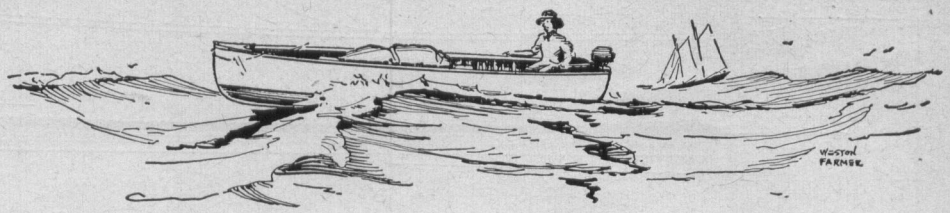
SCAMPER

How to Build a Strip Boat



Scamper loves the big stuff and will haul great loads of duffel.

By WESTON FARMER

WHETHER YOU cruise along the rockbound coast of Maine or on the mellifluous waters of the Chattahootchee, chances are you've ridden in a strip boat. They're everywhere.

And there is good reason for this. Time was when boatbuilders could spile a plank and fay a sawn frame, and thought nothing of building up a complete planked and framed-out clinker hull in one day for eight bucks. But now—well, since anybody can nail one strip to another all day long, the boss hands a crew of two a bunch of slats, a transom, stem and keel, a power sander and says, "Last man done is a monkey's uncle!" And the art of boatbuilding becomes a nailing contest.

Which is just as well, I guess. What with a lot of things in the world being bastardized and watered down, it probably is good that the strip boat holds up. It has a rugged hull, of true boat shape, and one that requires a minimum of preparation for building since it fairs itself as you build and there is little need for lofting.

The theory of the strip boat is so simple that just about anybody can grasp it. You have a transom, naturally, and a keel with an inside rabbet, and a stem. The girths are all equal in that portion of the hull where strips apply—any differences in hull girth from the lower edge of the strips down to the rabbet are absorbed in one wide plank called the shutter, or stealer.

To reverse the illustration: the stealer is fastened to the rabbet, and from that point up to the sheer, all the planking is in narrow strips, edge-nailed to each other, with girths from shutter or stealer to the sheer line all equal at each mold station.

To provide a boat of this simple construction I have designed and built *Scamper*.

Scamper is 14 feet over-all; has a 50½-inch beam; is 19 inches deep; weighs about 155 pounds dry. She'll do 12 to 14 mph with from 5 to 7 hp, and materials will cost you about $50.

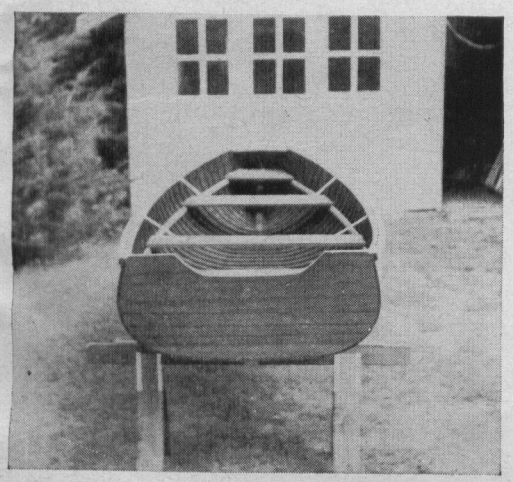
Study the outboard profile and arrangement plan. You'll see a boat of normal form, with a stern seat open at the aft end, so you can bail. You'll see a skeg, which is not needed at all, but which can be used if you fancy one.

If you're a cruiser born, and like to lope it on long jaunts, a ridge pole and a pliofilm or duck spray hood will keep your duffel dry. *Scamper* will do the rest. She is eager; loves her work; likes the big stuff; will haul a great load.

