

FLYING DUTCHMAN

BY ROGERS WINTER

Here's a flat-bottomed, shallow-draft boat for
sailors who want to get on the water with a fast rig, but feel that
other types are beyond their limited finances or ability

DURING THE LAST half of the nineteenth century and well into the twentieth, in both the United States and Canada, flat-bottomed sailing craft in great variety were used wherever there was shoal water or a necessity for low-cost boats.

Despite their simple form, these sailing scows very often showed quite remarkable weatherliness and speed, due to the fundamental elements of great speed in their hull design, and there are numerous recorded instances when scow-type craft showed their sterns to fast commercial sailing vessels and yachts.

The use of leeboards was adapted from Dutch craft which, despite their flat bottoms, shallow drafts and wide beams, are famous for their sailing ability.

Flying Dutchman, therefore, has a long and distinguished ancestry. It is a boat for sailors who want to get on the water with a fast rig, but feel that other types are beyond their finances or ability to construct.

Start building by getting out the side boards, which are cut from a length of $\frac{1}{2}$ " marine plywood 12' long. The dimensions of the side boards are given in the profile view of the Lines Plan.

If it is desired, and lumber this

wide is available, the sides may be cut from 16" wide 12' lengths of redwood, cedar, cypress or other good boatbuilding woods.

The chines, which are ripped from 1" x 6" fir, are bent around the bottom edge of the side boards and nailed in place. These bends are fairly sharp, and it may be necessary to soak the chines in water for a day or two or to cover them with rags over which boiling water is poured, in order to make them flexible. Of course, if you are lucky enough to have steaming facilities available, bending the chines in place is no trouble at all.

The next step is to cut the bow piece to shape from a length of 2" x 12" lumber, according to the dimensions given in the detail. After this is done, the transom is sawed from a 4' x 8' sheet of $\frac{3}{4}$ " marine plywood. The side frames on the transom are ripped from 1" x 6" fir, smeared with glue and fastened in place with $1\frac{1}{2}$ " No. 10 flathead wood screws. The transom frames are intended to provide a method of fastening the side planking to the transom. Don't omit them and attempt to fasten directly to the plywood. Plywood will not hold either nails or screws sufficiently well for the frames to be omitted.

