In Color: 10 Great Gifts for Craftsmen!

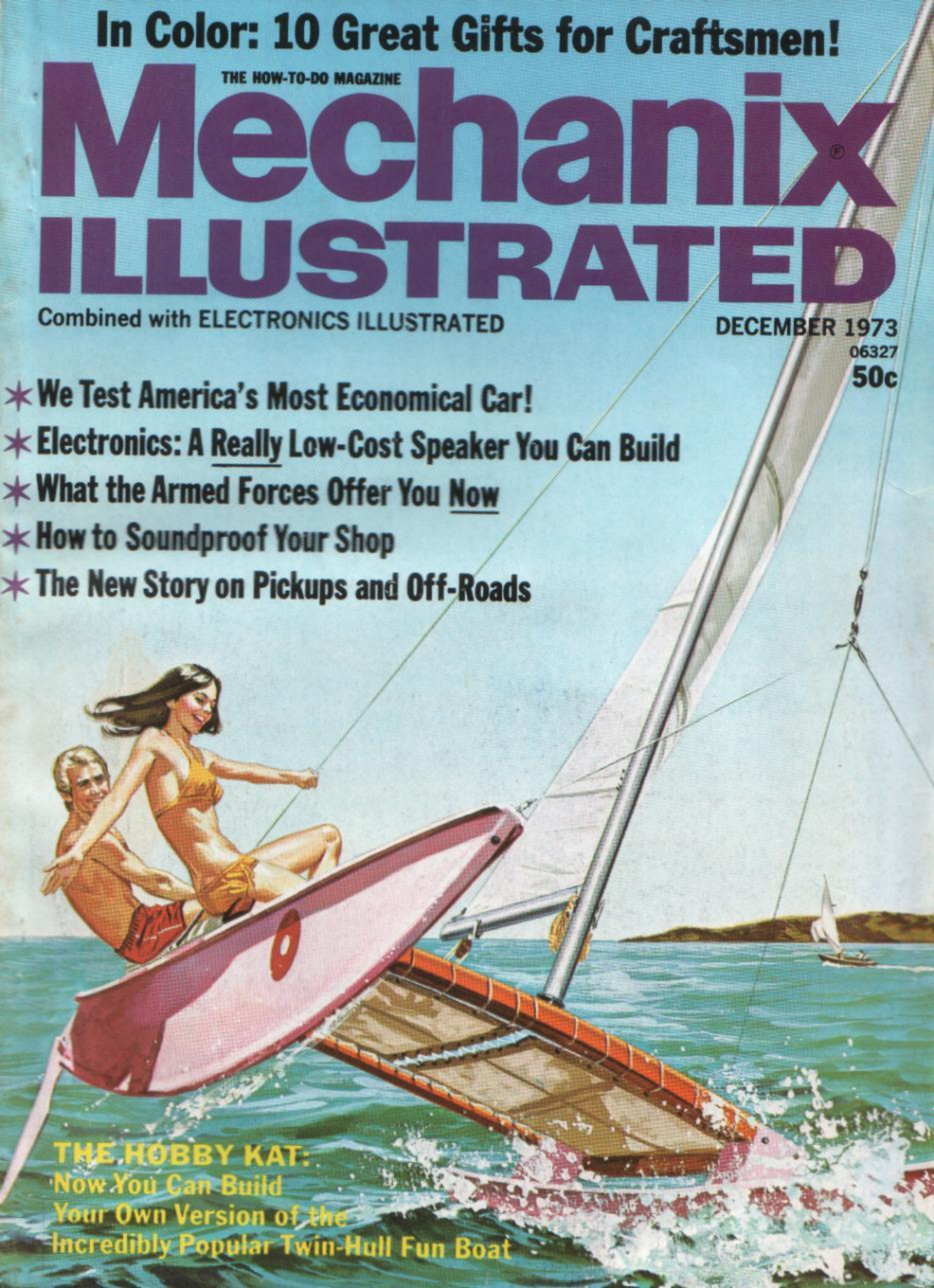
THE HOW-TO-DO MAGAZINE

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THE HOBBY KAT:
Now You Can Build
Your Own Version of the
Incredibly Popular Twin-Hull Fun Boat

Hobby Kat!

By Hal Kelly

BY NOW, everyone who digs boating has heard of the Hobie Cat, the sleek little catamaran that burst on the scene a couple of years ago and captured the attention of all the fast-action sailors. Marked by asymmetrical hulls and special trampoline supports, the Hobie can reach speeds above 20 mph and perform with a rare agility. But it has one drawback. It costs mucho dinero—$1200 for a Hobie 14.

Thus, we introduce our Hobby Kat a build-it-yourself version of the Hobie that should cost from half to a third of the commercial version. We built the hulls, decking, rudder, etc., for less than $200. Mast, boom, sail and rig—which we bought—brought the total to $650.

If you have the moola, of course, go for a Hobie and have the time of your life on the water. If not, try our Hobby. The homebuilt is not quite the same. But she sails sweetly and fast—qualities which have made the Hobie popular. We clocked her informally at above 20 mph. Even in a light air she'll slip through the water at a fast clip. She has no centerboards, leeboards or keel, and needs none. The inside of each hull has built-in lift, like an airplane wing, so that as the boat heels and one hull digs in the boat is pulled back to windward. She can run in very shallow water and the rudders kick up for beaching. You can carry her on a trailer or even disassemble her.

Hobby Kat is not hard to build. Just don't hurry. And understand what you're doing and why before you do it. For best performance, the Kat must be light. The complete boat, minus sail, boom and mast, weighs 165 lbs. Planking is 3/16-in. 3-ply marine plywood. We couldn't get 3/16 in the right lengths, so we used 4x8 sheets and hand scarfed two pieces to make up this length. To make the scarf joint, simply miter and glue the plywood edges to make an overlapping joint about 1½ in. wide. Use a slightly larger scrap block screwed firmly over the joint on both sides of the planking, with a scrap of paper between the block and the plank so the block won't stick to the planking. When the glue is dry remove the blocks and sand the joint to a slick finish. Fill the screw holes with epoxy.

