JUNE 1958

OWNERS REPORT on the OLDS

35 CENTS

POPULAR MECHANICS MAGAZINE

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Jet "Donkeys" for The Big Jets—
Page 72

In This Issue

WHAT'S IT LIKE TO LIVE IN A VACUUM?

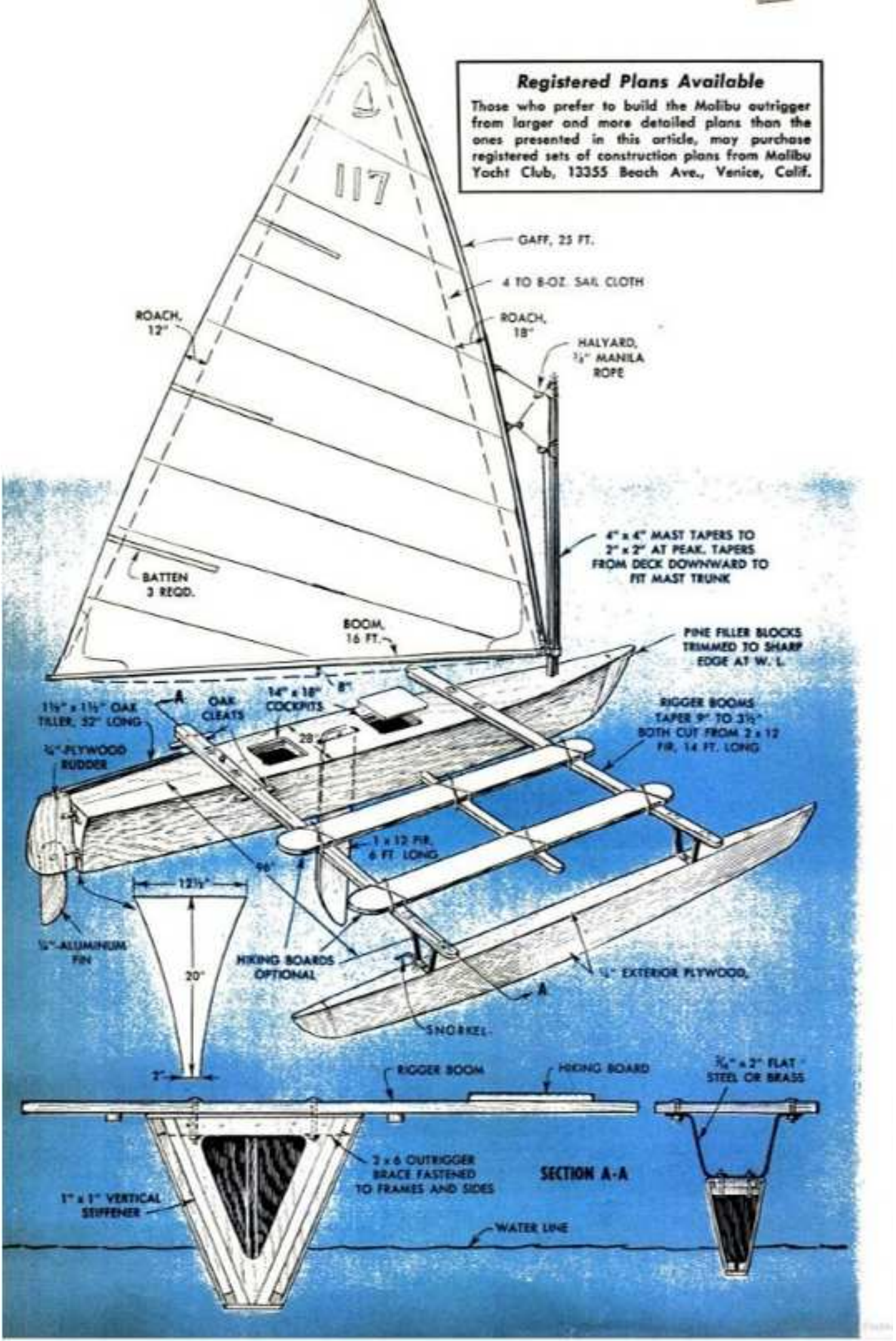
What We've Learned From the IGY

BUILD AN OUTRIGGER SAILBOAT

Outrigger for Fun in the Surf

HERE IS THE MALIBU outrigger, an 18-ft. sailboat that can be safely launched in fairly heavy surf and skims over the water faster than any boat of its size to date. The boat was designed for the Malibu Yacht Club by Warren Seaman, a World War II marine who, after seeing South Pacific natives use outrigger canoes in heavy surf without capsizing, decided to build a craft like theirs but with the addition of a sail and a few other refinements.