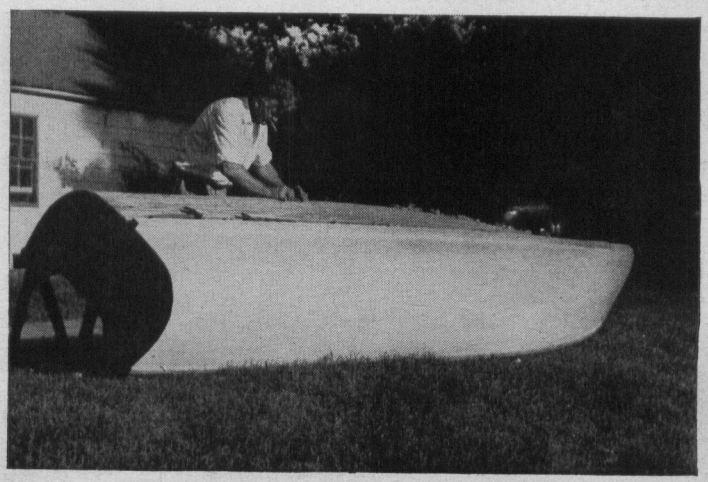
For her construction, you'll need the following materials: 14 pieces of red cedar rift sawn (edge grain) for planking. These will be rough sawn 5/4" stock, 15′ to 16′ long and at least 6" wide. Pick it out yourself if possible. Thicknesses of rough lumber are generally uniform, but lengths and widths vary widely.

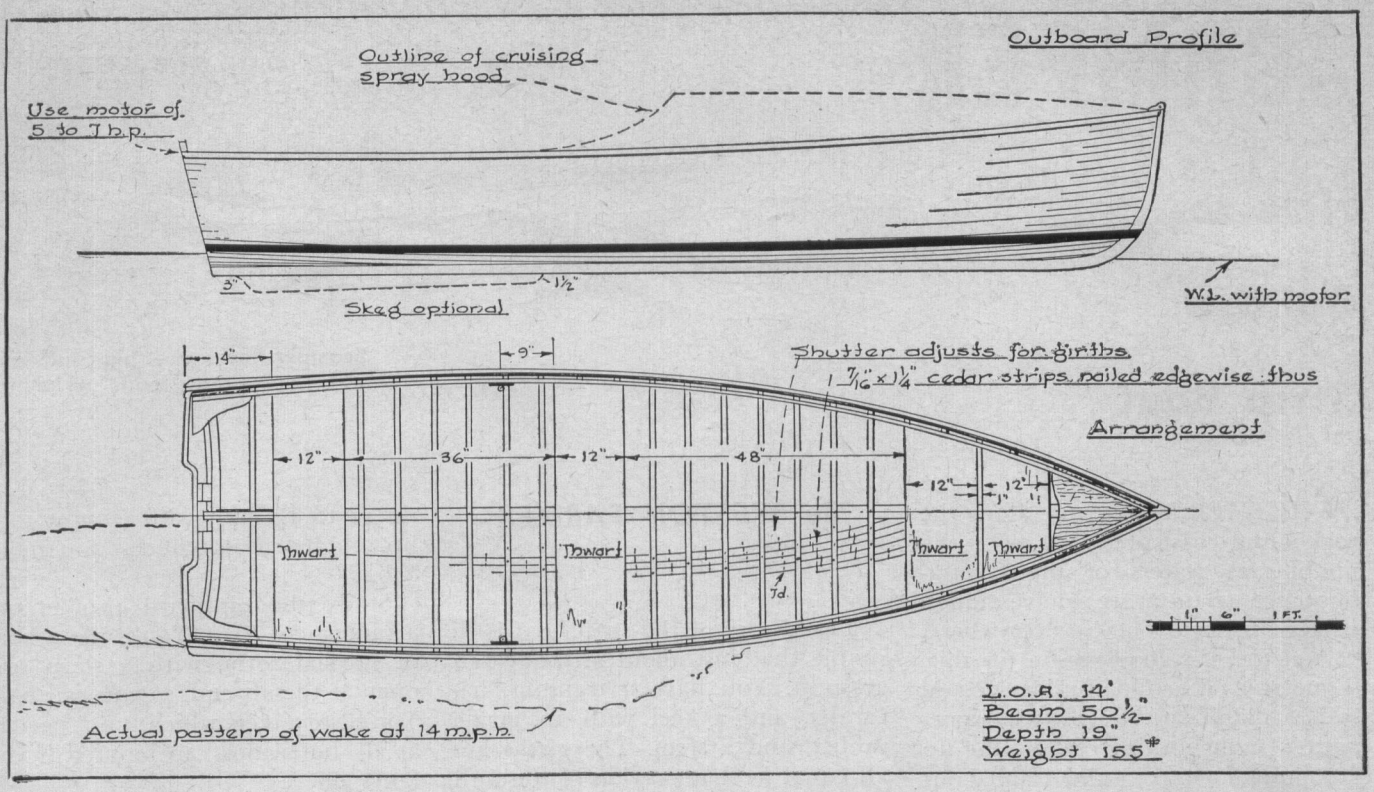
I paid $1.80 per board for my stock. It will cost less on the West Coast, more in the East. A piece of