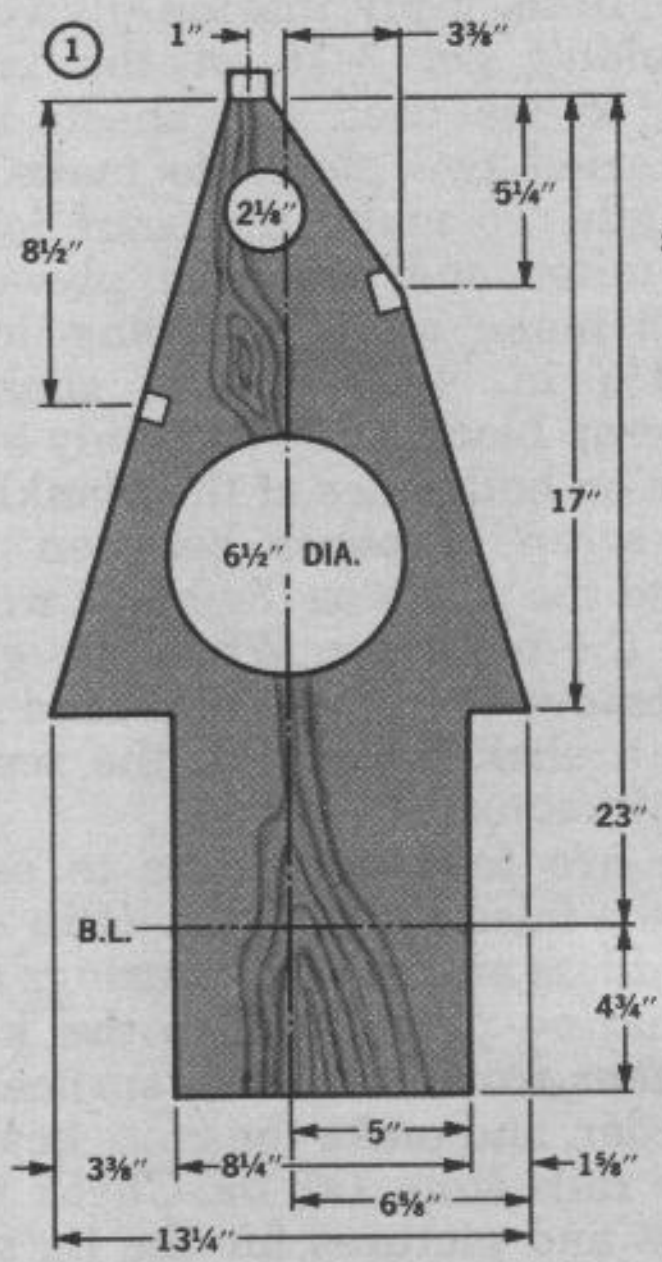
There are four main ribs to each hull, and a false rib up front (Rib A). Ribs, rudders and rudder housings are ½-in. marine plywood. Rip the keel and battens from 1x8 Sitka spruce or white cedar, and make the cross beams and side rails from 1x8 fir. Check the drawings and pictures for the jig setup and rib placement. Temporarily nail the ribs to the jig. Note the temporary spacer between Ribs 1, 2, 3 and 4 to keep them true until the hull is framed.

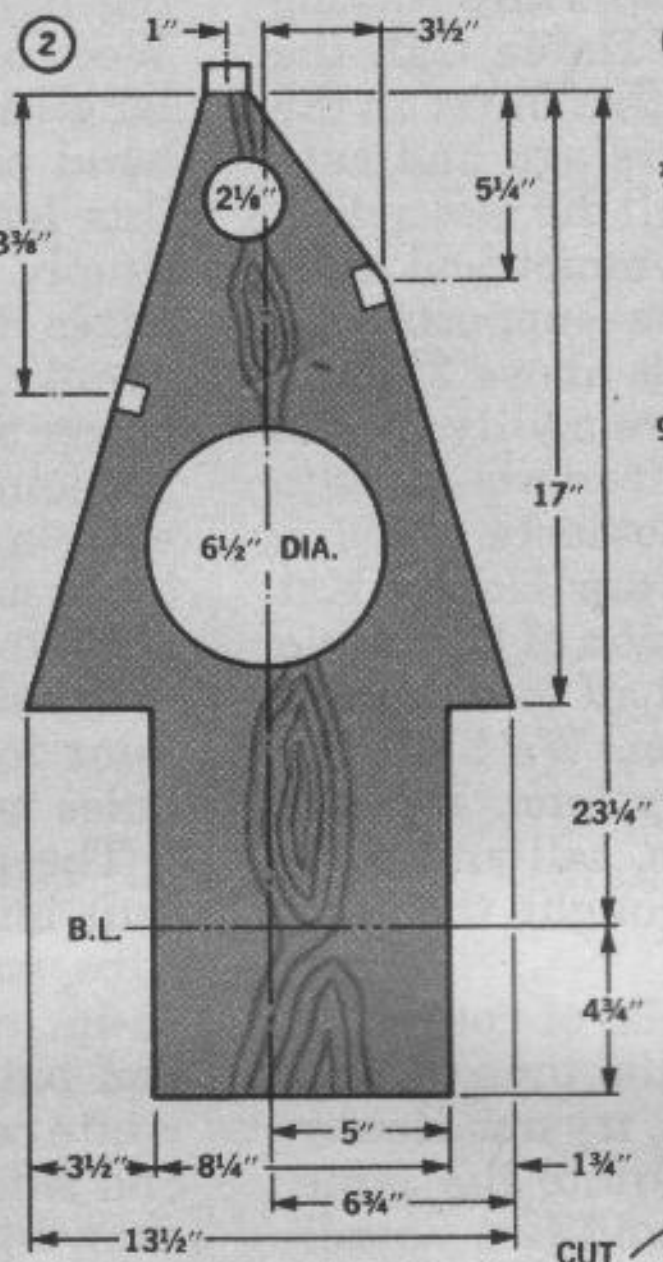
Make the keel of ¾x1¼ stock. Using a thin saw blade, run a cut down the center of the width so that the front part of the keel will take the severe bend. Generously coat with glue and bend to shape. Glue and screw the keel to all ribs and the transom. Clamp the front together until the glue dries. The outside batten is ¾ in. square and the inside batten (where the side planking butts) is ¾x1¼ in. Both battens are glued and screwed to all ribs, transom and keel. Use 1½-in. No. 7 bronze flathead wood screws. Fair the inside batten and keel so the planking lies snugly