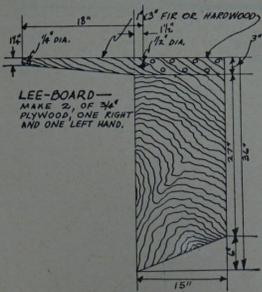
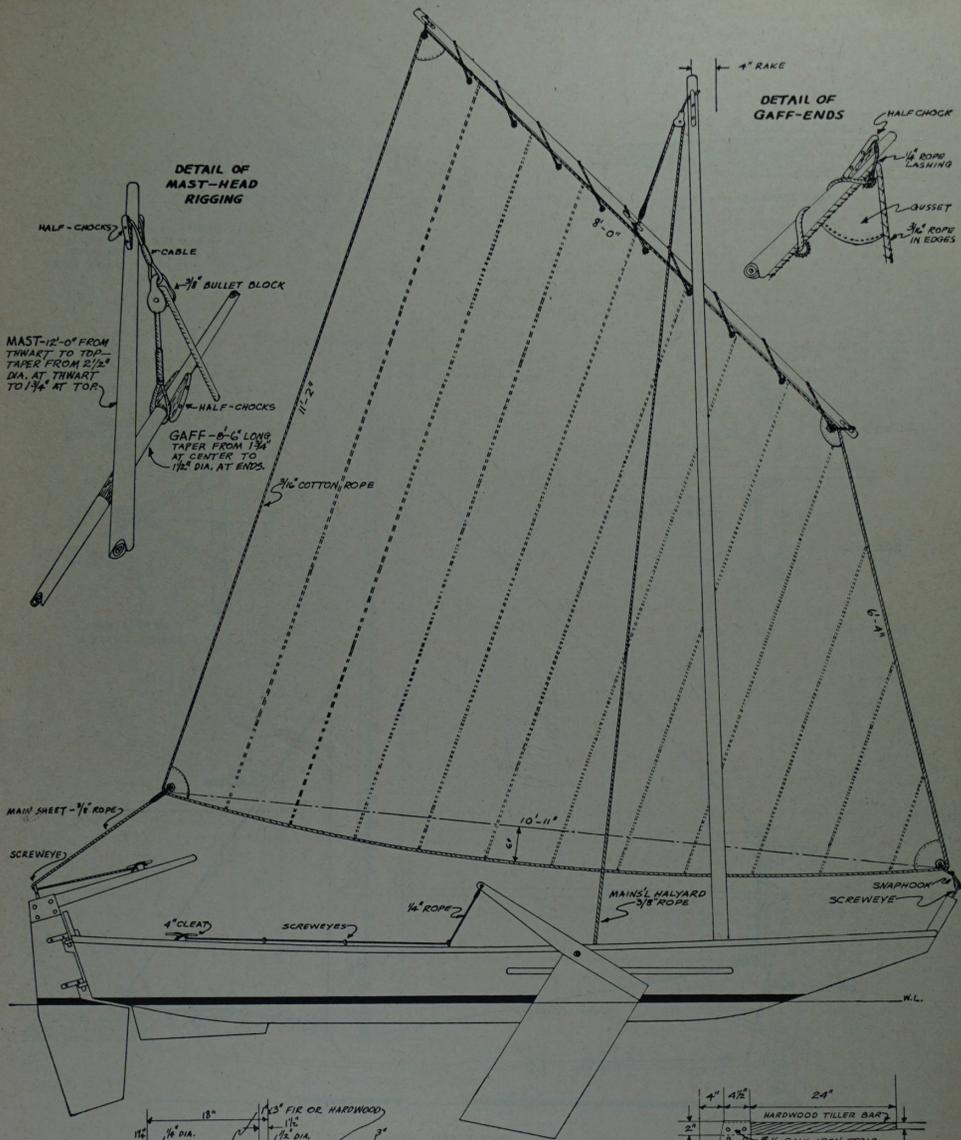
It is now time to assemble the sides, bow and transom. This is best done on top of two or three saw horses about 6' wide. The assembly is squared up with a framing square, or by using a steel tape to measure from one corner of the transom diagonally across to the opposite corner of the stem. Note this distance, and then compare it with the same distance as measured between the other corners. When the two distances are identical, the assembly is square.

Fasten the sides to the bow and transom with $2\frac{1}{2}$ " boat nails, either galvanized or Anchorfast, and use a good grade of marine glue in the joints. Space the fastenings closely. Or, although they are more expensive, $1\frac{3}{4}$ " No. 10 flathead wood screws may be used.

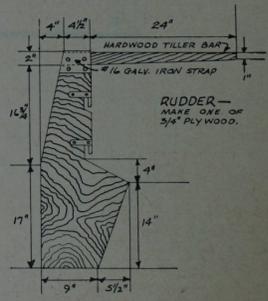
All fastenings or hardware, wherever used in the boat, should be of hot-dipped galvanized iron, brass or bronze. Black iron nails or fittings will rust out in a few weeks, especially if exposed to salt water.

When setting the transom and stem in place, remember that their bottom edges take a bevel, which must be allowed for.

The assembly of the sides to the stem and transom should be done with the boat upside down. When the assembly is finished and the hull

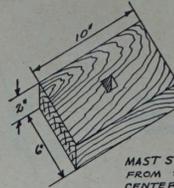


**OUTBOARD PROFILE
DIPPING LUG RIG**

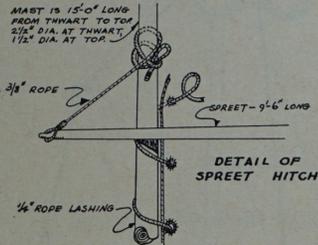




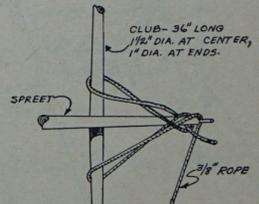
MAST THWART—MAKE ONE FROM 2 1/2 x 8" FIR OR PINE. MAST HOLE IS 2 1/2" DIA.



