

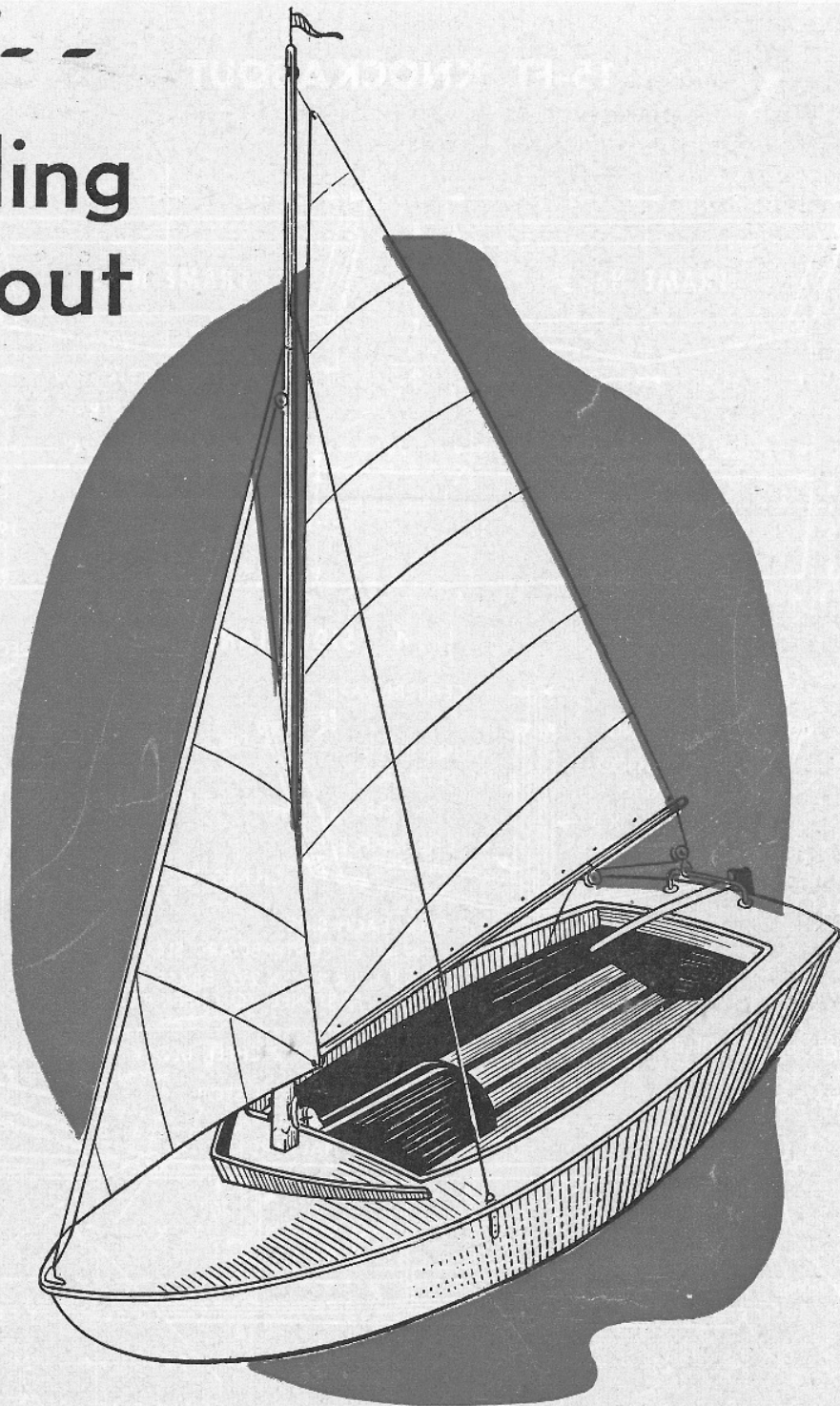
*"Tramp" - -*

# 15-ft. Sailing Knockabout

ANY SAILBOAT fancier will like "Tramp," the trim, 15-ft. knockabout that's so easy to build in plywood.