Here the hull has been trimmed out with risers, wales and seats.



Weston Farmer, Scamper's designer, at work planing and sanding her hull. Note beautiful finish of hull.





An ideal arrangement, proved by usage, is dimensioned above. In the profile view an optional skeg is shown; also the outline of pliofilm spray hood.

2"x2"x12" white oak makes the keel. One piece of 2"x8"x4' white oak makes the stem and knees. One piece of 2"x12"x5' makes the mahogany transom. Four pieces of 5/4"x6"x8' green bending oak (white oak) makes the frames. One piece of 1"x5"x16' oak, mahogany or fir will be needed for the wales and risers.

If you can't find old 2 x 4's around your shop, you'll need to corral about 60 lineal feet of this stuff, No. 3 or worse, to make the stocks from. In addition you'll need about 4 pounds of galvanized shingle nails, and about ten pounds of 7d galvanized flathead nails for edge nailing the strips. Paints, a few sundry screws, and such things as sandpaper will be needed.

Plane up your framing oak first. Out of the stock you have bought, you should get 1" thicknesses, and slightly more than 4" widths easily, as depicted in Fig. 1. In Fig. 1-A you see the method of marking. In Fig. 1-B you'll see how the necessary edge grain is obtained by ripping.

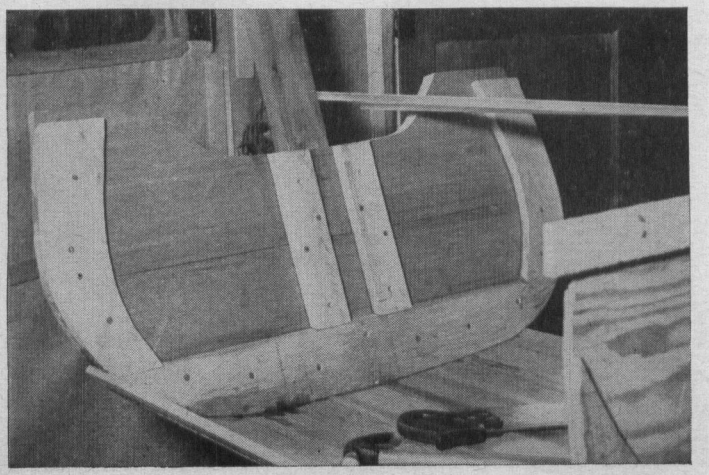
I know that most theories call for flat grain in bending oak. But the boards you buy are seldom cut that way, and the edge grain on so light a frame works all right, I have found.

Subtracting the saw cuts, as at Fig. 1-B, you'll get two strips each about 7/16"x7/8" with the right and left faces planed.

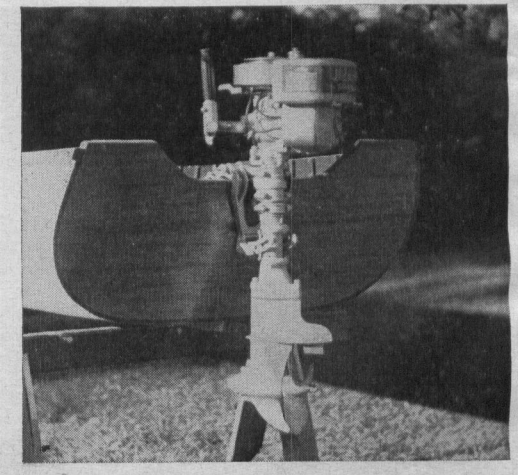
Knock off the rough 7/16" sides with a standard radius knife in the shaper as at Fig. 1-C. If you don't have a shaper, buy the knives and let your local sash and door factory run the things out. It will only take about an hour of machine time for all 27 frames in the boat, including the short frames forward.