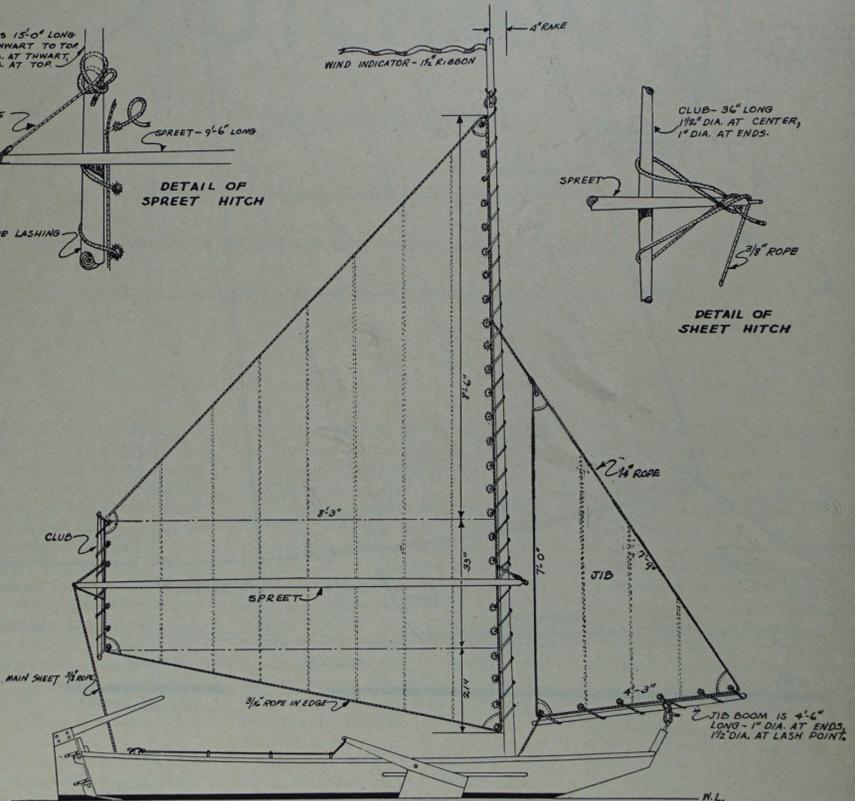
MAST STEP—MAKE ONE FROM 2 x 6" FIR OR PINE. CENTER HOLE IS 1" SQUARE TO FIT 1" PLUG ON MAST FOOT.



DETAIL OF SPREET HITCH



DETAIL OF SHEET HITCH



OUTBOARD PROFILE
SPREET-SAIL RIG

is squared up, it is time to start planking the bottom. This is done with 1" x 6" material, applied crosswise. Fir, pine, cypress, cedar or any good boatbuilding lumber can be used. It should be good, straight-grained stock, free from warps, knots, shakes, splits or winds. In boatbuilding, cheap lumber is the worst possible investment.

Start applying the bottom planking strakes at the stern, working forward. It would be well to tack a temporary brace or two across the hull ahead of the planking to keep the assembly squared up. Leave the width of a hacksaw blade between each strake of planking to allow for the wood's swelling after it has been in the water a couple of days. Use nails, closely spaced, to hold the planking, or 2½" No. 10 screws.

After the bottom is in place, gather several friends together, and turn the boat over with their help.

With the boat right side up, start inserting the side frames, which are ripped from 1" x 6" stock. The frames are notched to fit over the chines, and each frame is exactly alike, so that when one frame is carefully fitted, it can be used as a pattern from which to cut the others. Fasten the frames to the sides with the same size nails or screws used to fasten the transom and stem.

After the frames are in place, rip out the seat risers, fasten them in place, and then cut out the seats from the ¾" plywood and the mast thwart from a length of 2" x 6" lumber.

The mast step goes in place before the mast thwart is put in place. Fasten it securely to the bottom with glue and 2½" No. 12 screws, running in the screws from the outside.

It would be a good idea to fasten the skeg, which is cut from 2" x 8" lumber, before the rear seat is fastened in place. Use 2½" No. 12 screws, drilling and countersinking the holes from the inside of the hull. Be sure you fair off the aft end of the skeg as shown in the Lines Plan.

Seats and mast thwart in place, saw out the rudder and the leeboards according to the dimensions as given in the details. Assemble them and fasten in place, the rudder with pintles and gudgeons that can be bought at any marine supply store, and the leeboards with ½" bolts.

Next come the masts.