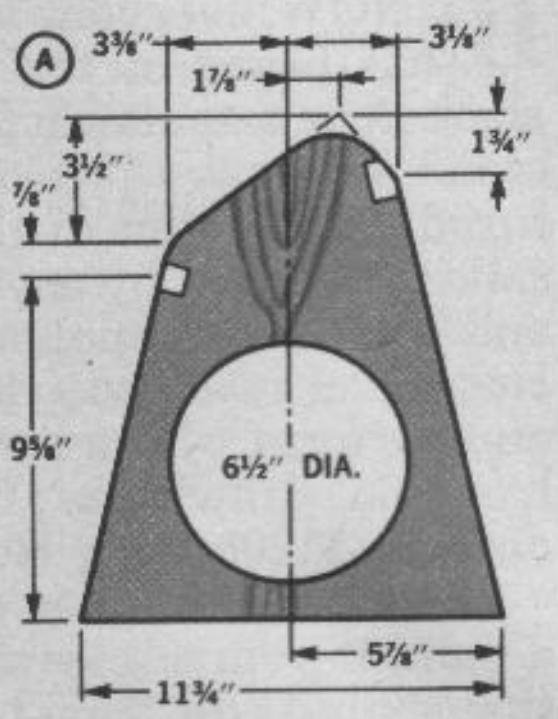


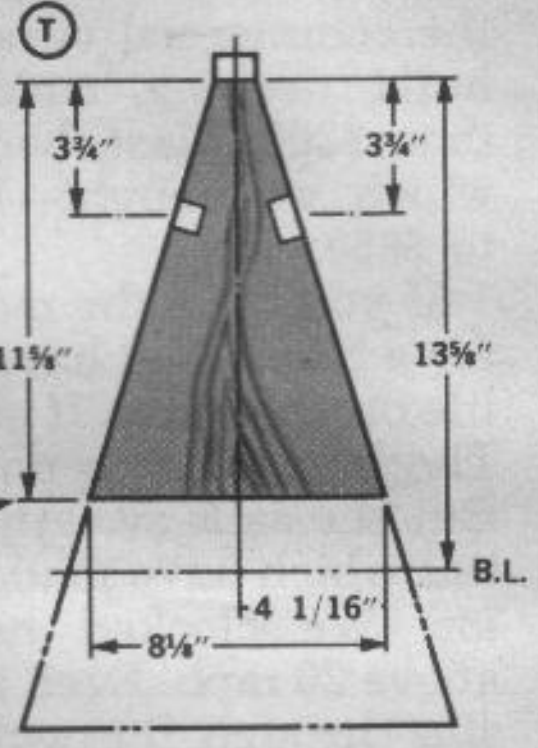
FAST-ACTION sailors can get plenty of thrills out of our build-it-yourself cat with the famous Polynesian hulls. Clocked informally at above 20 mph, she'll speed through the water even in the lightest breeze.

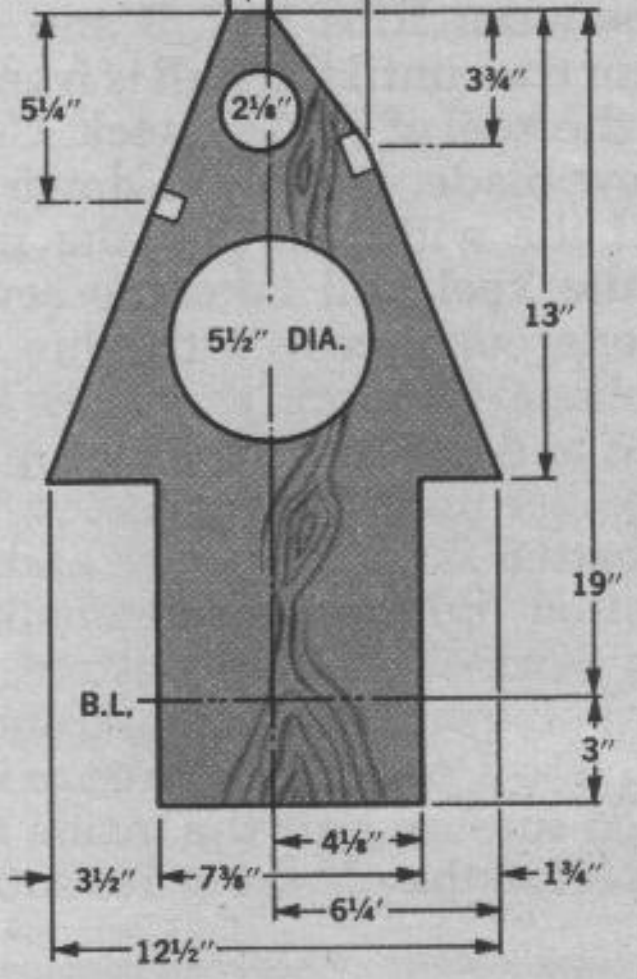
For Real Sailing Fun...Build Our Hobby Kat!