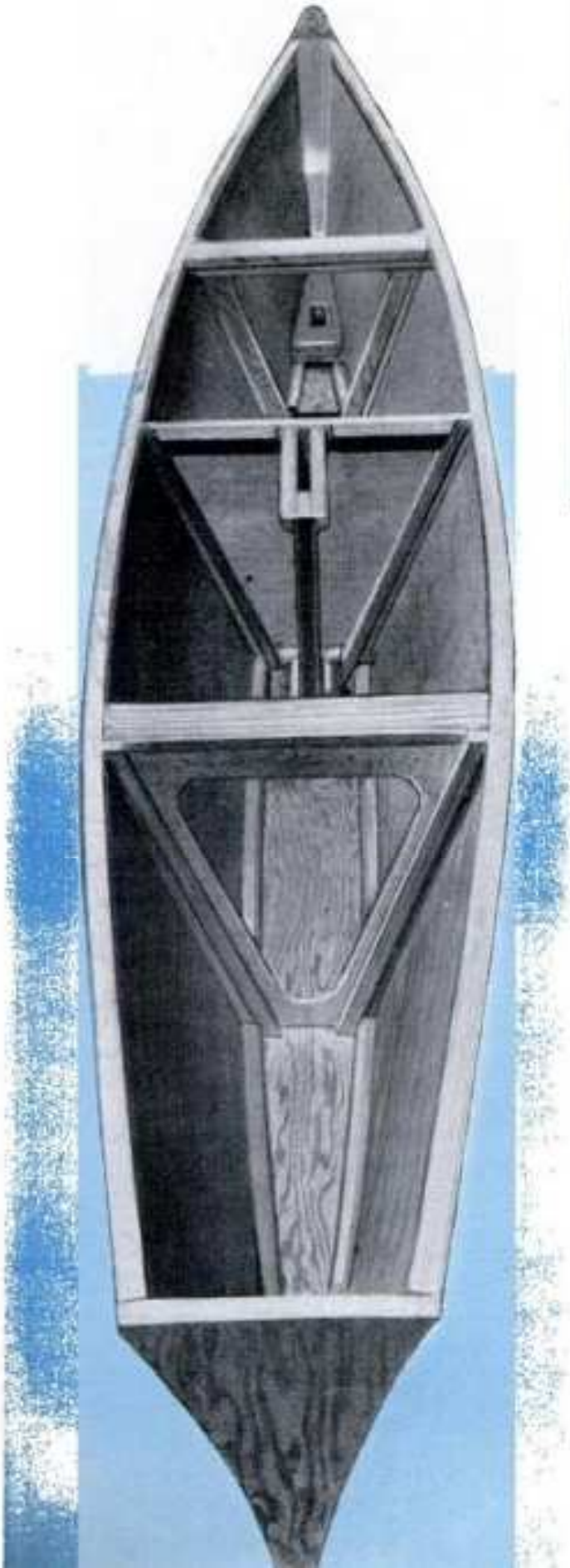
In most respects the boat is handled the same as any other small sailboat. Its shallow draft and comparatively large sail area give the outrigger tremendous speed in a strong breeze. Best performance is obtained by raising the yard or gaff to a point that results in a slight weather



Registered Plans Available

Those who prefer to build the Malibu outrigger from larger and more detailed plans than the ones presented in this article, may purchase registered sets of construction plans from Malibu Yacht Club, 13355 Beach Ave., Venice, Calif.

