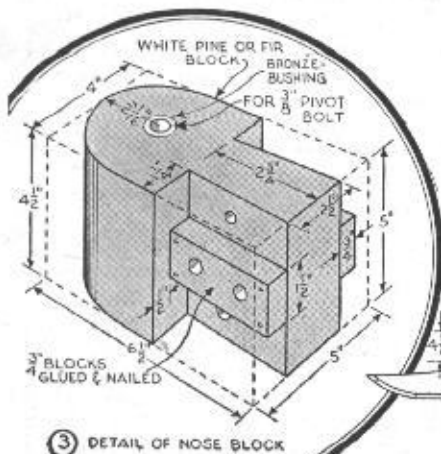


"WHIZZ" a Fast

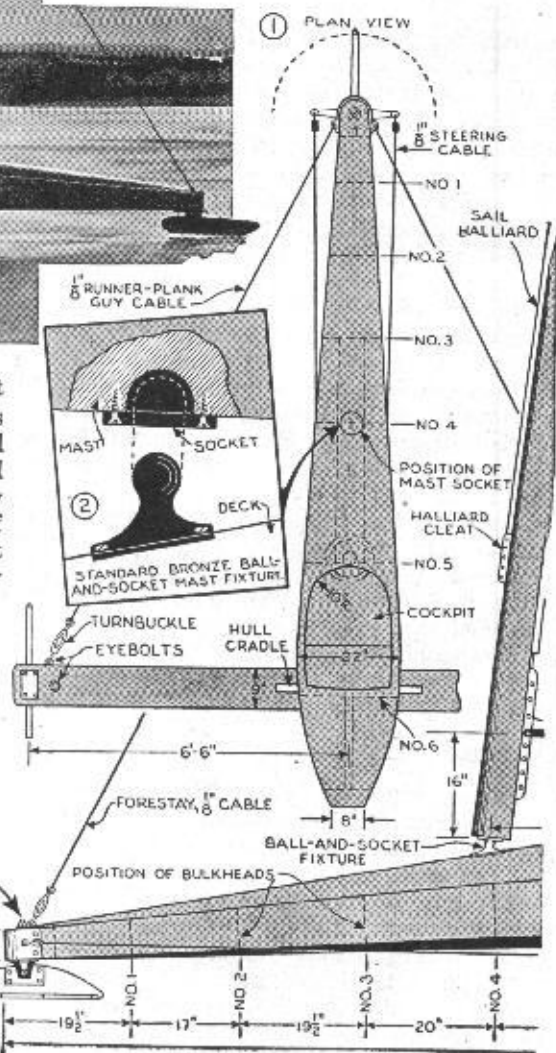


bulkheads, the smaller ones are made. There's no need to make paper patterns—just lay out the outlines directly on the plywood. Chine and sheer notches are cut slightly undersize and finished later when fitting these pieces. Place a 2 by 4-in. plank on edge across a couple of sawhorses. Bulkheads can be fastened temporarily to