The first operation is to cut the stem, transom and side planks and assemble the forms, Figs. 1 to 6. Use casein or waterproof glue under the butt strap joining the side planks together. Screw-fasten them, using  $\frac{3}{4}$ -in. heavy-bodied wood screws of a size not less than No. 10. Allow 24 hours for the lap to dry. The stem is beveled as shown in Fig. 10. The bevel stops just at the sheer line. Forms can be made of almost any scrap material on hand. If you are a good enough mechanic, they can be dispensed with and correctly beveled frames made to their exact shape can be placed permanently in the boat. Screw-fasten the  $\frac{3}{4}$ -in. oak frame (shown as dotted lines in Fig. 9) at sides and bottom on the inside of the transom. Then notch out the bottom of the frame to receive the keel batten. Make this a snug fit.

Side planks must then be screw-fastened to the stem and the aft ends pulled together, the forms being slipped into place as this is being done. The transom is placed last and must be beveled so that the side planks fit tightly against the cleats and the transom edge. Be sure to place white lead and a thin thread of cotton between planks and stem and transom prior to joining them together. Also, in any phase of construction where more than two pieces are joined and watertightness is required, this same procedure should be followed. The stem will fit into the notch in frame No. 1 in such a manner that enough wood is left to bevel the

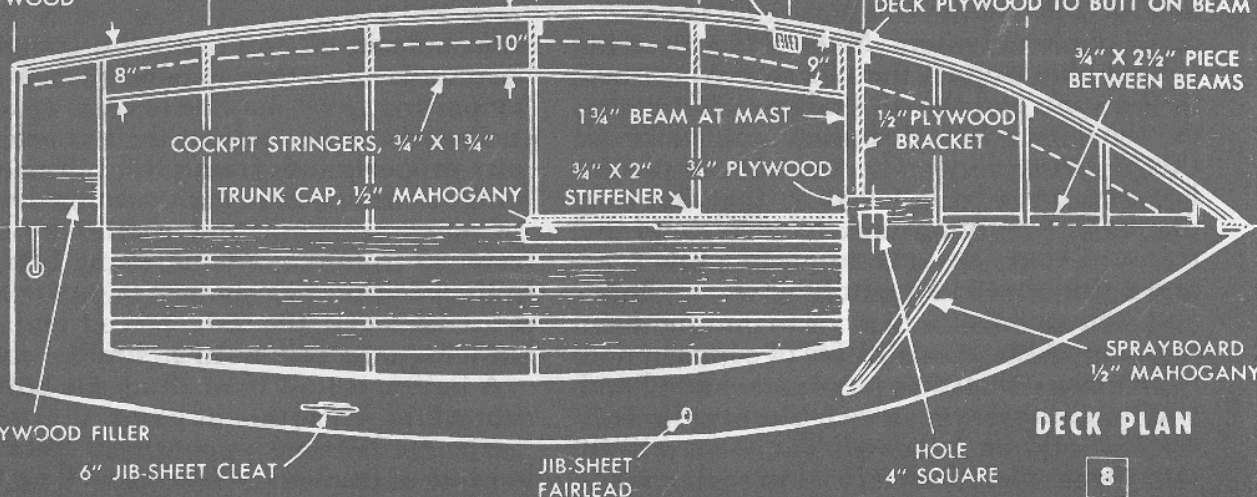
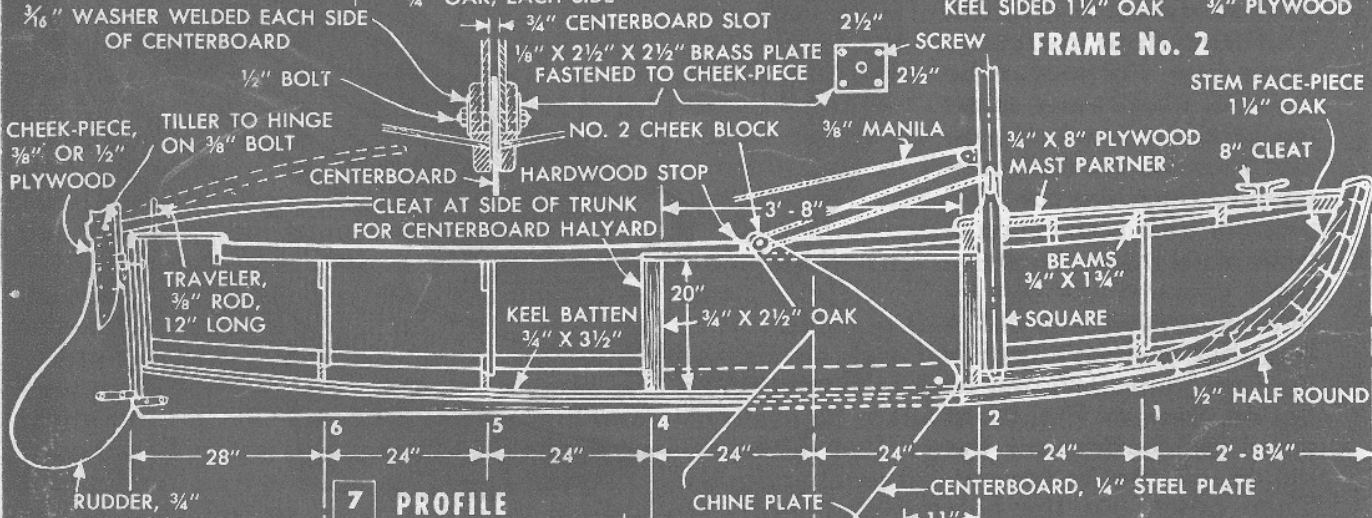
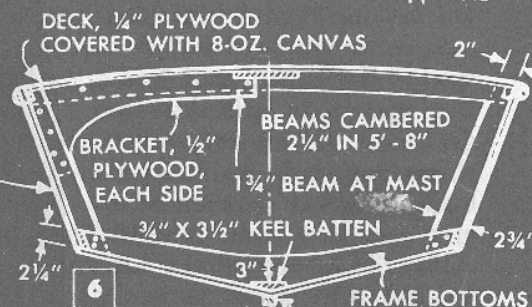
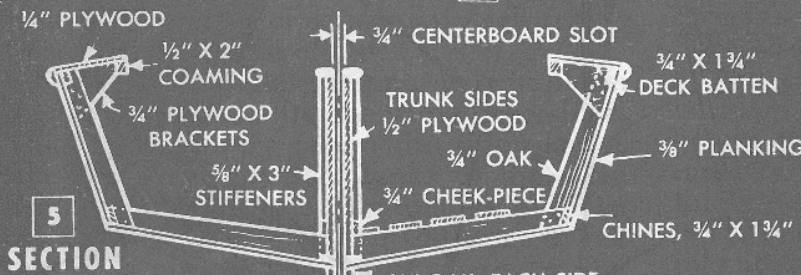
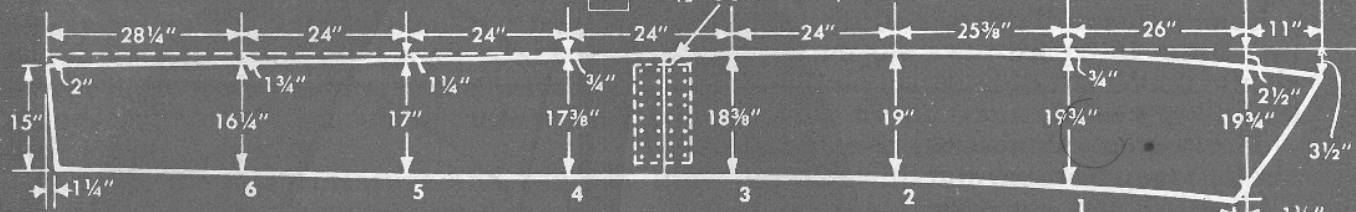
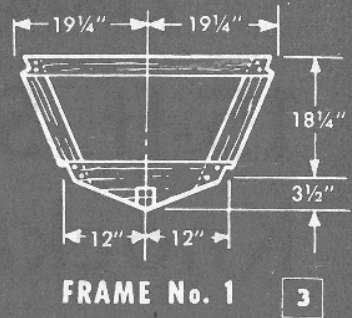
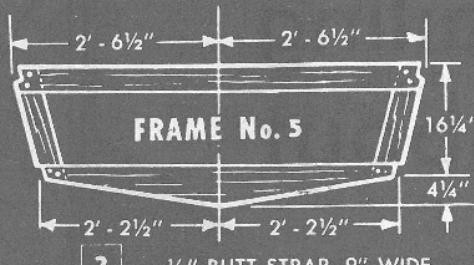
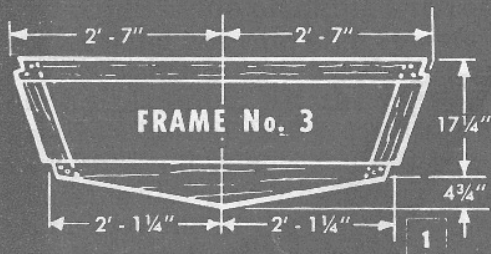


