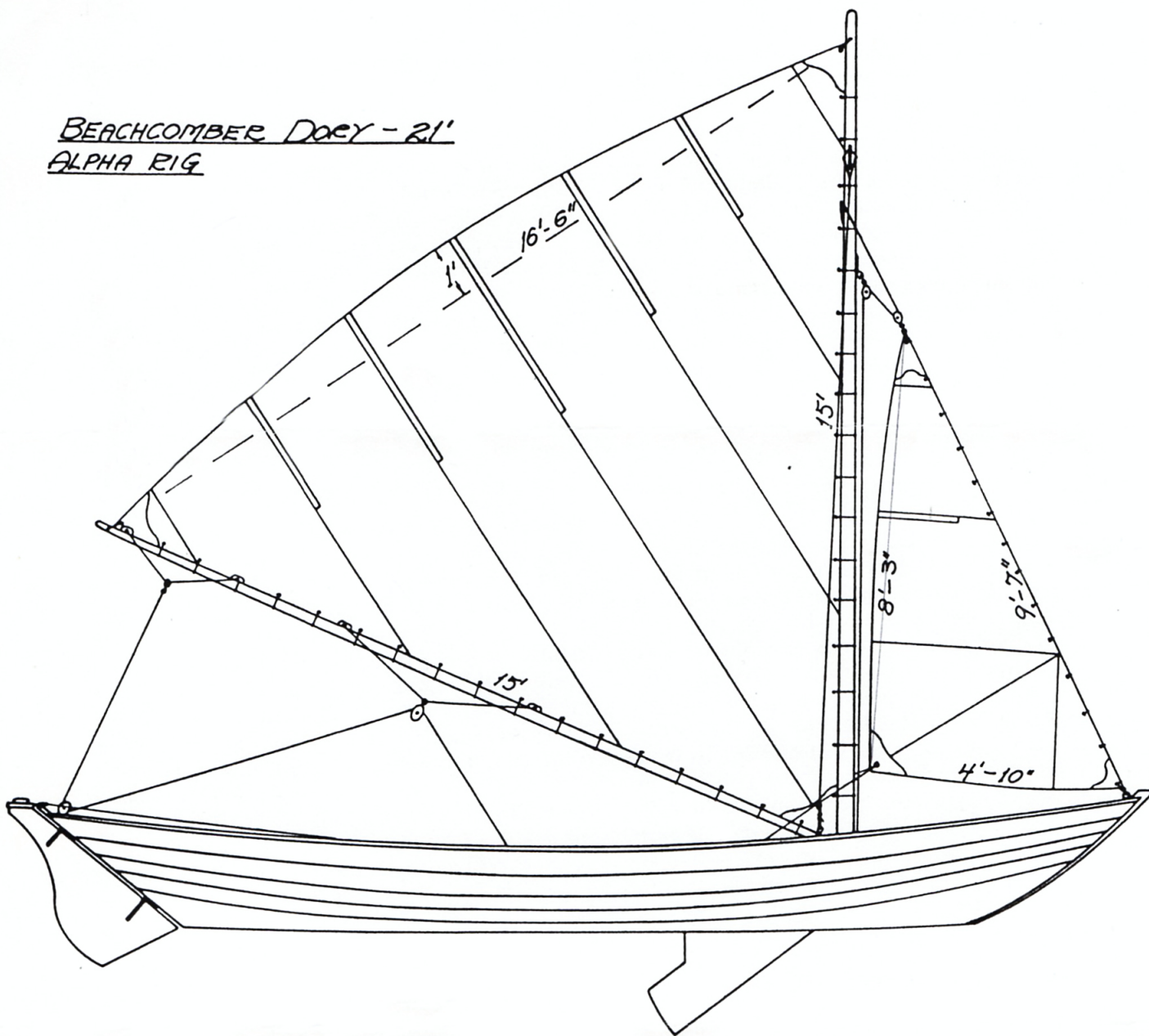
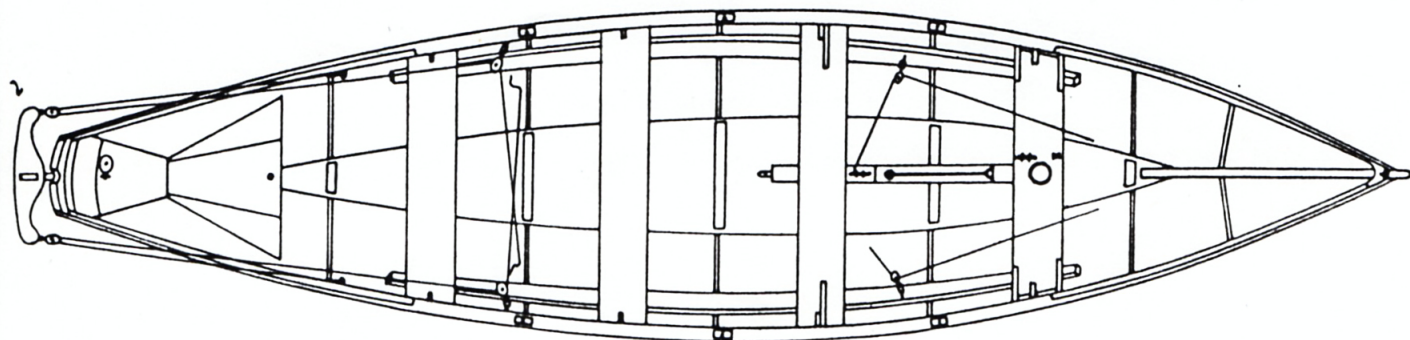