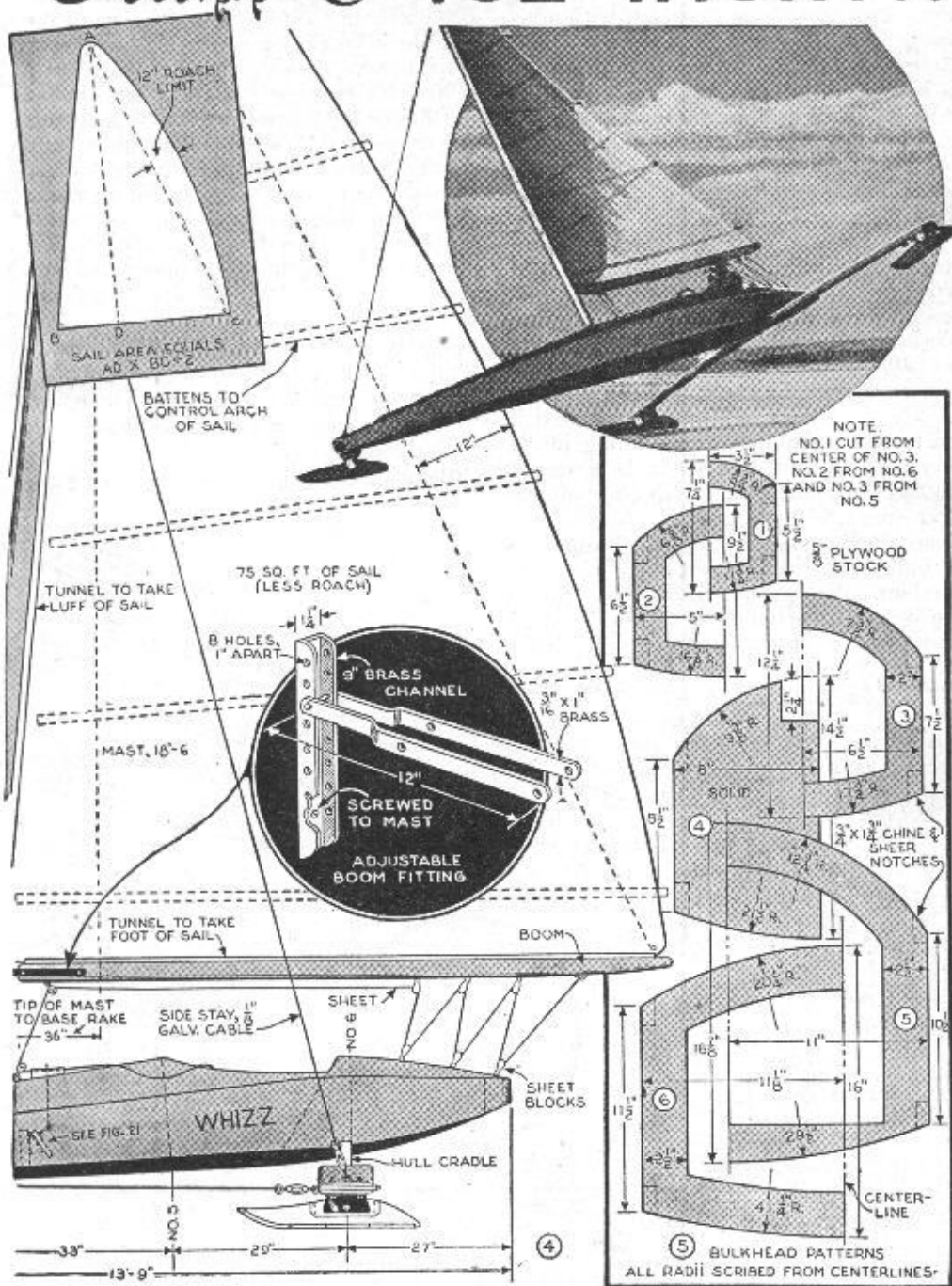
IN BUILDING this ice yacht, you start by carefully going over the drawings to get acquainted with all constructional details. The six bulkheads, dimensioned in Fig. 5, are cut out of a $\frac{5}{8}$ by 24 by 72-in. panel of fir plywood. Centers of all bulkheads except No. 4 are cut out and from the cutout stock of the larger



③ DETAIL OF NOSE BLOCK



Class-*E* ICE YACHT..



