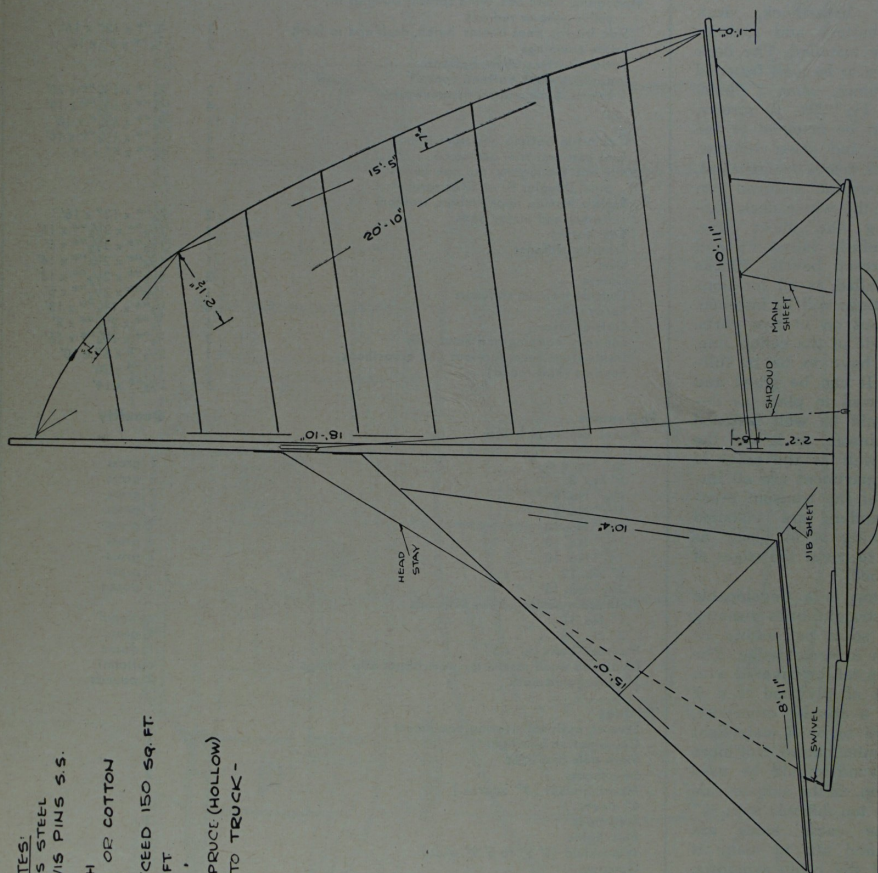


NOTES:
 TANGS: 1"-2" STAINLESS STEEL
 CHAIN PLATES # CLEVIS PINS S.S.
 STAYS 1/8" S.S.
 BATTENS FULL LENGTH
 SAILS 5 1/2 OZ DACRON OR COTTON
 NO DRAFT IN SAILS
 SAIL AREA NOT TO EXCEED 150 SQ. FT.
 MAIN SAIL 105 SQ. FT.
 JIB 45 " "
 MAIN MAST: 2 1/2" X 4" SPRUCE (HOLLOW)
 22'-0" FROM DECK TO TRUCK -



GREAT SOUTH BAY SCOOTER
 SAIL & RIGGING PLAN

Originally designed by
the Coast Guard as an amphibian,
these rudderless ice
boats are now sleek racing machines.
For winter sailing thrills

BUILD A SOUTH BAY SCOOTER

BY CHARLES R. MEYER

FASTER THAN the wind and trickier handling than any sailing craft afloat, the South Bay scooter was originally an amphibian. Designed and developed by the United States Coast Guard to hurdle patches of broken ice and to supply units of the Lifesaving Service on Fire Island when those personnel were virtually marooned by floating ice, the scooter was refined and eventually evolved into the sleek racing machine found on Long Island today.

Featuring rudderless steering and a flat, shell-type hull, today's scooter is a highly individualistic vehicle. There are no rigid class restrictions to date—scootermen merely differentiate between big and little boats,

depending on the canvas carried overhead. SPORTS AFIELD Boatbuilding's set of plans, drawn by Jesse and Dave Fishman, may be followed exactly, but are usually used as a general template by experienced boatmen and builders.