stem bottom off fair with the frame. It is best to fasten stem to side pieces rather temporarily as it may be necessary to loosen the screws and adjust the stem so that it fairs properly into frame No. 1. The assembling is easiest with the boat upside down.

Chines are next and should be screw-fastened from the outside, using 1-in. No. 8 brass wood screws about 3 in. apart. Apply paint between the side pieces and chine. Deck battens follow in a similar manner.

A batten is now bent along the bottom at centerline. With this in place, the shape of the frame bottoms is obtained. Tack these in place at frames 2, 4 and 6 and then fit and bevel the side pieces. The frame should now

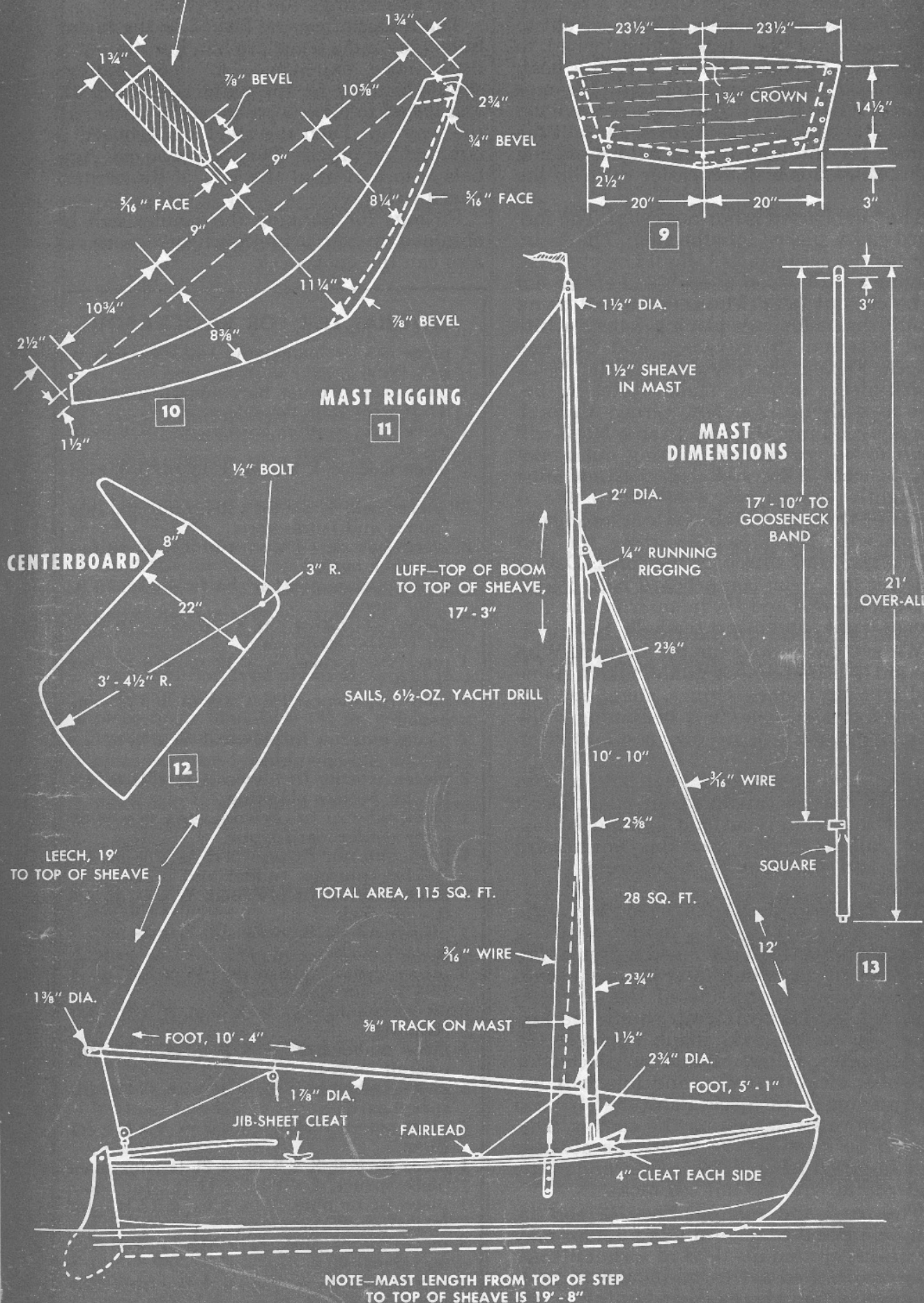
# 15-FT. KNOCKABOUT





## SECTION THROUGH STEM

### AFT FACE OF TRANSOM



be removed from the boat and fastened together using 1½-in. wood screws. A beam can be sawed to shape with a camber of 2¼ in. in 5 ft. 8 in., and used as a pattern for the plywood brackets. These are cut to the camber of the deck and attached to frame No. 2 before placing it in the boat. Next place a brace across the tops of frames 4 and 6. When these are in place remove the forms and replace with frames. Cut out the frames for the keel batten before placing them, since this is much easier to do on the bench.

The keel batten is our next step. The forward end is placed into the stem. The ¾-in. slot for the centerboard should be cut first, leaving a little wood at each end of the slot to be cut out later. The centerboard trunk should be made up, placing heavy white lead between the plywood and the end pieces. Fasten the plywood to the ¾-in. cheek-pieces and the trunk stiffeners before assembling. Use 1-in. screws through the plywood into the oak. Frame No. 3 will have to be cut in two, cutting out a slot 1¾ in. wide. The centerboard trunk must fit tightly against the keel batten and is fastened through the batten into the cheek-pieces with 1½-in. screws. Here, too, put white lead and cotton in the joint. Drill a hole for the ½-in. centerboard bolt, 3½ in. in from the end and 1¼ in. up from the bottom of trunk, and insert the bolt.

We are now ready for the bottom. With the aid of a batten as a guide, take a plane and trim up frames, chines, stem, etc. Put on the forward pieces first, beginning at the stem and using a ½-in.-plywood butt strap as was done with the side pieces. Fasten bottom into chines and keel batten with 1-in. No. 8 screws about 2½ in. apart. Don't forget the white lead and calking cotton. Pack calking well around the centerboard trunk and also tuck it in securely at the frames.