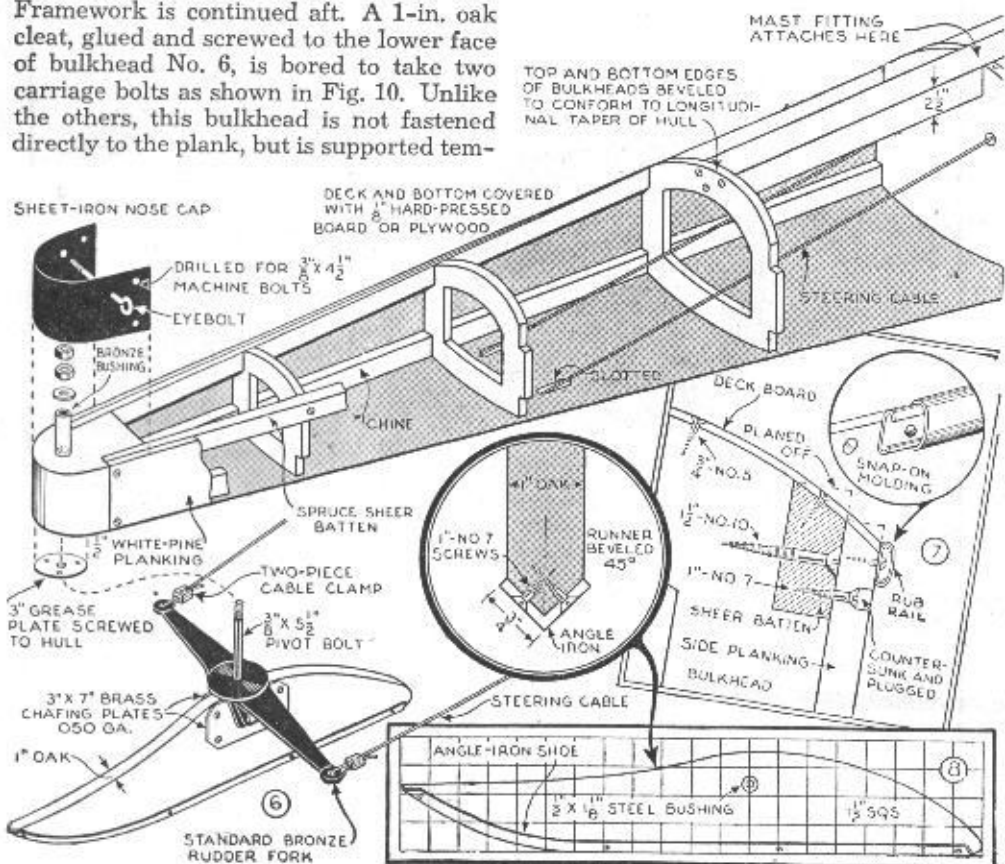
this plank while assembling the hull framework. Center-to-center spacing of the bulkheads is given in the side view, Fig. 4. Begin assembling by fastening the nose block, Fig. 3, to the plank with a lag screw inserted through the pivot hole. Then toenail bulkhead No. 5 to the plank in its correct location, after which a light straightedge is laid across the top of both nose block and bulkhead to determine the bevel to which the outer edges of the bulkhead should be cut in order to conform to the longitudinal taper of the hull.

After locating and beveling the intervening bulkheads, the chine and sheer battens of $\frac{3}{4}$ by $1\frac{3}{4}$ -in. spruce are fitted, casein-glued and screwed in the nose-block rabbets and bulkhead notches, using No. 10, $1\frac{1}{2}$ -in. f.h. brass or galvanized screws. Allow the sheer and chine pieces to extend all the way back. Next, the oak mast support is glued and screwed in place. The top edge of this piece is crowned slightly to conform to deck contour. Framework is continued aft. A 1-in. oak cleat, glued and screwed to the lower face of bulkhead No. 6, is bored to take two carriage bolts as shown in Fig. 10. Unlike the others, this bulkhead is not fastened directly to the plank, but is supported tem-