The scooter's performance is determined by the canvas and the sharpness and placement of the lengthwise runners—the hull is more of a platform used to carry passengers and support the structural components. Designed for competition rather than broken-ice navigation, this hull operates well over the ice, but will not give much performance if dunked in a pothole. She will do 40 to 60 mph over the ice under good wind conditions with the proper handling.

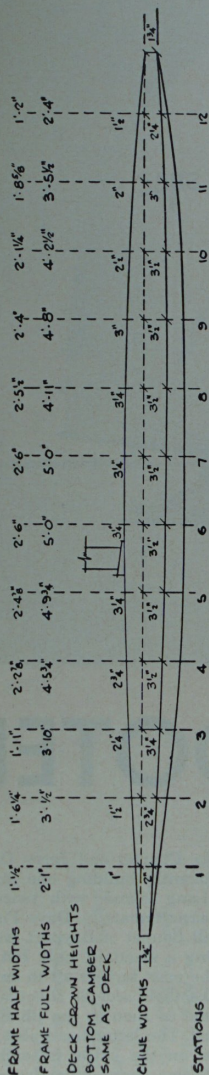
Your scooter can be from 13' to 16' long, with a beam of 4' to 6' conven-

tionally. Charles and Jerry Dominy are currently building one in Bellport, Long Island, with twice that beam *experimentally*. Dave Fishman and Bill Bannet of Bayport are constructing a standard hull, but stepping the mast farther aft in an effort to make their scooter shoot up into the wind as soon as the jib sheet is released. The latter team also favors gussets on the sides, fastening the deck beams and bottom frames together in a clamping operation to provide additional strength.

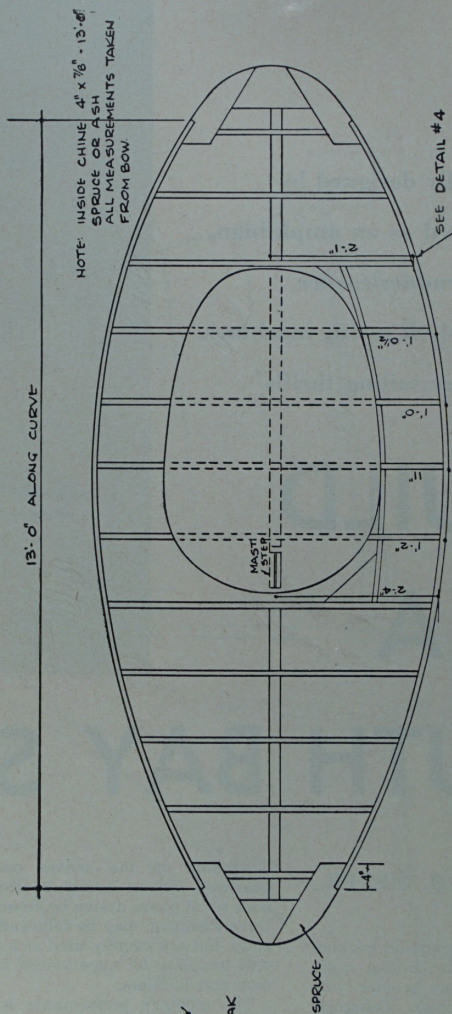
In building your South Bay scooter, assemble the bow and stern stems, laminating them of spruce or fir for lightweight strength with minimum expense. You will discover that Weldwood or other water-resistant glue is an absolute necessity in this construction process.