BEACHCOMBER DORY - 21'  
ALPHA RIG



FEET AND INCHES





Only the weight of the rudder itself is required to keep the pintles from slipping out of the gudgeons under most conditions. If the rudder should come unshipped, the tiller lines will keep it from getting away.

The only feature of the yoke that needs mention is the reinforcement of  $\frac{3}{4}$ -inch half-oval brass that binds and reinforces the center part of the forward edge where there would be some danger, otherwise, of breaking because of the short grain. Normally this brass is secured by screws.

The centerboard box is rather light, but that is the way Chamberlain's specifications show it. I do not think that much weight is saved by reducing the thickness of the upper half of the box to  $\frac{5}{8}$  inch. In fact, I would prefer that the sides of the box be  $\frac{1}{2}$  inch or even one inch throughout. The end posts should always extend through the bottom, as shown, both to stiffen the box and to permit caulking the ends from the outside. Copper rivets are the best fastening for the ends of the box, but these must be well headed over and set up tightly so they pull into the wood.

The box should be put together and bedded with waterproof adhesive, preferably epoxy, for additional strength as well as watertightness. The old builders like Chamberlain used white lead, which gave a tight seal, but did not make the construction any stronger.

The pivot pin is sometimes made of white oak or locust; if it is, it ought to be 1 inch in diameter. I have shown the pin as  $\frac{3}{4}$ -inch-diameter brass or bronze. It must fit tightly, yet be removable in case you wish to drop the board.

#### Pivot and Rod

Sometimes a large screw eye or even an eye bolt was fastened to the top of the board for attaching the rod used for raising and lowering the board. I show a simple strap arrangement of  $\frac{3}{4}$ -inch by  $\frac{1}{8}$ -inch flat bronze, attached with copper rivets. The handle is easily formed of  $\frac{3}{8}$ -inch rod with an eye to hook into the strap on the board, and a T-shaped outer end. This tee or cross-bar rests on the top of the box when the board is down, preventing it from going farther. When the board is up, the T-end slips under a special cleat on the front end of

the box, locking the board in the up-position. This is a simple but effective device that was pretty generally used on centerboard dories of the Beachcomber period.

One thing that should be mentioned is that the lumber thicknesses given are quite critical in some cases and should not be reduced, even if retail lumberyards attempt to argue otherwise. For instance,  $\frac{3}{8}$ -inch-thick pine for the bottom or the sides of the centerboard box should under no consideration be less than  $\frac{3}{8}$ -inch thick. Most "one-inch" pine boards as sold today are actually only  $\frac{3}{4}$ -inch thick. So you may have to have your pine planed up specially, and, if you do, I would specify a "plump"  $\frac{3}{8}$ -inch, which if it ran to  $\frac{1}{2}$ -inch, would be all the better.