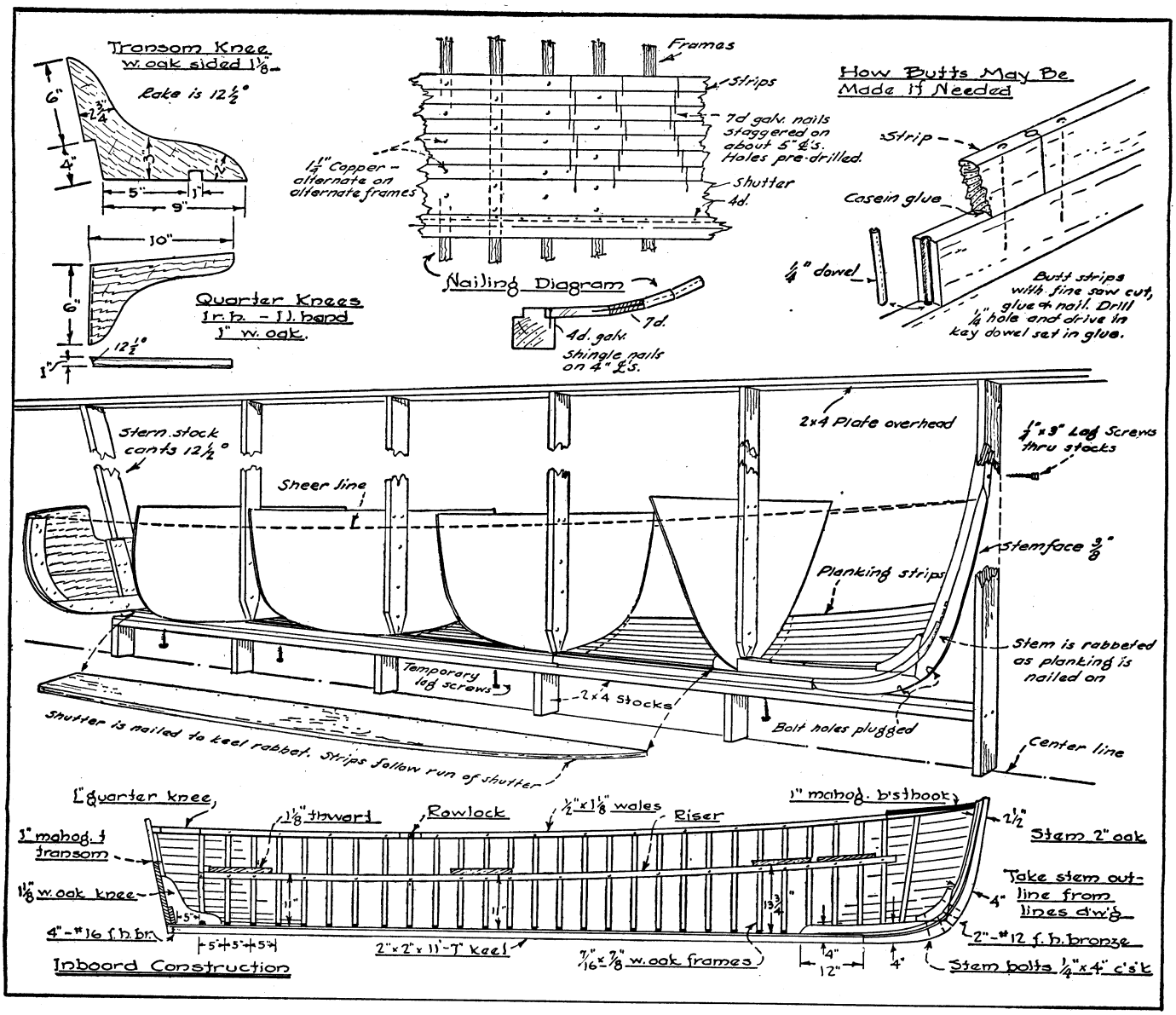
I have allowed for 32 to 34 frames in the materials list. This gives mar-

Here's a good shot of the transom and cheek pieces. Planking has progressed on both sides to bilge turn.



