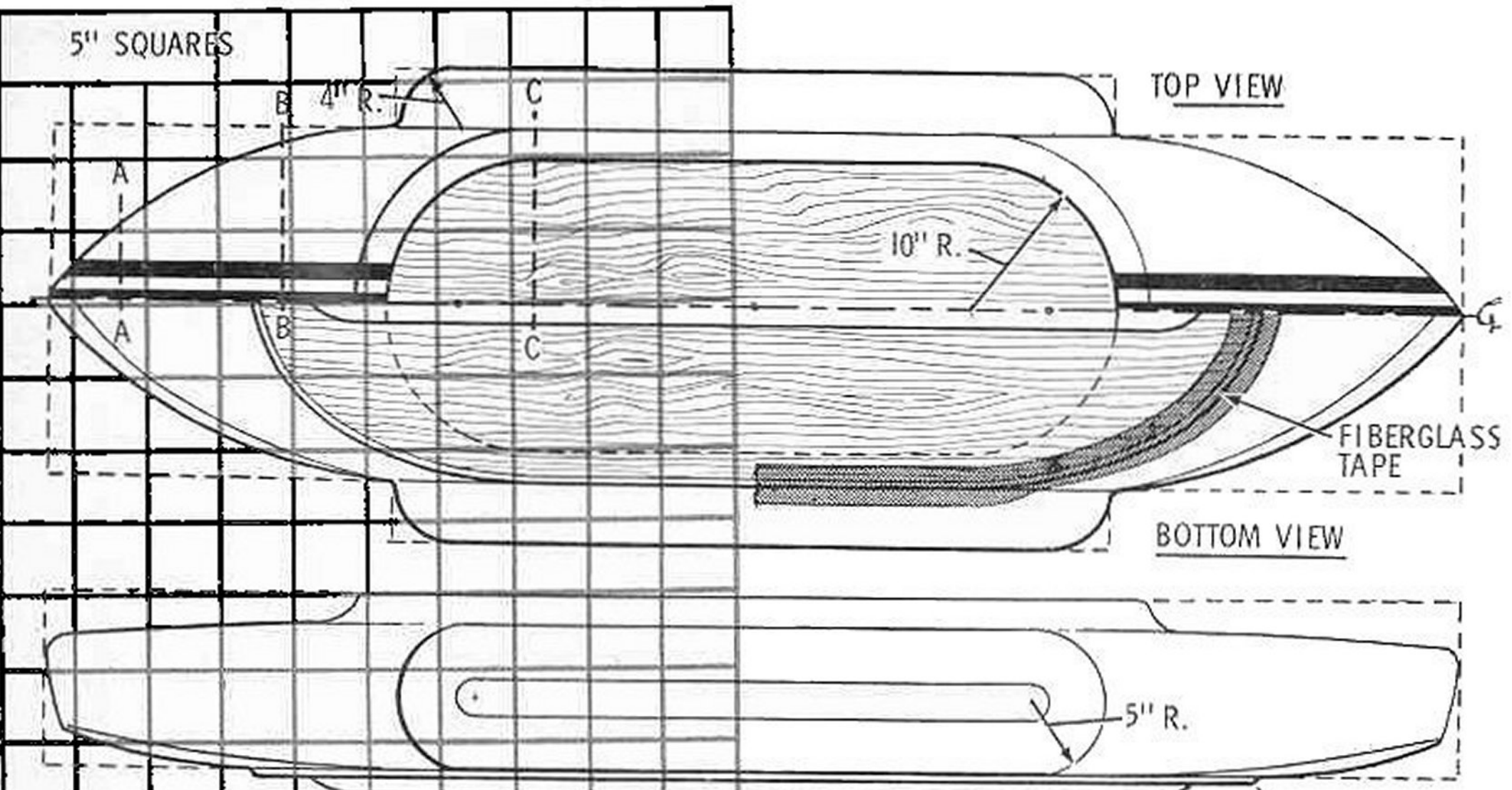
smoothing, however, the best tool is a rasp-type file, such as the Stanley "Surform" or Sears "Rasplane." Remember that the foam cuts quickly, so take your time when hacking away.