#### Sailing Rigs

The Beachcomber-Alpha is a good boat to learn to sail in. It is a safe boat for youngsters in their early teens, but no toy. In fact, sailed hard and up to its capacity, this craft can provide thrills and a vigorous workout for most adult sailors. It can be rowed as well as sailed, and handles easily under oars, like the working dories of the Massachusetts Bay shore fishermen of the late nineteenth century from which it was derived. With a full rig, 50 pounds of lead ballast on either side of the centerboard trunk, and a crew of three hiked out on the rail, this boat will draw smartly to windward and handle like a spirited colt.

This is also an economy boat. The standard rig, contrived to be lifted out of the boat and carried home at night in a compact roll on the skipper's shoulder, is just about as simple and inexpensive as it is possible for a workable rig to be.

It is not suggested that the rig about to be described in detail is the best one or the only one worth considering. But it is the rig most used around 1915, when the Beachcomber-Alpha class was at its peak of popularity. It will do to set a norm, but a norm that a present-day builder would probably want to depart from to some extent. It does constitute a tried and tested rig that is probably the least expensive and the least complicated of any that are workable and safe. But some of the newer things like Dacron yacht rope, stainless steel



wire, and some of the newer fittings are more than worth the extra cost.

In describing the rig, we shall start at the bow. The luff of the jib is laced or seized to a length of  $\frac{3}{16}$  inch, 7 by 7 galvanized yacht wire with thimbles spliced in either end. The tack end is attached by a  $\frac{3}{16}$ -inch screw-pin shackle to a No. 1 galvanized swivel-eye boat snap, which hooks into a  $\frac{3}{8}$ -inch galvanized eye bolt through the stemhead. The upper eye of the jib luff wire takes another No. 1 swivel-eye boat snap, which is shackled to a single block for  $\frac{3}{8}$ -inch line. Another single block of the same size shackles to a 4- or 5-inch galvanized eye plate, which screws to the mast at the height designated on the rigging plan. Two  $\frac{3}{16}$ -inch screw pin shackles are needed for a fast-eye block; one shackle for a swivel-eye block.

The jib halyard of  $\frac{3}{8}$ -inch manila carries an eyesplice in the upper end just large enough to slip over the masthead, supported about 3 feet, 6 inches below on a wooden shoulder cleat. The lower end reeves through the block snapped into the thimble at the peak of the jib and back through the block fixed to the mast; it is hauled down taut, passing through a leader on the port top forward edge of the mast thwart, and securing to a 5-inch cleat on the after side of the thwart. This arrangement makes a separate headstay unnecessary.

The jib halyard arrangement is simplicity itself, but effective and generally substantial, although weak snaps have been known to break under the strain of pounding into a heavy chop. While  $\frac{3}{16}$ -inch manila might be sufficiently strong here,  $\frac{3}{16}$ -inch Dacron would be more than ample. Dacron, except for its higher cost, is to be preferred here, as in every other part of the rig, not only for its great strength and long-wearing qualities, but also because it handles easily and does not stretch.

The twin jib sheets of  $\frac{1}{4}$ -inch manila are permanently spliced into the clew of the jib, although some sailors preferred to have them on snaps. These sheets lead aft through swivel-eye single blocks shackled to  $\frac{1}{4}$ -inch galvanized eyebolts through the seat risers, either side, 15 inches forward of Station 2, and secure to a 4-inch cleat on the after slope of the center-board box, above and forward of the second thwart.

The mast and boom are solid sticks of Douglas fir, according to Chamberlain's specifications, but Sitka spruce or eastern red spruce would

be just as good or better. The mast is  $3\frac{1}{2}$  inches in diameter where it passes through the thwart and tapers to 2 inches at the head. It rises 16 feet above the thwart and extends 1 foot below, requiring a length of 17 feet in all. The gooseneck for the boom attaches about 5 inches above the thwart.

The gooseneck was generally of brass or bronze of a type that attached to the end of the boom with side straps fastened by through rivets. The boom, 15 feet, 6 inches long, is  $2\frac{1}{2}$  inches in diameter centrally, tapering to 2 inches at the inner end and  $1\frac{1}{4}$  inches at the outer.

The mainsail is lashed permanently to the boom and mast with Italian hemp marline or suitable Dacron cord by a continuous series of half hitches passing through small grommets set close to the edges of the sail and spaced on 10-inch centers. Grommets of the same size and spacing are likewise pierced through the luff of the jib for its lashings.