Use a ½" piece of fir or spruce, or



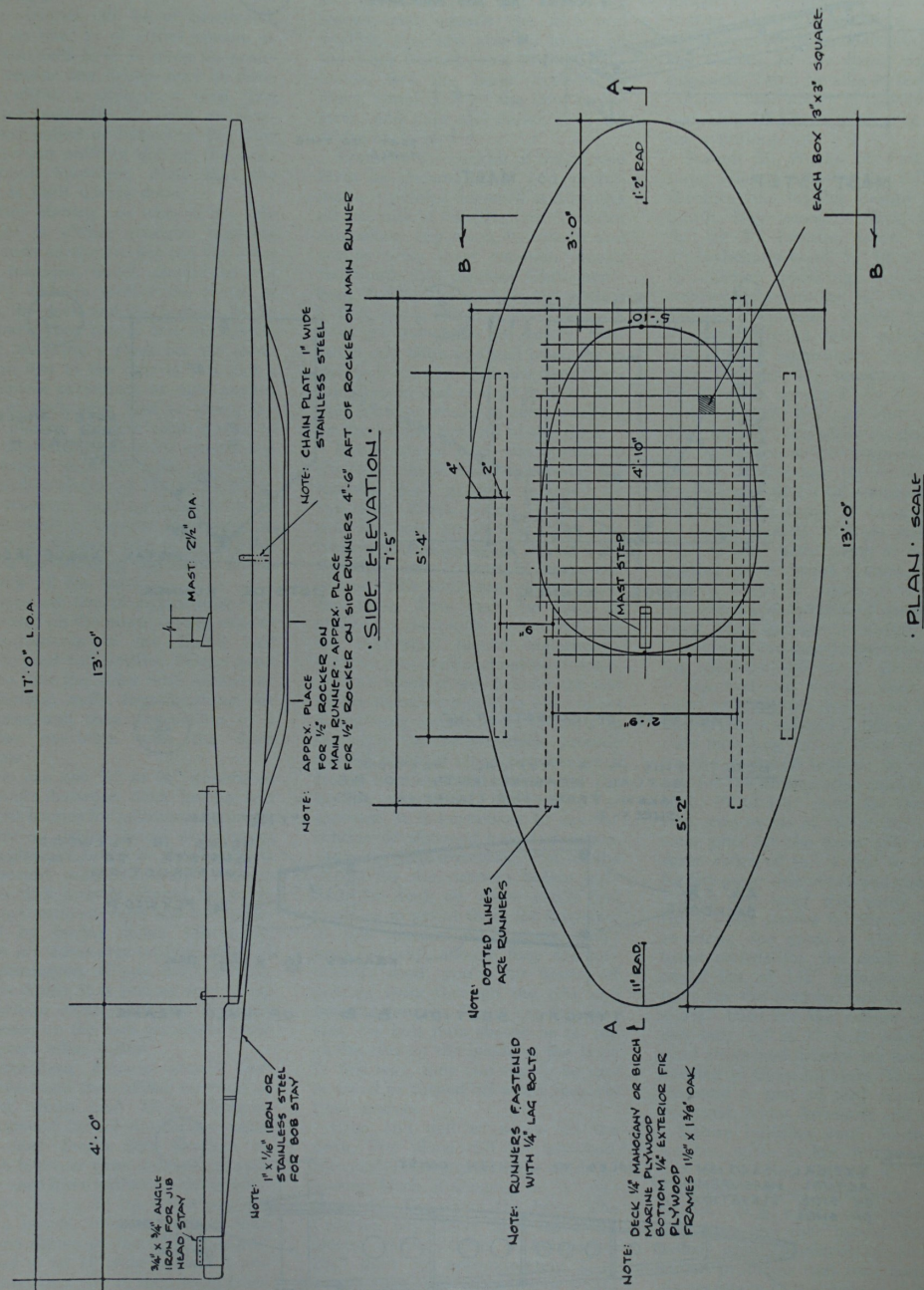


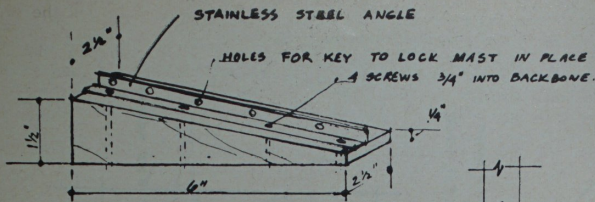
SIDE ELEVATION



NOTE: DECK $\frac{1}{2}$ " MAHOGANY
OR BIRCH MARINE
PLYWOOD
FRAMES $1\frac{1}{2}$ x $1\frac{3}{8}$ OAK