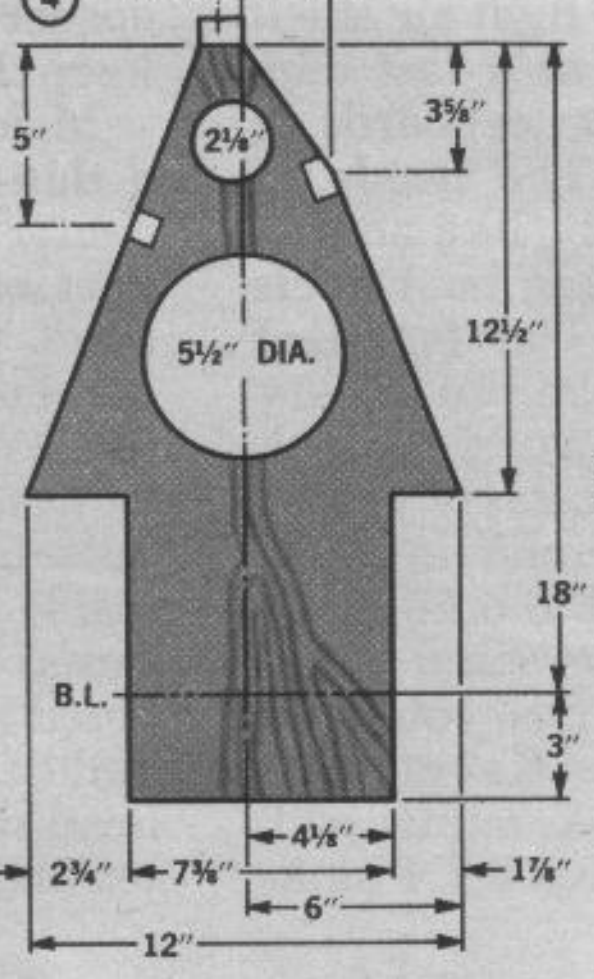


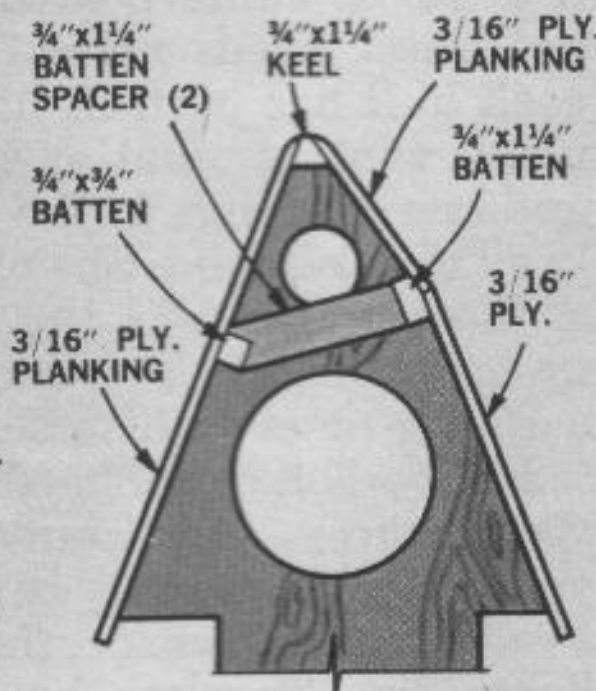




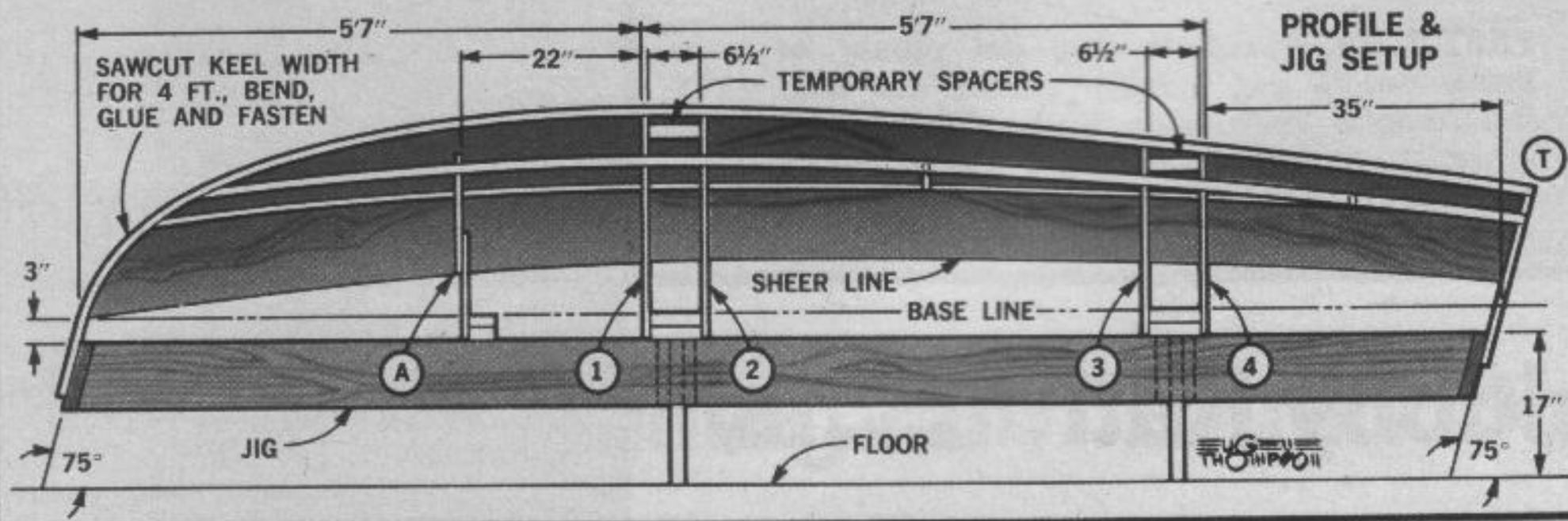








TYPICAL SECTION OF ASSEMBLY ON JIG



DETAIL A

1½"x3" SIDEBEAM—LAMINATE FROM ¾" FIR

1½"x4" BLOCK

¾" TH'K

1½"x4" HOLLOW

3" 7½"

⅜"x8" BRZ CARRIAGE BOLTS

¾"x¾"

CROSSBEAM—LAMINATE FROM ¾" FIR

FILLER BLOCK FOR MAST STEP

SECTION BB

35⅜"—REAR BEAM

34½"—FRONT BEAM

5"

SEE DETAIL A

5°

¼" PLY. DECKING

¾"x¾" SHEER

¾"x¾" BATTEN

¾"x1¼" BATTEN

¾"x1¼" KEEL

3/16" PLY. ALL PLANKING

USE 3" GLASS TAPE & FIBERGLASS ON PLANKING SEAM, KEEL SEAMS, TRANSOM EDGES, & CROSSBEAM HOUSING SEAMS

B C TILLER EXTENSION ARM TILLER CROSS BAR 5" DIA. INSPECTION PLATE

C

29"