Flying Dutchman is designed to carry either of two rigs. One is the dipping lug rig, which is a favorite for small boats in Europe; the other is a spreesail rig, which has been used, in one form or another, along the New England coast and as far

south as Virginia for a century.

The spreesail rig requires a mast, a spreet (or "sprit"), a club and a jib boom. The dimensions of each are shown in the details. All these spars should be made from Sitka spruce. The required materials are as follows:

- 1 piece 1½" x 1½" 3' 0" long
- 1 piece 1½" x 1½" 4' 6" long
- 1 piece 1¾" x 1¾" 9' 6" long
- 1 piece 2½" x 2½" 16' 6" long

Use a jack plane to fashion the spars, working carefully and slowly, taking the corners off first to produce an octagon, and then finishing off in a circular shape. The taper should be worked in while the spars are still octagon-shaped.

The dipping lug rig requires a mast and a gaff. The following material (also Sitka spruce) is needed:

- 1 piece 1¾" x 1¾" 8' 6" long
- 1 piece 2½" x 2½" 13' 6" long

Spars finished, it is time for sails. Sailmaking is a difficult and intricate art, so that it would be the better part of valor to have whichever set of sails you choose made up by a firm of professional sailmakers, many of whom advertise in all the boating and yachting magazines. The sail plans as given are sufficiently detailed so that any sailmaker will have no difficulty running up a set.

If having a set of sails made up professionally is absolutely beyond your pocketbook, however, the sails can be turned out at home—with the assistance of the female side of the family, who should be sufficiently bribed with suitable endearments, as she will be undertaking a big job of work.

If the sails are homemade, use twilled muslin or cotton drill. Synthetic fabrics are very hard to sew. Lay out the sail dimensions on a large floor and mark the correct shape on the material, including sufficient goods for the hems. After the sails are cut and hemmed, a ¾" rope should be sewed around all edges. Cotton line should be used for this purpose, and the stitches should pass through the line, not around it.

Install brass grommets as indicated to accommodate the sail lashings.

It is now time to think about painting. First, give the entire boat, inside and out, two coats of copper naphthalate or other anti-rot preservative. When this has dried—a matter of a day—finish the paint job with a good grade of marine paint. This costs a little more than ordinary household paint, but it lasts a great deal longer and is well worth the extra expense.

Before painting the rudder and

leeboards, seal the edges of the plywood with 2" fiber-glass tape and polyester resin. The edges of plywood are fairly tender and will bang up easily against even small underwater objects.

The traditional color scheme for this type of craft is white for the topsides, with the bottom up to the waterline copper red. Any color scheme, however, can be used, so long as the colors complement each other.

The spar work should be painted with good grade marine varnish, at least two coats.

Paintwork dry, masts stepped and sails rigged, *Flying Dutchman* is in all respects able and ready to go to sea. You have a summer of fun ahead.

To sail with the dipping lug rig, the boat is started downwind, with the sheet let out as much as possible without the sail doubling up against the mast. Both leeboards are pulled up as high as possible.

With the wind on the beam, the sheet is hauled in until the sail is well filled, and the leeboard on the side away from the wind is lowered to provide leeway. If the boat is difficult to steer, showing a tendency to come up into the wind, the leeboards are moved aft. Should a marked tendency to fall off the wind be observed, the leeboards are moved forward, using the series of holes indicated on the sides.

With the dipping lug rig, the sail must be dipped and shifted from side to side as the boat is tacked upwind. This makes this particular rig a two-handed affair, one crew member to handle the halyard and gaff and the other to handle the sheet and tiller.

Tacking with the dipping lug rig requires a little practice, but there is no sight on the water more beautiful than an experienced crew working a dipping rig into the wind.

The spreesail rig, in contrast, is a single-handed rig. While perhaps a little more complex, it is in some respects a smarter-looking rig and makes the boat easier to handle.

Tacking into the wind with this rig is performed in the usual manner, and the leeboards are adjusted forward or aft as explained for the dipping lug rig.

After a day of fun on the water, if the wind dies about sunset, hang a 3- or 5-hp motor over *Flying Dutchman's* transom, to port of the rudder, and you will be home in no time.

Large scale plans (1½" to 1") are available at a cost of \$6 per set. Send your order, along with check or postal money order, to Rogers Winter, c/o SPORTS AFIELD, 959 Eighth Ave., New York, N.Y. 10019.

