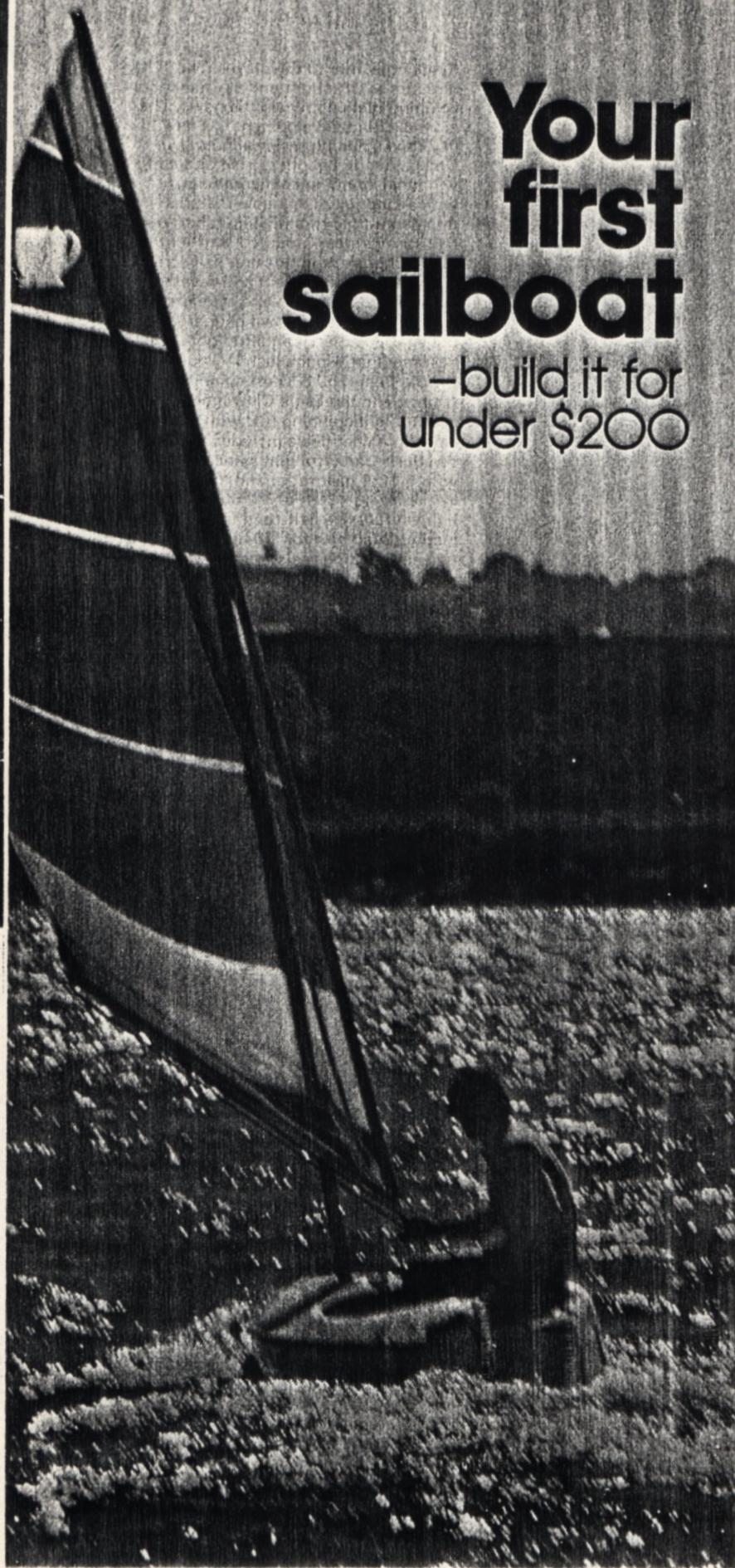


Your first sailboat

—build it for under \$200



It's easy to transport and set up, and just as easy to sail. Carrying handles on the deck double as tie-downs for easy cartopping (top photo). Lightweight hull is no strain for father and son to carry to beach (in center photo, boy is inserting the daggerboard; note rudder in locked-up position). Car-to-sailing time averages under 15 minutes. Cockpit seats two (above), but solo sailing is easy (left).

It's 12 feet of sailing fun you can easily build of plywood. That price includes the sail

By AL LEES

Too many people deny themselves the pleasure of sailing because they can't justify the investment in a boat they'll use only occasionally. If that's your hang-up, the answer is to build yourself this trim 12-footer, since all materials, including a polyethylene sail, shouldn't run you \$200.

Never built a boat before? Then this project's for you. It's specifically designed for the novice, and is as simple to build as it is to sail (and to transport). The 11-year-old son of the designer not only made his first solo sail in this boat, but handled much of the construction, under his father's supervision.