5"

2" HIKING STRAP

4"

B

SECTION CC

SAIL TRACK

½" PLY. (2)

CANVAS—#4 DUCK

¾" #12 BRZ. BOAT NAILS 4" APART

½" PLY. (1)

⅛" PLY. (1)

SIDEBEAM

15° 16¼" 3" 1¾" 1½" 7¾" 1⅛" SQ. 1½" 6¾"

TRIM ONE

½" PLY. FIBERGLASS GRAIN

38¼" 30" 19¼"

1" SQUARES

¾" SQ. DECK BEAM

RIB A

RIB 1

RIB 2

¾" SQ. DECK BEAM

BATTEN SPACER BLOCK

RIB 3

RIB 4

BATTEN SPACER BLOCK

¾" SQ. DECK BEAM

TRANSOM

TILLER—42" LG. 1⅛" SQ. AT RUDDER—TAPER TO ⅞" SQ. AT CROSSBAR

⅜" EYE BOLTS

1"x9" CHAIN PLATES—½" PLY. SPACER

RUDDER GUDGEONS & PINTLES

to them.

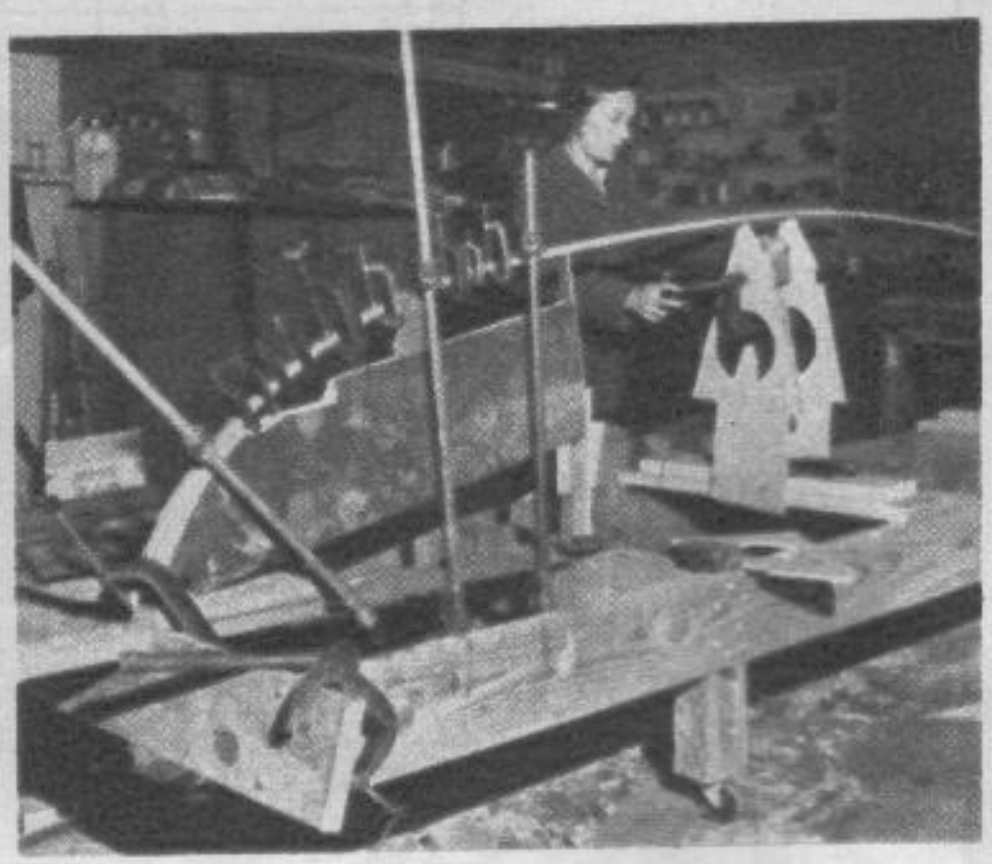
Laying on the planking, apply the upper two-thirds on the inside first. Clamp it in position, mark and trim. The bottom edge of this section goes to the center of the side batten. Use large cardboards from packing cases for patterns. After trimming and fitting, drill pilot holes for ¾-in. No. 12 bronze boat nails. Space them about 2 in. apart and apply with glue.

Next comes the bottom section of the inside planking. With a soft-lead pencil, mark the edge of the upper planking where the bottom section butts, then clamp the bottom section in place. The lead will leave a mark on the bottom section, indicating where to trim. Drill nail holes and apply with glue, as before.

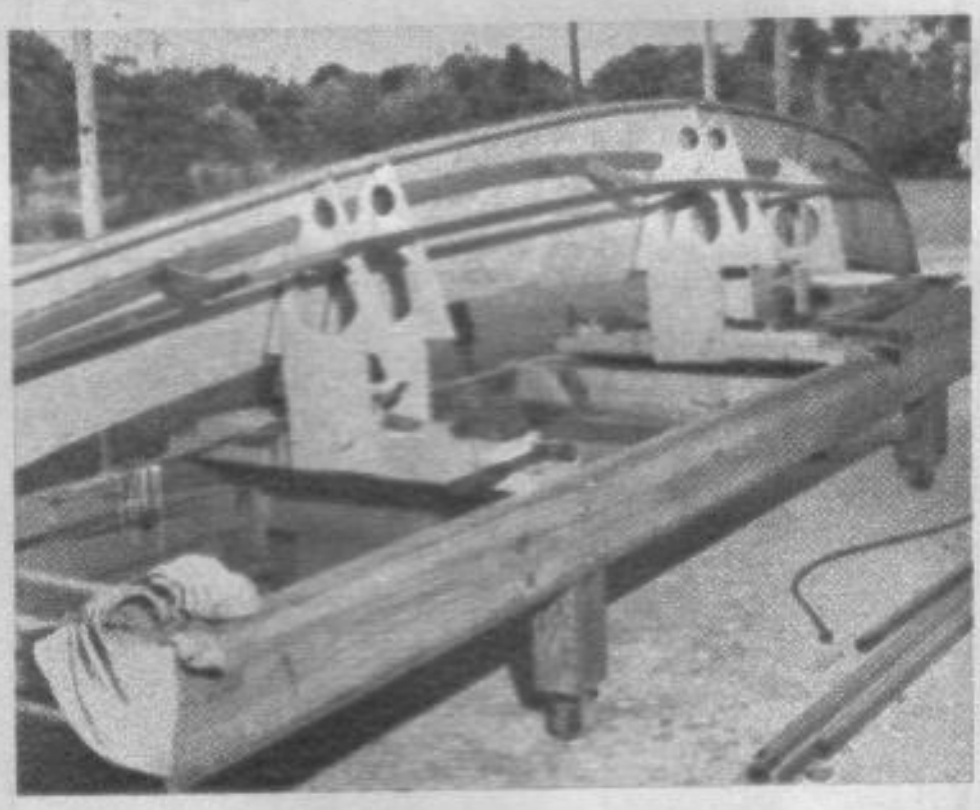
The outside planking is all one piece. Leave extra planking at the sheer so you can nail and glue the sheer batten in place. (See plans.) Remove the hull from the jig and glue and nail the planking to the outside sheer batten. After the glue is dry, trim to shape. Use the same procedure and jig for the other hull. Just remember to flip the ribs.