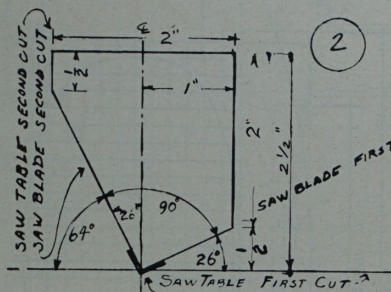
FRAMING PLAN



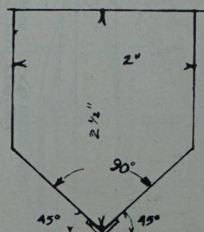


MAST STEP

MAST



INSIDE RUNNER

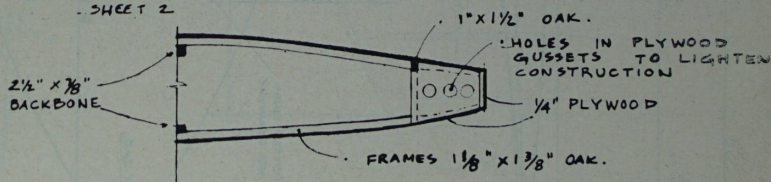


OUTSIDE RUNNER

NOTE: ANGLE IRON ON RUNNERS = 3/4"

NOTE: THICKNESS OF GUSSETS = 1/4"

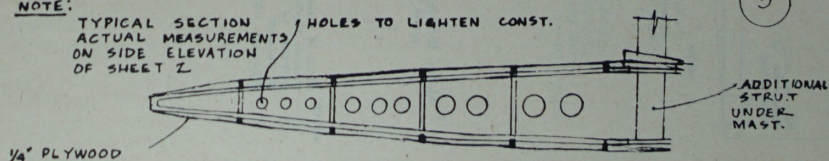
NOTE: THIS IS A TYPICAL SECTION
ACTUAL MEASUREMENTS TO BE
TAKEN FROM SIDE ELEVATION OF
SHEET 2



TYPICAL SECTION B-B OF HALF FRAME

NOTE: TYPICAL SECTION
ACTUAL MEASUREMENTS
ON SIDE ELEVATION
OF SHEET 2

HOLES TO LIGHTEN CONST.



FORWARD LONGITUDINAL SECTION A-A

any other wood you find available and easy to bend, 13' in length, for the side chines. Laminate another ½" piece over the basic after this is completed.

The frames can be of hardwood, such as oak, or of either spruce or fir. You will have to keep an accurate center line, which may be done with either a stick or a cord. The scooter may also be built on sawhorses, nailed or bolted to the floor to prevent shifting during the construction operation. Note that the boat is built upside down.

After planing one edge of the side planks or chines straight, tapering the ends as shown, get out the stem and transom, which should be cut amply wide to receive the crown of both the deck and the bottom. Make or mark your center line on a level floor, marking a place for the stem. Seven feet to the rear of this nail a crosspiece extending, at right angles, 2½" to each side. Nail or screw the side planks, straight edge down, to the stem and bend them around the crosspiece until the ends are within the widths shown on the plans. Fit in the transom, leaving enough wood underneath to receive the crown of the deck. An easy way to accomplish this is by blocking the whole frame slightly off the floor.

Space off the 12 equidistant ribs, as shown on the plans, taking careful measurements of the frame half widths and full widths. Fasten each frame into the sides with screws or Anchorfast nails, first finishing the bottoms and then proceeding in a similar operation with the deck frames.

You can use ¼" or ⅜" gussets as fasteners between deck beams and bottom frames for additional strength if you so desire. Some scootermen favor limber holes in these gussets to permit water drainage; others claim that gussets should be made for maximum strength and not weakened by boring holes. Obviously, there are advocates on both sides of the discussion. If you don't include limber holes, it is just as easy to tip the whole scooter hull for drainage purposes on the rare occasions when the craft takes water.

Regardless, gussets should first be glued and then either screwed or nailed. Jesse and Dave Fishman recommend Monel Anchorfast nails, but other South Bay scooters on which brass or even galvanized nails were used have withstood many winters on the ice. In the event you desire a larger, roomier cockpit than the one shown on the plans, use a 9" instead of an 11" side deck, but understand that you're sacrificing freeboard for the added room.

In the process of putting in the

first few ribs, you may want to spring ribbands over them from stem to stern to give the proper fore-and-aft curve to the bottom. In this manner, after the first two have been placed, and usually the fifth and twelfth, you are able to make all the other frames come to these ribbands. Set the inner keelson in place, running from the bow to the stern, and glue and fasten each rib or frame to it.