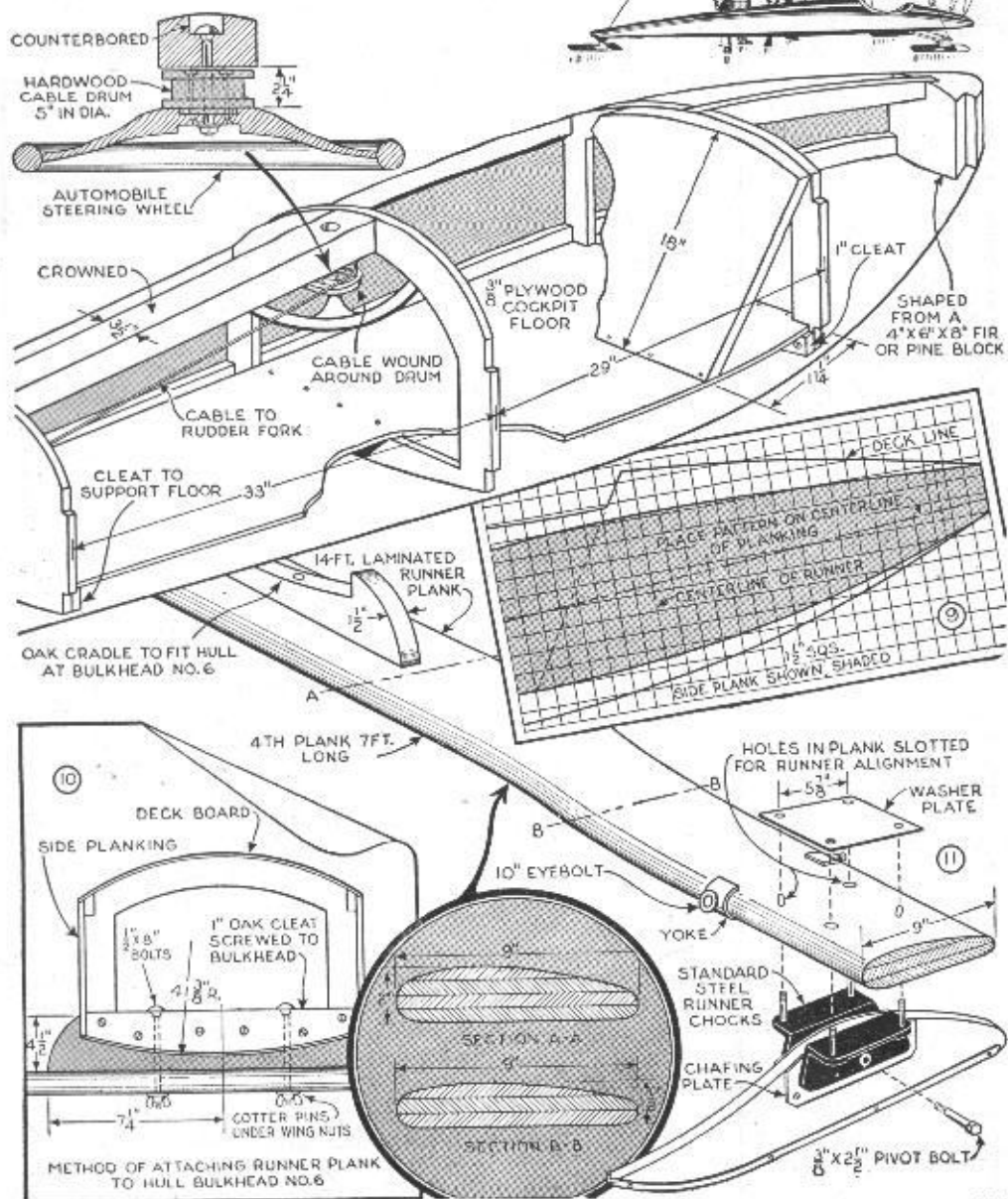
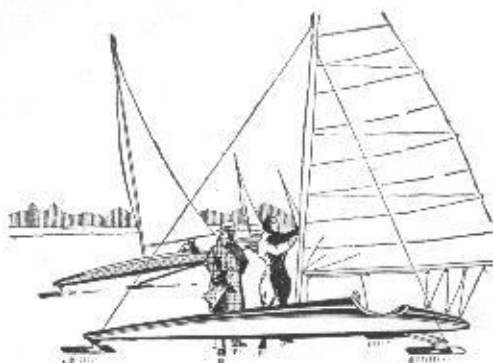
porarily about $1\frac{1}{2}$ in. above the top edge of the plank to maintain the sweep of the hull. The natural curve of the battens when fastened at this point will bring the bulkhead in true position. After fastening the tail block in place, a $\frac{3}{4}$ -in. center brace is fitted between the bulkhead and tail block.