The cross beams are hollow and are built up of four layers of ¾-in. clear fir. Curve-cut a couple of 2x8s with 2-in. spacers to make a form for laying up the curve in the front beam, which is laminated. The ribs form a housing to take the two cross beams. While it's drying go back to the hulls. Fasten the chain plates and spacers in place with bronze carriage bolts, and fasten down the deck beams that cross from sheer to sheer.

With hand plane and sander, round off the keel and deck edge. Using 3-in. glass tape and fiberglass, tape and glass all joints outside the planking. This includes the planking section joints, keel, sheer and edge of the transom. Also tape and glass the housings where the main beams will go. Feather the edges of the tape with a sander. Then cut a 5-in. hole in the decking near the transom. Fasten the rudder gudgeons in place after the hull is finished, and use this inspection plate to get at the bolts. Afterwards, cover with a larger round piece of plywood, using caulking and small bronze screws.



TEMPORARY spacer holds ribs in place until hull is framed. Note set-up of jig.

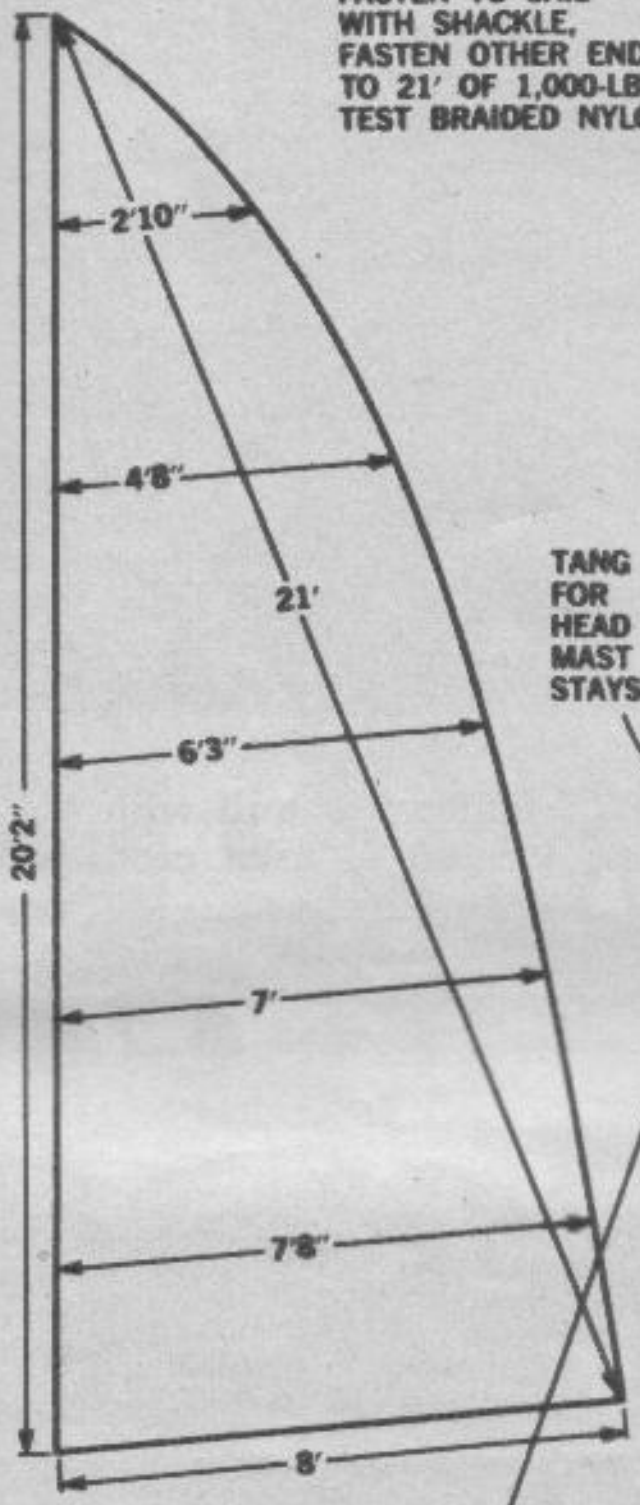


PLANK of inner hull goes on in two pieces. They butt along inner-hull side batten.



CURVE-CUT two 1x8s, with 2-in. spacer, to make form for laying up front cross beam.