Frame in the cockpit in the curved form as shown or, if you prefer, make it pointed forward and square aft for ease of construction. You can use almost any wood, though fir and spruce seem most common among the South Bay Scooter Club members. Scribe the cockpit out with a batten, put a block of wood beneath it to get the shape accurately, then cut it out. Glue and nail or screw to the deck frames. With the deck, bottom frames and cockpit framed out, you are now ready to start working on the actual bracing of the deck.

Put struts in from the bottom to the deck ribs in order to support the forward deck pressure exerted by the horn. While sailing, your stays pull the horn up so that there is a tremendous downward pressure on the after end. It must be very well braced with additional struts under the mast. This may be done as shown on the plans, or you can use the individual blocks underneath, between the deck and bottom frames.

Put a block of wood under the end of the horn, so you'll be able to set a fastening with screws or bolts to secure it. On the afterdeck, provide a solid block of wood between each frame for the sheet blocks. Put the bottom on, glued and nailed or screwed. It is customary to use ¼" marine fir plywood here but, again, use your own discretion. Put on the woods for the runners before putting the deck on, since you'll find it easier to get at them for fastening in this manner. Lag screws don't hold too well, though they are frequently used; you're far better off putting bolts through the ribs and into the runners. If you use this system, the bolt nuts should be on top of the ribs on the inside of the boat. In this way, they can simply be unscrewed or turned off when removal time arrives.

Glue and nail or screw on the deck. The plans call for plywood. Successful scootermen have used ½" marine birch, mahogany or ¼" exterior fir. Construct the horn. The Fishman boys have used three ¾" pieces, giving them a lamination 2¼" thick by approximately 7' in length. Make this of spruce or whatever other wood you please, but make sure it is laminated for the

extra strength. From there on in, attend to the rigging and the sail-making.

As a matter of record, No. 16 gauge ⅞" Anchorfast nails on the bottom and ¾" fasteners on the deck are more than adequate. Cover the outside of the chine with ¼" plywood. You'll be able to fasten the outside chine plates to it with screw fastenings without worrying about them pulling out.

Joseph H. Weeks of Patchogue, Long Island, submits the following specifications for his design of the South Bay scooter: deck beams, ⅞" by 2"; forming piece, ⅞" by 4"; mahogany band, ½" by 4"; deck, ½" cedar; planking, double ⅜" weldwood; coamings, ½" Philippine mahogany; runner woods, 2½" by 3" oak fastened with galvanized-iron bolts; right-angle steel runners, ⅜" by 1"; bowsprit, fir 3" by 5"; mast, spruce 3" by 3"; boom, spruce 2¾" by 2¾"; jib club, spruce 2¼" by 2¼"; standing rigging, ⅜" gal. wire rope or ⅝" stainless steel.

J. W. Muller and Henry V. Watkins suggest that a 14' scooter should have runners about 10' long, slightly rocker-shaped, 1" wide and from 1½" to 1¾" high, being so set and ground as to bevel inwards. They are set about 20" apart. It is in the set, shape and location of these runners that further evolution, efficiency and increased speed as a racing machine will come. Except for a few odd-size screws, boat nails, paint and varnish and so on, Muller and Watkins present a bill of materials including 125' of clear ½" pine for the deck and bottom; 20' of 1½" oak for the bottom ribs, runners and such; 10' of 1½" cedar for the deck ribs; two strips of ⅞" x 3½" x 15' clear pine for the inner side plank; three strips of ½" x 4½" x 15' oak for the outer side plank and coaming.

You will need five gross of 1" No. 8 brass screws for the deck and so forth; one gross of 1½" No. 10 brass screws for the deck and so on; 2 lbs. of 1¼" galvanized boat nails for the bottom; two dozen ¼" x 3¾" bolts for the runner woods; one pair ¼" x 1" x 9' cold-rolled steel shoes and screws for same according to these builders. They recommend a spar of stiff spruce for the mast, boom, bowsprit and so on.

Before building your South Bay scooter, write to Mr. William Bannet, South Bay Scooter Club, 140 Garritsen Ave., Bayport, Long Island, N.Y., for additional information and the "inside" answers to any knotty construction or navigation problems that may come up. As secretary of the scooter club, Bill Bannet will be glad to recommend sources for materials if needed.