Larger, heavier grommets in the corners of the sails permit lashings at the ends of the spars. The peak and the tack of the jib are held taut by lashings through respective eyes in the ends of the luff wire. The tack of the mainsail is lashed to the gooseneck. The peak, in absence of a main halyard, is pulled up by lashings passing through a  $\frac{3}{8}$ -inch hole bored through the top of the mast a couple of inches higher than the stretch of the sail. Likewise, a hole bored in the outer end of the boom allows a lashing from the clew that serves as an outhaul.

The two side stays or shrouds are  $\frac{3}{16}$ -inch, 7 x 7 galvanized yacht wire (stainless steel would be better) with eye splices served and varnished at the upper ends of a size to slip over the masthead and to lead neatly from ash shoulder cleats. Thimbles spliced into the lower ends allow lacing with light line to draw the stays taut. Turnbuckles are not used. Instead,  $\frac{3}{8}$ -inch galvanized iron eyebolts pass through the rail from 4 to 6 inches abaft the center of the mast. The eyes in the ends of the side stays hang about 6 inches above. A light line or lanyard threaded back and forth several times through these opposing eyes, and secured with a couple of half hitches around the standing parts, puts sufficient tension on the stay. In an emergency, two slashes with a knife will free the mast.

In the past, the main sheet was made of



cotton line because it was softer on the hands than hemp or manila. Dacron would be best today, and for Dacron only,  $\frac{3}{8}$ -inch-diameter line would be required, while cotton for this purpose should not be less than  $\frac{7}{16}$ -inch.

The main sheet requires two bridles on the boom. Old photographs show considerable variation in the length and location of these bridles. It is suggested that the outer one at the end of the boom with the ring at its mid-point to take the snap in the end of the main sheet should be  $1\frac{1}{2}$  to 2 feet long with a drop of 6 inches, and the inner or center bridle that carries the main sheet block should be  $3\frac{1}{2}$  to 4 feet long with a 12-inch drop. And, further, there should be about 6 feet between the center points of the two.

These bridles have eye splices in their ends of a size to slip over the boom and are held in position by small ash stops fastened with two screws each. It is important that these bridles should not stretch, and no doubt hemp was originally used. Dacron resists stretching well, and the  $\frac{3}{8}$ -inch Dacron recommended for the sheet would do nicely for these straps as well.

As previously mentioned, the outer end of the main sheet snaps into a ring tied in the outer bridle. Thence, it leads down through a single block, preferably swiveled, which is shackled to a  $\frac{3}{8}$ -inch eyebolt passing through the center of the transom and vertically located slightly below the bottom of the sheer strake. From this block, the sheet leads forward and up through another swiveled single block secured at the mid-point of the inner and larger bridle. Thence, it leads downward and forward to be secured when desired on a jam cleat of ash or white oak bolted to the

after vertical post of the centerboard box. In the past, a few well-heeled skippers had brass snatch blocks attached to swivel deck plates, which bolted to the bottom of the boat about a foot aft of the centerboard box.

Since  $\frac{7}{16}$ -inch manila is ample for the two tiller lines,  $\frac{1}{4}$ -inch Dacron will do nicely. One end of the tiller line snaps into a  $\frac{1}{4}$ -inch ringbolt or an equivalent screweye set in the inner edge of the rail about 1 foot, 5 inches aft of Station 4. The tiller lines, one on either side, lead back to a single block, preferably a swivel-type, shackled to  $\frac{1}{4}$ -inch ringbolts or large screweyes in the outer ends of the yoke. From the yoke, the lines return inboard, reeving through another set of swiveled single blocks shackled to  $\frac{1}{4}$ -inch ringbolts or large screweyes fastened in the rail about 1 foot, 9 inches aft of Station 3. The resulting two-part purchase is sufficient to work the rudder easily from almost any location in the middle of the boat.

To secure the rudder, equivalent to lashing the tiller in other boats, the two lines are pulled tight athwartships and tied.

Rowlock sockets are set in the rail 12 inches aft of the after edges of the three forward thwarts so that the boat can be rowed from each of these thwarts if desired. When not in use, rowlocks are stored in the small after cuddy next to the transom. Here also could be stored the mooring line, which was used without mooring chocks, being tied through the mast hole and lashed to the eye in the stemhead to hold it centrally.

A pair of 8-foot oars tied under the front thwart on either side, with the blades extending to the stem, were always carried in the old Beachcomber-Alphas.