SAIL PLAN



EXTERNAL HALYARD
18' OF 3/32" SS WIRE
WITH 2 THIMBLES.
FASTEN TO SAIL
WITH SHACKLE,
FASTEN OTHER END
TO 21' OF 1,000-LB.
TEST BRAIDED NYLON

TANG
FOR
HEAD &
MAST
STAYS

SIDE
STAYS

#3 MAST
22'3"

HEADSTAY—
3/32" SS WIRE,
SS THIMBLES,
NICROPRESS SLEEVES,
1¼" GAL. SHACKLES

FIXED
GOOSENECK

10" TURNBUCKLE

SHEET AND
DOWNHAUL
CLEATS

SWIVEL
MAST STEP

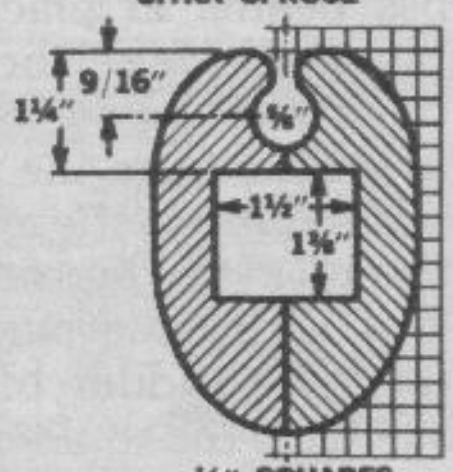
#2 BOOM
8'6"

BOOM BLOCK
5' FROM MAST

10" TURNBUCKLE
1¼" GAL. SHACKLES

MAST SECTION

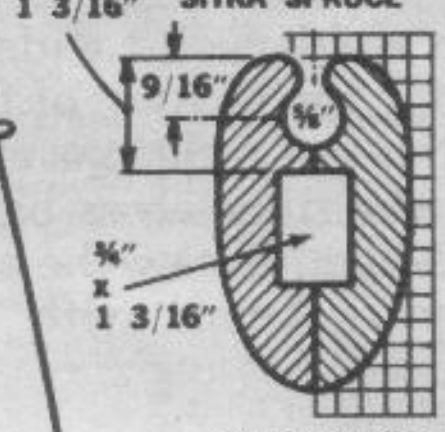
2 PIECES OF 1⅛"x4"
SITKA SPRUCE



¼" SQUARES

BOOM SECTION

2 PIECES OF 1"x3½"
SITKA SPRUCE



¼" SQUARES

BOOM & MAST—
DADO OUT HOLLOW
& SAIL GROOVE,
GLUE TOGETHER,
SHAPE OUTSIDE

For Real Sailing Fun...Build Our Hobby Kat!

Fasten the cross beams in place with ⅜-in. bronze carriage bolts 8 in. long. Note that the outside bolts hold not only the cross beams in place but the side beams as well. Make the trampoline of No. 4 duck and follow the drawing for size and shape. Lace the front and back of the trampoline to the cross beams, and nail the sides to the side beams with ¾-in. No. 12 bronze boat nails.

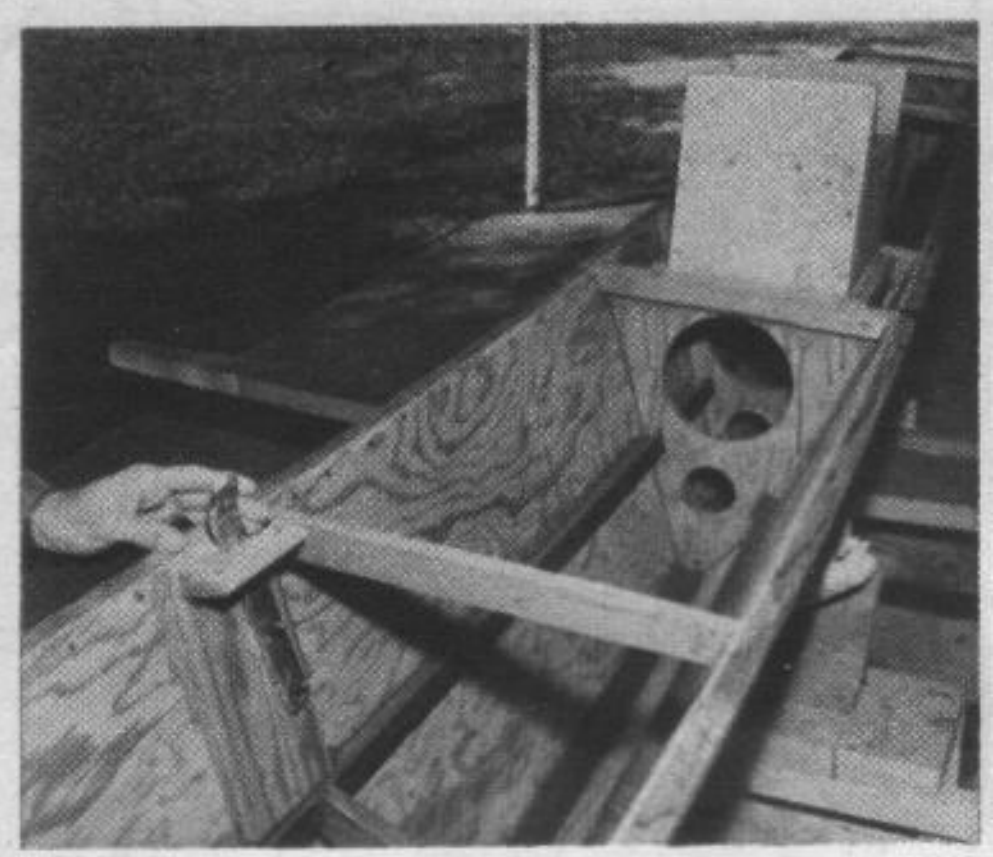
The kick-up rudder blades are ½-in. plywood. Cut the blades so the grain runs at a 45° angle. Cover with glass cloth and resin. Make the rudder housings of ½-in. plywood and cover with glass cloth and resin. Make the groove for the rudder a bit wider than ½ in. to allow for the coating of fiberglass.

Fasten the gudgeons and rudders and set up the tiller cross bar and tiller extension arm. Screw the sail track to the rear cross beam with 1½-in. bronze screws. This is used as a traveler track for the sheet block.