When we wanted to feature plans for a beginner's sailboat in this boating issue, we sought out Peter Stevenson, a southern California designer/photographer who'd created a parking-lot sail car for our March '72 issue. It seems that Pete got the sailing bug from these dry-run trials, and took to the water for his next sail project. Since then, he's designed a string of successful build-it-yourself boats for publi-

cations such as *Family Circle*.

About his PS assignment, Pete says: "This is our best boat to date, and it's one of the easiest to build. I call it the Mini-Cup because I modeled it after America's Cup contenders such as the Enterprise, positioning the deck forward of the hull bottom to create a flared bow, tumble home at the stern, and a reverse transom, for the latest in high-performance styling."

Construction couldn't be more straightforward; the hull and deck bottom are identical shapes, so can be cut simultaneously from stacked plywood blanks. Hull sides are straight-cut 9-in.-wide strips of ply. The V-bow tapers back into a one-piece arc-bottom for extra-fast planing performance without pounding. In the center of the foredeck is the simple, one-part daggerboard box/mast step combination that further simplifies construction.

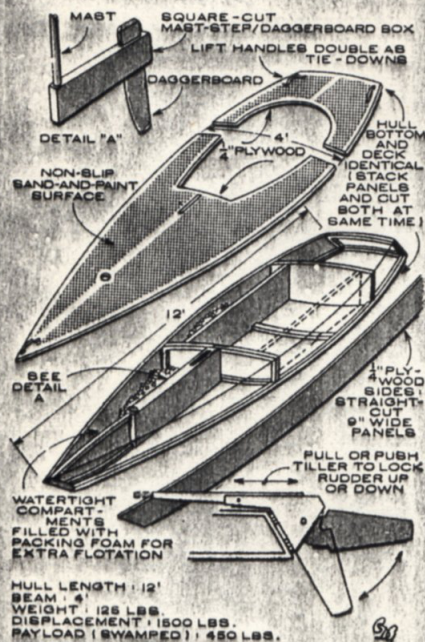
Inside the hull are four watertight compartments filled with flotation (Stevenson used EPS polystyrene packing foam). If swamped, the 125-pound hull still has 900 pounds of buoyancy and rides stably. If it should ever capsize, the hull can easily be righted; it will spill most water as it turns, retaining only about two inches that would have to be bailed. Total displacement is 1500 pounds.

Hard chine angles at the lower outside corners give the hull good roll stability. A cockpit-controlled, instant kick-up rudder makes beach launching a snap. The mast rig can be constructed of irrigation or exhaust pipe. The sail in our photos was homemade in a few hours from polyethylene. Sails of this type have been tested for years and have handled speeds over 30 knots.

The boat is a frisky performer: A large, high-aspect-ratio daggerboard allows the boat to point well into wind, and on a reach across the wind the boat is surprisingly fast. In a gust, there are few boats at any price that you won't be able to catch.

Maneuverability is exceptional. The large control surfaces and shallow draft make tacking virtually instant. As quickly as you can move your weight to windward, the boat takes off on a new tack.

sail kit that would cost you about \$50. That two-color sail is offered to PS readers by Sailrite Sail Kits, 12937 Venice Blvd., Los Angeles 90066. For Mini-Cup plans, make check or money order payable to Stevenson Projects. Inquiries about the Mini-Cup should have a stamped, self-addressed envelope.



Expert plans for \$5

Detailed construction plans for the Mini-Cup are \$5 from Stevenson Projects, P.O. Box 584, Del Mar, Calif. 92014. Plans packet includes complete instructions for making your own polyethylene sail (for under \$10) and includes full ordering information for an optional nylon



Porcupine heater

This porcupine throws off heat—not quills. Because of its strange geometry, it can deliver extremely high heat in a small space without impeding air flow. Though the idea has been around for years, it's been too expensive for mass production. Now, Kanthal Corp. (Wooster St., Bethel, Conn.) has developed a less costly manufacturing process. Kanthal makes the elements from either nickel-chromium or iron-chromium-aluminum resistance wires with outside diameters of one-half to four inches. Threaded on a ceramic core, the porcupines can be mounted almost anywhere, says the company. But they're probably most useful for heating air—in clothes dryers, for example.—*Laura Wessner*



Smart copier

Medic for its own maladies, the Xerox 5400 copier/duplicator is smart enough to tell you what ails it. A microcomputer translates problems—such as paper jams or low ink levels—into troubleshooting codes. Even inexperienced operators can make repairs by following instructions on coded cards—which should reduce service calls. Back on stream, a memory tells you where you left off and completes the job. You can rent the Xerox 5400 for \$525 a month or buy it for \$25,000. With an automatic 20-set document sorter, prices are higher. —*L. W.*