The transom is cut to let the cavitation plate line up below keel.





A 2" x 4" plate is scabbed to the shop tie rafters, and 2" x 4" stocks are set up on which to lay the keel and erect the molds. Note copper clinch nail scheme.

gin for occasional breakage. Put the frames in a pile of wet sawdust, or wrap them in gunny sacks and keep them watered by sprinkling until you are ready to heat them.

You get the planking strips out as shown in Fig. 2. Your 5/4" stock will probably average 6½" wide. Mark as in Fig. 2 and cut horizontally as shown. Use a thin planing saw blade.

If the table saw won't handle a full-depth cut, finish the job by hand ripping as the sketch depicts. Plane only one face of the board to start with. Use careful cuts with an eye to saving as much thickness as you can.

This will give you rough strips of cedar about ½"x1¼". By kissing off the lower half of the split board in the planer, you can thus get all the *inboard* faces of the plank strips smooth. Leave the saw marks and fuzz for the outboard face—planing and sanding later will take care of that.

You'll end up with strips roughed at about ½"x1¼". By the time the finish sanding is done, the thickness should be no less than 7/16". The 1¼" dimension may go down to 1⅛" by the time the hollow and round is put in on the shaper as per Fig. X. Therefore I have nominated several sizes to call attention to the fact that there are maximums and minimums.

Your strips are now gotten out. The next step is the building stock and the transom, keel and stem.

The stocks are shown above and require little explanation. They are of 2"x4" and at a good working height. This makes building easier.

Next make the molds. These are of ⅜" plywood preferably, but may be of scab lumber. Whether to loft or not is up to you—if you can get fair curves for the sections on the dimensions in the body plan, all well and good. If you'll realize that the plans are drawn 1/16 full size, you can see that even the width of a pen line on the plans can scale ½" off from actual, so if the dimensions shown are not right on the button don't get in a stew—just average them out to fair curves, preserving the general size, and you'll be all right.

If you hit this condition, perhaps it would be best to start from scratch and lay the whole job down on paper taped to your dining room floor, running in all waterlines as

close to dimension as the batten wanted to go, and making your mold body plan from that.

I can hear somebody say, "Whyncha make up yer mind?" I could lay the thing down full size in my design office, but you couldn't duplicate that because the columnar consistency of your batten wouldn't be the same as mine. No two boats lofted in different locations are the same. The pro boatbuilder would use the molds as a guide to the shape, knowing that the planking will stand away from the molds anyway.

Erect the transom stem and keel on the stocks, fastening the keel and stem temporarily through the 2 x 4's with 3" long 1/4" lags.

Put a batten around the molds when they are erected at the sheer line. Make a thin batten about 1/8"x1/2" of oak. Mark on this batten from the end, the distance of 24 or 25 of your compacted planking strips. This is the girth of the strips from sheer to shutter.

Place the sheer mark on the batten on the sheer mark on the mold, and bend the batten around the mold. Where the end of the batten terminates at the bottom of the mold, place a mark. The distance between this mark and the inner edge of the keel rabbet is the width of the shutter at that mold.