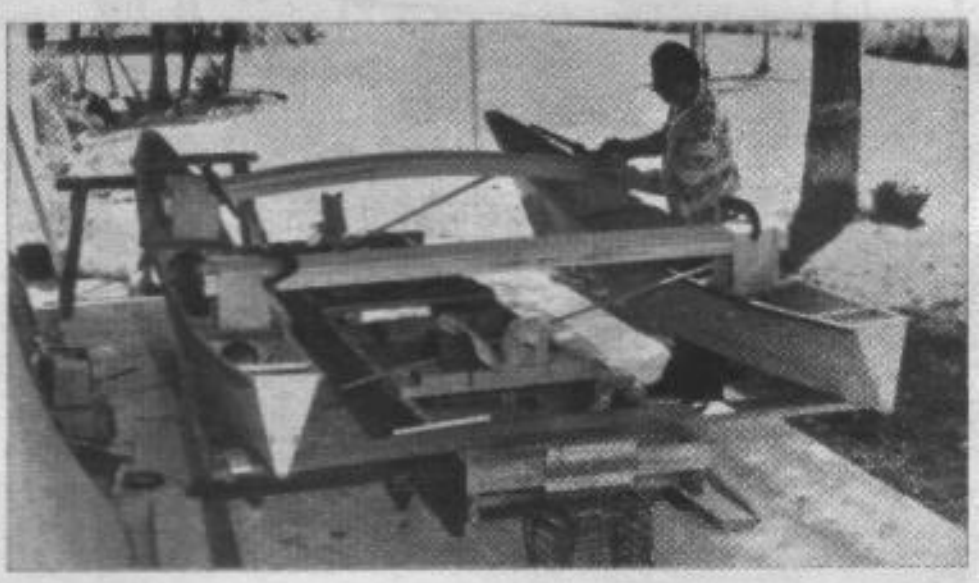
You can make your own mast and boom, and it's well worth the trouble if you want to save money. Use Sitka spruce and follow the plans. To rig the Kat, use 3/32-in. stainless steel wire for stays, fitted with stainless thimbles. Use Nicopress sleeves to clamp the stays together. It's important to use a swivel step for the mast. The first 18 ft. of the halyard is 3/32 stainless with a thimble at each end. One end fastens to the sail with a shackle. The other end fastens to 21 ft. of Nylon, which makes up the rest of the halyard.

Buy the rudder gudgeons from Land's End Co., 2241 N. Elston Ave., Chicago, Ill. 60614. You can get the sail from Johnson Sailmakers, 13185 48th St. North, St. Petersburg, Fla. 33732. The No. 3 mast and No. 2 boom come from Zephyr Products Inc., Wareham, Mass. 02571 (or Sitka spruce from Maurice L. Condon Co., 250 Ferris Ave., White Plains, N.Y. 10603). E and B Marine Supply, 257 Bertran St., Perth Amboy, N.J. 08861 can provide sheet blocks. ●

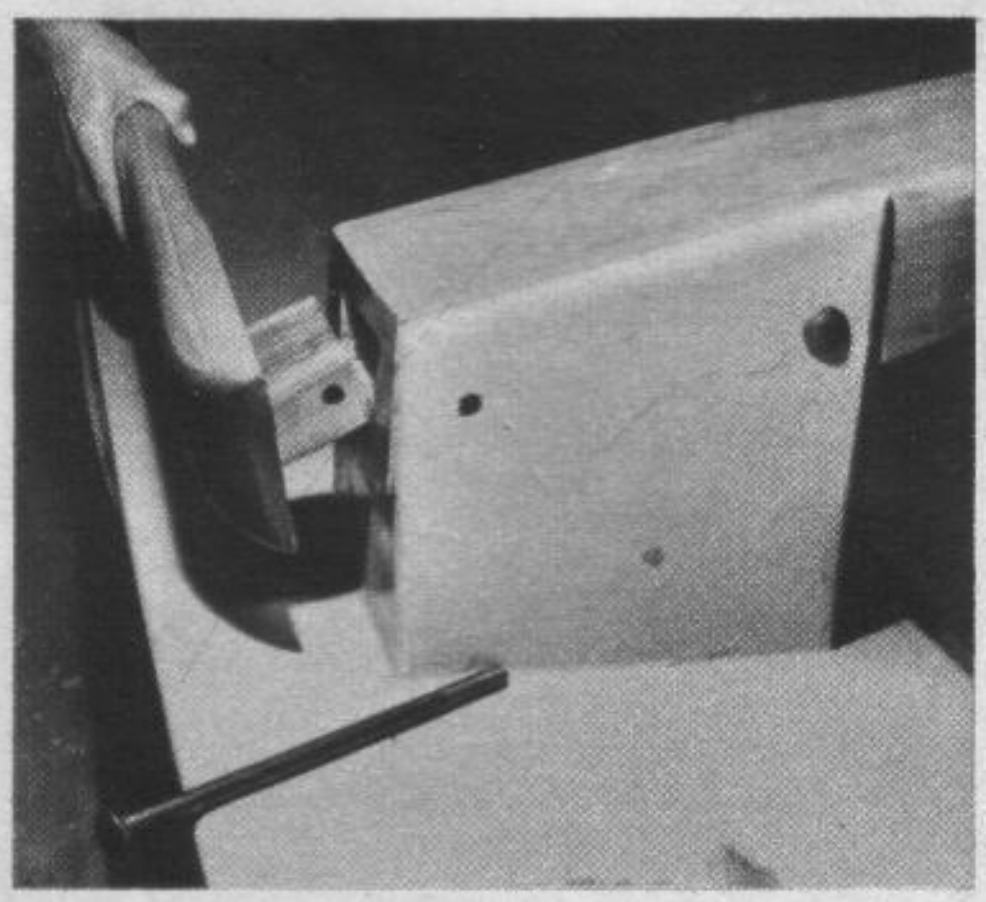
Large-scale plans costing $5 are available for building Hobby Kat. Order from Mechanix Illustrated Plans Service, Fawcett Bldg., Greenwich, Conn. 06830. Ask for Plan B-12-73. Include payment.



CHAIN PLATE fastens to hull with spacer. Note rib tops formed to take cross beam.



LAMINATED cross beams hold twin hulls together. Front beam curved, rear straight.



DETAIL of side beam fitting into hollow front cross beam. Through-bolt holds both.



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