Next, cut out the center portion of the block and lay out the sponsons on this. Follow the same procedure in shaping these as you did on the hull, holding them against the sides of the hull frequently to check the fit. You may find it necessary to do a little sanding to obtain perfectly flat surfaces for an even joint.

Mount the sponsons to the hull with epoxy resin adhesive, since other types of glues will either dissolve the foam or fail to hold. You can obtain this in suitable quantities at any marine supply store. Mix about two thirds of a cup of resin and spread it on one sponson, concentrating most of the material around the edge and letting the remainder go to the center. Then place the sponson on the side of the hull and hold it in place with clamps or weights. Very little pressure is required, so don't overload the foam.

Once both sponsons are in place, cut the plywood bottom from $\frac{1}{4}$ -in. exterior plywood and bevel the edges as shown in the drawing on p. 170. Put the plywood bottom on the hull and mark the outline on the

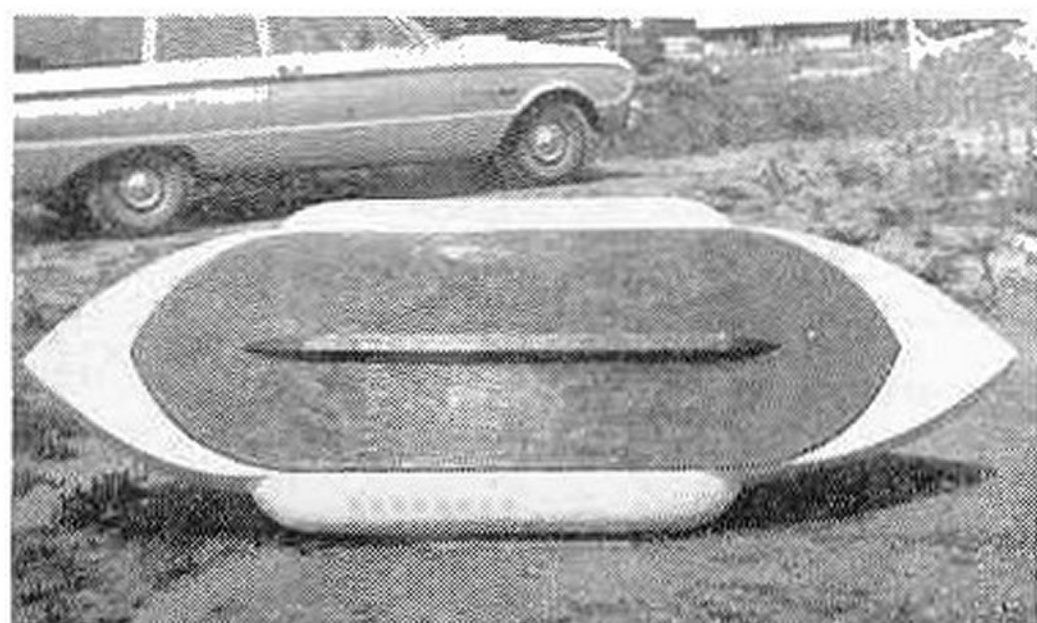




foam with a pencil. You'll need about a cup of resin to attach the bottom. After mixing, spread this on the foam inside the pencil line, place the plywood on the hull and weight the edges to hold all surfaces in contact during drying.

The basic boat is now complete, but for extra durability it's recommended that you seal the foam-plywood joint with 3-in. fiberglass tape. Any final smoothing can be done with sandpaper. The keel is made by ripping a 2 x 4 down the center and shaping the ends as shown. Mount it with three #10 x 1-in. flatheaded wood screws and epoxy glue.

The choice of finishing is up to you. Remember that the foam is soft and will dent rather easily, though this won't affect performance. One way to avoid this is to fiberglass the entire hull. However, if you don't care a great deal about the continuing appearance of the boat, give the foam about three coats of water-base paint to seal it, sanding between coats. Apply two coats of enamel to the plywood. After the surface is sealed, ordinary enamel may also be used for trim.



MATERIALS LIST	
No. Req.	Size & Description
1	12" x 24" x 8' Styrofoam block (Formex Corp., Box 812, Elkhart, Ind.)
1	1/4" x 24" x 68" A-A exterior plywood
1	2 x 2 x 60" fir (keel)
Epoxy resin and fiberglass tape available from Sears Roebuck or Montgomery Ward.	