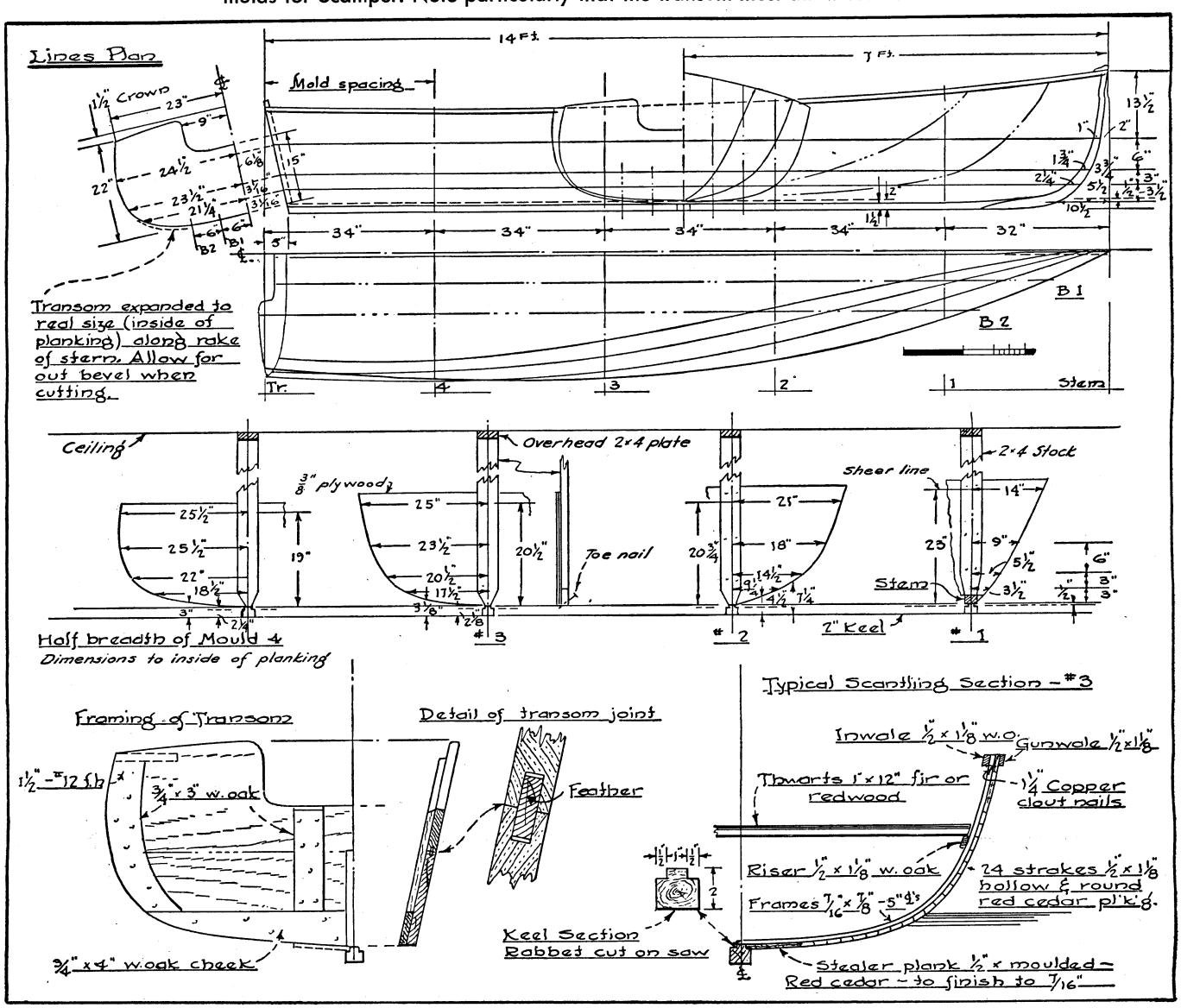
Lay off these distances on the shutter board, join the points fairly with a batten, and saw out the shutter planks. Do them both at once to assure evenness of girth at all molds.

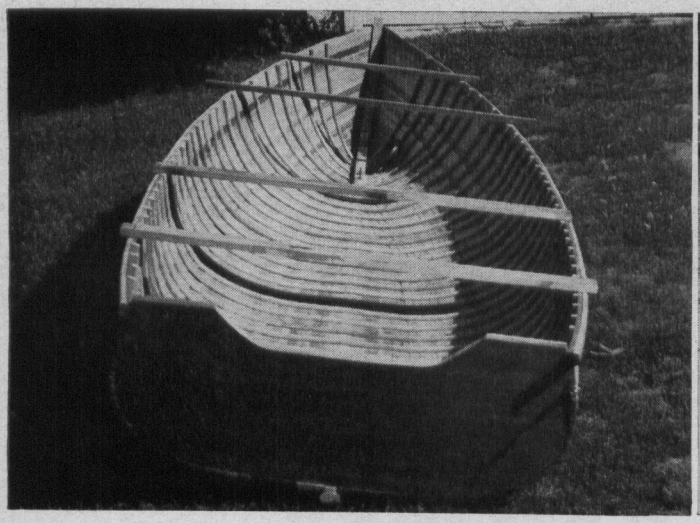
Spread casein glue on the rabbet, place the shutter into position, and nail every 3" with galvanized shingle nails into the keel of Scamper.