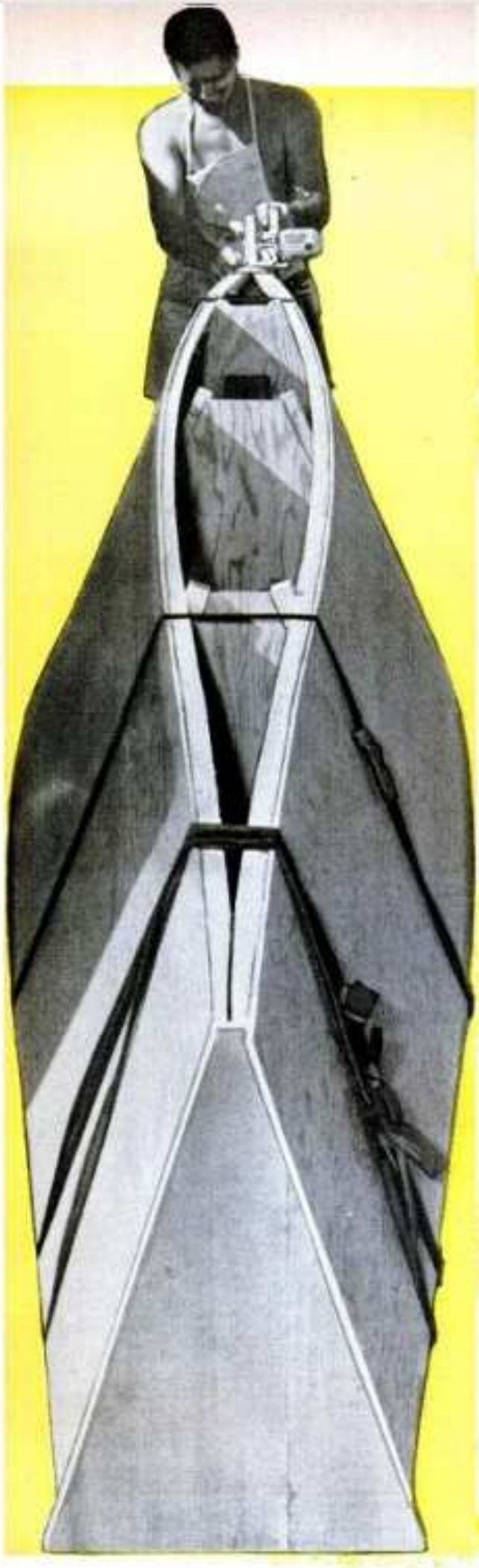
Right, when sailing on starboard tack, crew member moves out on hiking board to help stabilize craft. Below, basic hull is nearly completed with mast step block, dagger-board trunk and outrigger braces glued and nailed in place



helm and then sailing the boat flat on the water.

When launching the outrigger from a beach, the sail is first raised and the rudder fin is allowed to drag in the sand. The dagger board and paddles are secured under rope lashings that are used for tieing the hiking boards to the rigger booms. By pushing off at the right time, it is possible to launch the boat through 4-ft. breakers without difficulty. As soon as the wind fills the sail, the boat moves seaward. The board may be inserted in its trunk, when the water is sufficiently deep to avoid grounding. When coming ashore, try to catch a large breaker and ride it up on the beach, taking care to remove the board before shallow water is reached.

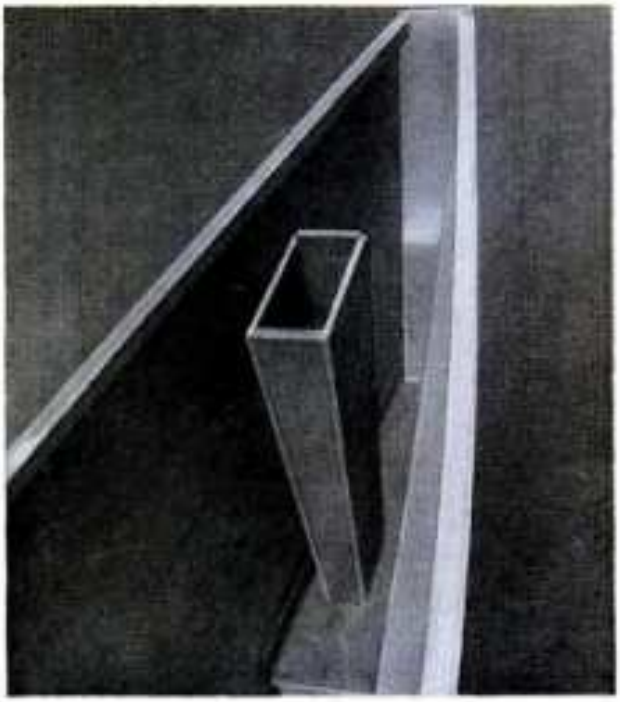
An amateur craftsman can build an outrigger sailboat like the one illustrated in 300 to 400 hrs., depending upon the care taken when finishing it. For good sailing performance, it is important to build the hull and float on a building jig to assure accurate alignment of the frames, transom and stem. A satisfactory arrangement can be made simply by driving three sturdy stakes in the ground. The stakes should be in line and be spaced accurately to the frame locations. The frames are then cut from plywood as indicated and temporarily nailed in the inverted position on the stakes. Next, the sheer clamps and chine logs are cut from mahogany stock and glued and nailed to the frames. The side planking is rough cut from a 4 x 18-ft.