The balance of the job needs but little explanation as it is just a matter of fitting the parts in place, Figs. 7 and 8. Put in the deck beams, fastening their ends well into frames 1 and 2 and install the plywood brackets. A piece of scrap should be fastened inside the side plank opposite the chain plates. Fillers should be placed for jib-sheet cleat, traveler, and fairleads before putting on the deck. Paint the plywood well before stretching on the canvas. This should be stretched as tightly as possible and fastened around the edges under the half-round with galvanized tacks.

The mast and rigging, Figs. 12 and 13, can be erected in several ways. Loops may be spaced around the mast or socket fittings may be attached to wire and in turn to metal strips or tangs screwed and bolted to the mast. One-eighth-in. aircraft strand may be

substituted for the ⅜-in. wire shown. If the builder is not familiar with the rigging of small boats, see the section on "Mast, boom and fittings" on page 174.

The mainsail can be lashed to the boom, but slides and a track are handier, though a little more expensive. A wood pattern should be made for the centerboard, Fig. 12, and tested to make sure it can be pulled all the way up. Then the steel centerboard is cut and mounted. The centerboard rope belays to a cleat at the side of the centerboard trunk.

Fittings for hanging the rudder can be obtained at a marine-hardware store, as also can the gooseneck.

### MATERIAL LIST FOR KNOCKABOUT

- 1 piece oak or mahogany, 1¾ x 11¼ in. x 4 ft.—for stem
- 1 piece oak or other hardwood, 1¼ x 4 in. x 5 ft.—for stem face piece
- 1 piece oak or other hardwood, 1 x 6 in. x 6½ ft.—for skeg
- 1 piece oak, ¾ x 3½ in. x 13 ft.—for keel batten
- 32 pieces oak, ¾ x 3 in. x diagram—for side frames and trunk ends
- 4 pieces oak, ¾ x 1¾ in. x 16 ft.—for chines and deck batten
- 2 pieces mahogany, 1 in. half round x 16 ft.—for guards
- 2 pieces fir, spruce, ¾ x 1¾ in. x 10 ft.—for cockpit stringers
- 1 piece fir, spruce, ¾ x 12 in. x 6 ft.—for beams
- 1 piece fir, spruce, 1¾ x 5½ in. x 5 ft.—for beams
- 2 pieces exterior fir plywood, ⅝ x 48 in. x 8 ft.—for side planking
- 2 pieces exterior fir plywood, ⅝ x 48 in. x 8 ft.—for bottom planking
- 1 piece exterior fir plywood, ½ x 48 x 50 in.—for centerboard trunk
- 1 piece exterior fir plywood, ¾ x 48 in. x 4 ft.—for transom, rudder and brackets
- 1 piece exterior fir plywood, ¼ x 48 in. x 8 ft.—for deck
- 1 piece exterior fir plywood, ¼ x 48 in. x 4 ft.—for deck
- 8 pieces cedar, spruce, fir, ½ x 3½ in. x 10½ ft.—for floor boards
- 2 pieces mahogany, ½ x 2 in. x 9 ft.—for coaming
- 1 piece mahogany, ½ x 6 in. x 4 ft.—for cockpit ends
- 1 piece mahogany, ½ x 4 in. x 6 ft.—for sprayboards
- 1 piece oak or hickory, 1 x 3 in. x 4 ft.—for tiller
- 1 piece spruce, 3 x 3 in. x 21 ft.—for mast
- 1 piece spruce, 2 x 2 in. x 11 ft.—for boom
- 1 piece fir or pine, ¾ x 6 in. x 12 ft.—for forms
- 3 pieces fir or pine, ¾ x 3½ in. x 8 ft.—for forms
- 2 pieces oak, ¾ x 4 in. x 4 ft.—for trunk cheek-pieces