Now you start planking. Scuff off the hollow of the first strip with a plane. Taper the fore end of the strip to fit the rabbet forward, and nail the strip edgewise every 10" or so with 7d galvanized nails. After nailing each strip to its neighbor, put a light pencil mark inboard, indicating where the nail is. This will help show you where the blind nails are when you're framing.

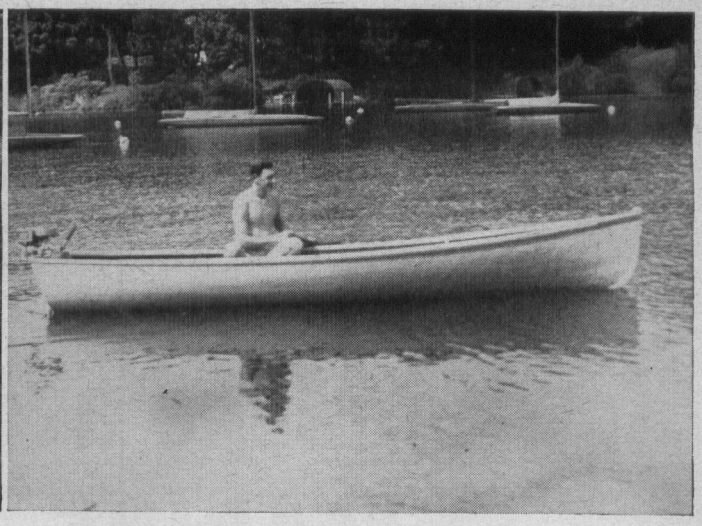
Use an "egg beater" and a drill to pre-drill for all nail holes, else the strips will split. It's best to paint casein glue in the hollow of each strip as you go. This tightens the boat, preserves shape in framing. Cut the rabbet in the stem as you go, having someone buck your cut with a heavy wood block. This method assures each strip laying in correctly.

The lines plan below will supply all dimensions necessary to make up the molds for Scamper. Note particularly that the transom must allow for bevels.





Here the strip planked hull has been framed out and cross-spalls tacked across the wales to hold hull shape.



Scamper poses with crew member just after launching. Note buoyant trim and her long, graceful hull lines.

After carrying the planking to the sheer, the boat is framed. Use an old section of rain spout with soldered end piece over a good wood fire to soften the frames. Fifteen minutes of boiling will make the oak say "Uncle."

Mark for the frames inboard, drill every other strake for the 1¼" clout nails, put the nails into these holes, and then, with a helper, nail the frame to the keel with a galvanized shingle nail and, with a weight to buck (called a clinch iron), nail the frames in.

With boiling, the frames will take about a day to put in. If you can rig a steam box, you can do it in half a day.

While the frames and the nails are still warm and before the copper has crystallized, use a broadfaced nail set and buck the clout nailheads into the planking so the outer skin can be planed.

That's about it, Mates. I can think of only one or two points more. Use two shingle nails per strake into the stem, two per strake into the transom cheeks, one 7d per strake into the mahogany transom.

If the planking runs into an uneven sheer, as may happen on your first boat, use a wider sheer strake, edge nailed with finishing nails, which can be set as deep as needed, and the sheer line can then be planed to a fair sweep.

Next put cross-spalls from sheer edge to sheer edge, remove the molds, paint the inboard planking, run in the wales and risers, cut the thwarts, turn her over and plane, sand, and paint.

A boat built of small pieces like this goes together easily. All it takes is gumption.

Getting a start is most of the battle —using the old bean is the rest of it. And *Scamper* here is a little sweetheart if you ever saw one.

Aside from the ease of building, a strip boat uses very few boards. Oak and cedar are re-sawn in your own shop to give low lumber bill.