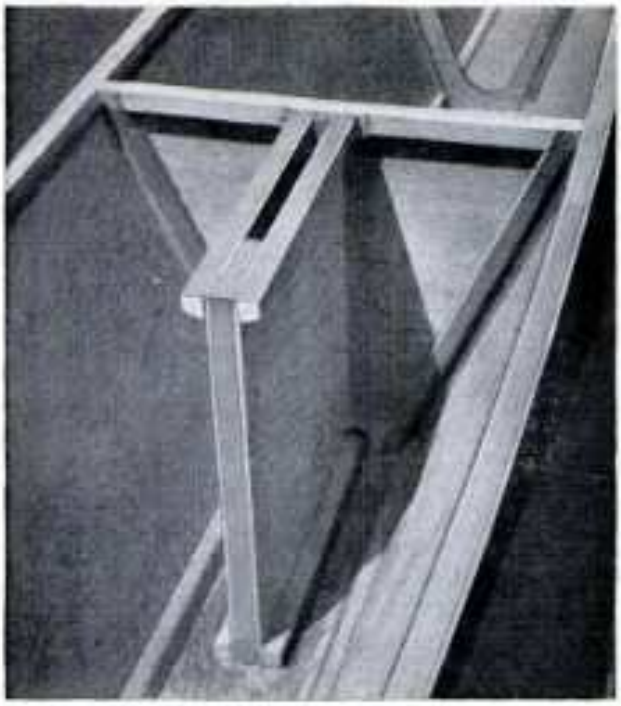


Left, inner-tube strips clamp side planking to frames and stringers for fitting. Above, mast-step block is nailed to chine logs and secured to side planking with resin-coated strips of glass-fiber cloth

panel of ¼-in. exterior plywood and is held in place on the hull framework for final fitting and fastening by means of inner-tube strips stretched around the assembly as shown. Next, the stem and transom are formed from mahogany lumber and are glued and nailed to the sides. Before fastening the bottom planking, it is necessary to fair (plane and sand to the required curves and planes) all of the members coming in contact with it to provide a

Below, mast trunk is glued in step-block cutout. Later, the top is nailed to deck beams and decking





The plywood dagger-board trunk is nailed and glued to bottom planking and after side of second frame

Gooseneck fastened to mast has fittings for attaching boom and lower end of gaff for lateen-type sail

watertight fit. The hull is then removed from the jig and placed in an upright position for installation of the dagger-board trunk, mast-step block, mast trunk and outrigger braces. The latter are glued and nailed to the first and third frames and hull sides to reinforce the hull and provide sturdy members to which the rigger booms can be bolted, detail A-A.

To complete the main hull, the interior is given two coats of wood sealer. Framing for the cockpits and additional deck beams are fastened to the sheer clamps spaced as shown in the photo at the bottom right of this page. After fairing all deck beams and sheer clamps, the deck planking is cut to fit, then glued and nailed in place.

The jig that is used for the main hull also, is used for building the float that is very easy to make. Four longitudinals are the only framing members required. A snorkel tube fitted in the deck permits equalization of air pressure in this closed unit to prevent rupture of the plywood. The float is attached to the rigger booms by means of two U-shaped brackets. These may be formed from $\frac{3}{16}$ x 2-in. flat steel or brass as indicated in detail A-A. For best results, all fittings should be of brass or stainless steel, fastenings of monel or brass.

The mast is formed from a 12-ft. length of 4 x 4 Sitka spruce that is tapered to fit the mast trunk. For racing purposes, the gaff and boom should be of laminated spruce but for day sailing, they can be cut from bamboo poles or other suitable material. The sail is made as indicated, and it may be lashed to the spars with rope, or provided with a bolt rope on the luff and foot for attaching and raising the sail by means of longitudinal grooves cut in facing surfaces of the mast and boom. To add to the life of the boat, the hull and float should be covered with glass fiber, using heavy cloth for the bottoms and lightweight cloth for the sides and tops. Spars and outrigger booms may be varnished or painted. ★ ★ ★