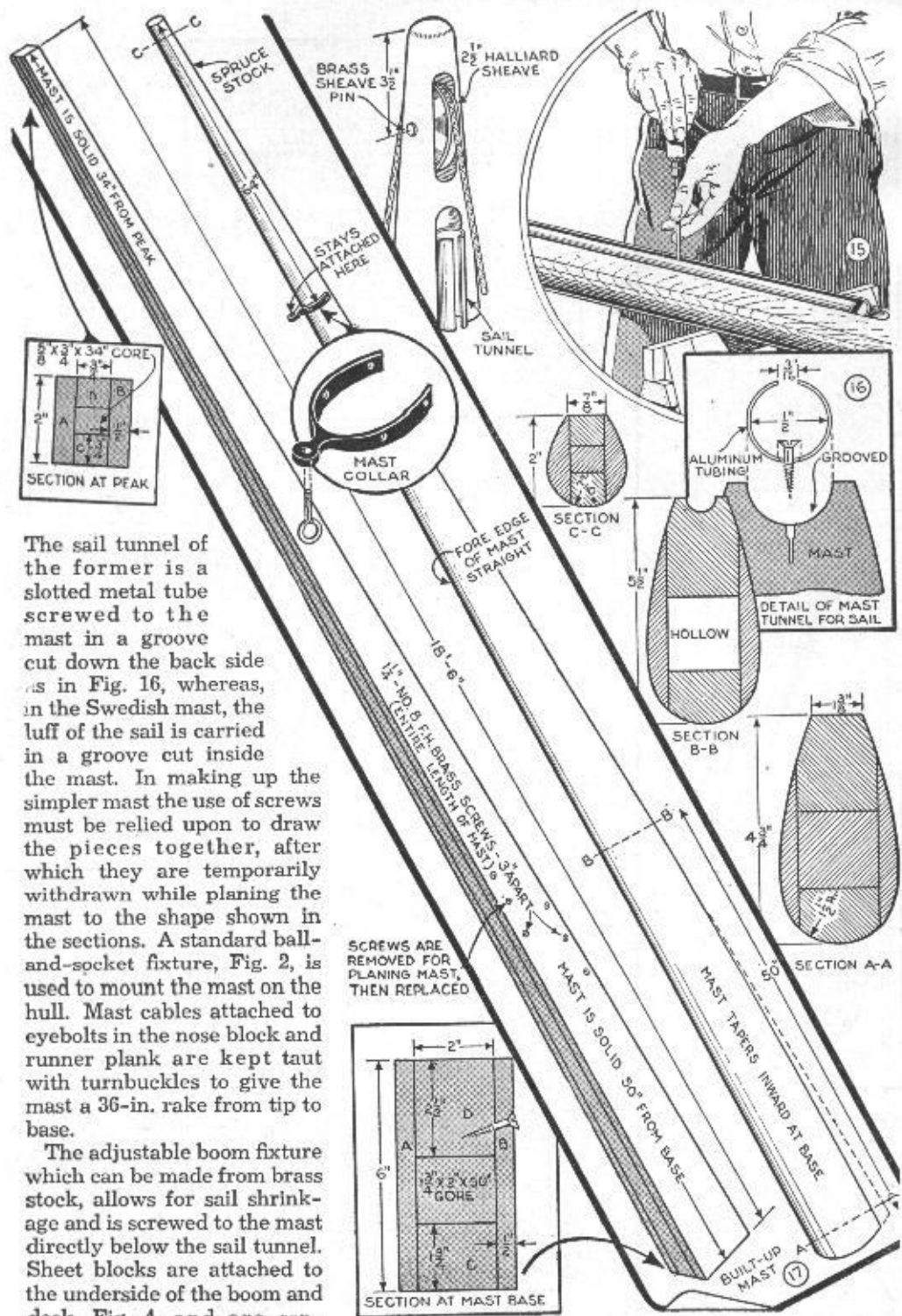
Now for the side planking: The shaded portion of the pattern in Fig. 9 represents the shape of the side planking 39 in. from the tail of the hull, the lines being straight from this point forward. The centerline of your paper pattern, which is made accordingly, is laid directly over a centerline struck on the planking and the curved outlines traced off. After the planking is cut to shape, first, temporarily fasten it in place to the battens for a test fit before permanently fastening with casein glue and No. 7 1-in. brass screws, spaced about 4 in. apart. The batten edges should come about flush with the planking.

Before the deck and bottom covering are



applied, the edges of battens and planking must be planed off so that they will be flush and on the same angle as the bulkheads. See Fig. 7. Also, the cockpit floor and back are fitted. And, don't forget the bolts in the cleat on bulkhead No. 6, nor the counterbored hole for the steering-wheel pivot bolt. Paper patterns of the deck and bottom to guide in cutting the hard-pressed board can be made by laying





The sail tunnel of the former is a slotted metal tube screwed to the mast in a groove cut down the back side as in Fig. 16, whereas, in the Swedish mast, the luff of the sail is carried in a groove cut inside the mast. In making up the simpler mast the use of screws must be relied upon to draw the pieces together, after which they are temporarily withdrawn while planing the mast to the shape shown in the sections. A standard ball-and-socket fixture, Fig. 2, is used to mount the mast on the hull. Mast cables attached to eyebolts in the nose block and runner plank are kept taut with turnbuckles to give the mast a 36-in. rake from tip to base.

The adjustable boom fixture which can be made from brass stock, allows for sail shrinkage and is screwed to the mast directly below the sail tunnel. Sheet blocks are attached to the underside of the boom and deck, Fig. 4, and are con-



LUMBER REQUIREMENTS

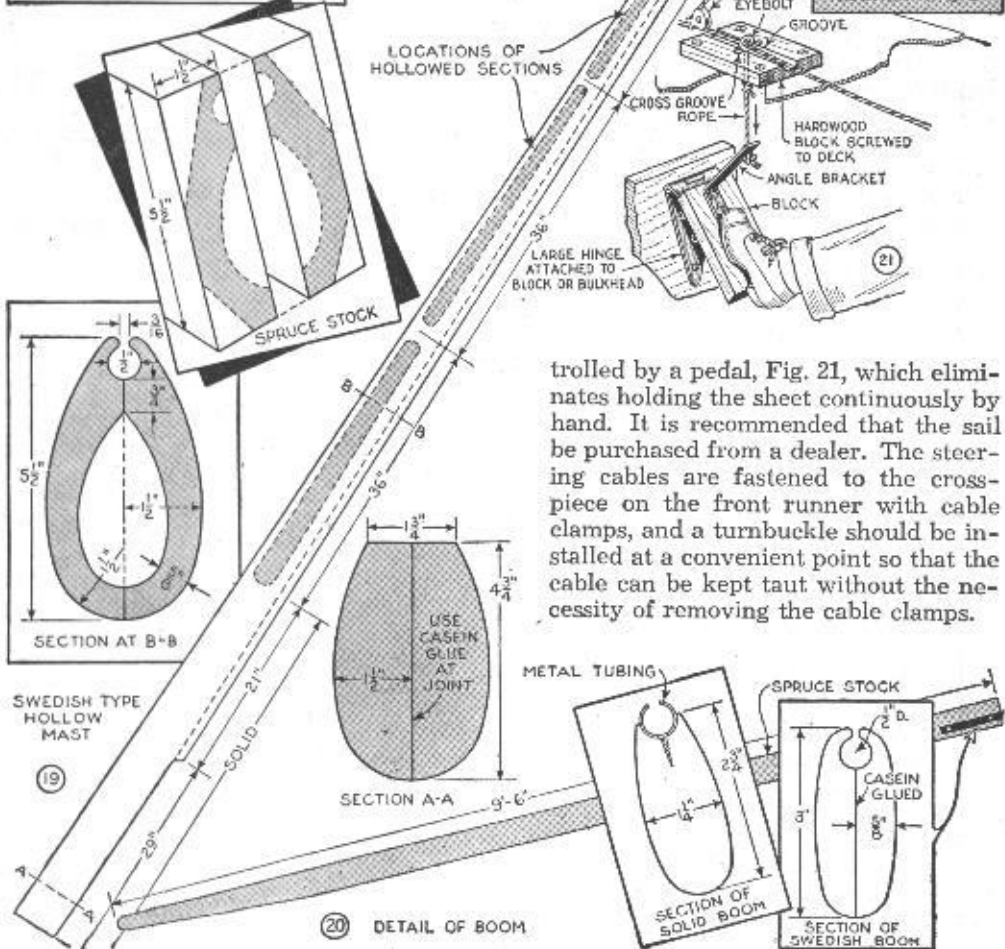
- 1 pc. Fir plywood $\frac{1}{8}$ x 24 x 72 in.—Bulkheads
- 1 pc. Fir 5 x 5 x 7 in.—Nose block
- 1 pc. Fir 4 x 6 x 8 in.—End block
- 4 pcs. Spruce $\frac{3}{4}$ x 1 $\frac{1}{4}$ in. x 14 ft.—Sheer and chine bottoms
- 2 pcs. White pine $\frac{1}{2}$ x 1 $\frac{1}{2}$ in. x 14 ft.—Side planking
- 1 pc. Hand-pressed board or plywood $\frac{1}{8}$ x 24 in. x 14 ft.—Deck board
- 1 pc. Hand-pressed board or plywood $\frac{1}{8}$ x 24 in. x 14 ft.—Bottom
- 1 pc. Oak 2 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x 36 in.—Mast support
- 1 pc. Fir plywood $\frac{1}{8}$ x 20 x 24 in.—Seat track
- 1 pc. Fir plywood $\frac{3}{8}$ x 24 in. x 6 ft.—Cockpit floor
- 1 pc. Oak 1 x 3 x 40 in.—Floor cleats
- 1 pc. White pine $\frac{3}{4}$ x 3 x 30 in.—Deck brass
- 1 pc. Oak 1 x 5 x 16 in.—Hull cradle
- 1 pc. Oak 2 $\frac{1}{2}$ x 6 x 6 in.—Cable drum
- 3 pcs. Spruce $\frac{1}{2}$ x 9 in. x 14 ft.—Runner plank
- 1 pc. Spruce $\frac{1}{2}$ x 9 in. x 7 ft.—Runner plank
- 1 pc. Oak 1 x 6 in. x 9 ft.—Runners

Mast and Boom (built-up type)

- 2 pcs. Spruce $\frac{1}{2}$ x 6 in. x 18 $\frac{1}{2}$ ft.—Sides
- 2 pcs. Spruce 2 x 2 $\frac{1}{2}$ in. x 18 $\frac{1}{2}$ ft.—Filler strips
- 2 pcs. Spruce 1 $\frac{3}{8}$ x 2 in. x 18 $\frac{1}{2}$ ft.—Filler strips
- 1 pc. Spruce 1 $\frac{3}{8}$ x 2 x 90 in.—Cores strips
- 1 pc. Spruce 1 x 1 x 36 in.—Cores strips
- 1 pc. Spruce 1 $\frac{1}{4}$ x 3 in. x 9 $\frac{1}{2}$ ft.—Boom

Mast and Boom (Swedish type)

- 2 pcs. Spruce 1 $\frac{1}{2}$ x 6 in. x 18 $\frac{1}{2}$ ft.—Mast
- 2 pcs. Spruce $\frac{3}{4}$ x 3 in. x 9 $\frac{1}{2}$ ft.—Boom



trolled by a pedal, Fig. 21, which eliminates holding the sheet continuously by hand. It is recommended that the sail be purchased from a dealer. The steering cables are fastened to the cross-piece on the front runner with cable clamps, and a turnbuckle should be installed at a convenient point so that the cable can be kept taut without the necessity of removing the cable clamps.

