



## COMPANIONWAY SCREENS & DOORS

John MacBride, T-30 #495, *Kestrel*, May 1996\*

A constant irritant when cruising or living aboard is the movement in and out of the companionway when you have drop boards. Egress with most forms of screening is no better. On four successive boats I've built a combination of an overhead sliding screen and hinged doors that works well. My third boat in the series was a Tartan 30. I have just finished the screen and doors for an O'Day 40 on which I am now living. The latter was completed mainly with portable power and hand tools since there is little room for a workshop the likes of the *Yankee Workshop* on a cruising sailboat. While I am writing this, the Tartan 30, *Kestrel*, is in deep snow 700 miles away, so I cannot give exact dimensions, but I can provide drawings of the design and notes on construction which should be sufficient for sailors with some woodworking experience to complete the project.

The doors were, in all cases, built of teak, the overhead screen and track of teak or oak. Any hardwood would do, since the drop boards remain functional, protecting both screen and doors from serious weathering. Teak, of course, harmonizes with the existing wood and is easy to work with, if expensive. On earlier projects I bought finished teak by mail order, at considerable cost. On my most recent project, I bought several rough sawn 1" x 3" teak boards about six feet long for less than \$50 from a lumber yard in Beaufort, NC and borrowed use of a friend's table saw to rip  $\frac{3}{8}$ " x 1" strips for the screen and quarter inch strips of varying widths for the track and doors. Cross-lap joints are strong, simple, and not too difficult with hand tools. Laminating strips of wood to produce frames eliminates most of the tedium in producing joints. Although hard and strong, teak sands easily. With a portable belt sander turned on its side and clamped to a table you can plane to precise angles and hairline joints. I use epoxy for gluing after wiping parts to be glued with acetone.

The track for the overhead screen should be slightly longer than twice the fore-and-aft length of the overhead hatch opening, the screen slightly more than the opening. I made the track from two  $\frac{1}{4}$ " x 1" strips with a  $\frac{1}{2}$ " x 1" between, the 1" measurement vertical. If you have the tools, the track could be routed from a single piece. The screen frame was made of  $\frac{1}{2}$ " x 1" stock with cross lap joints, glued and screwed. Because we have a cat, I gave it aluminum screening on the upper side, then covered the edges of the screen with  $\frac{1}{4}$ " x 1" strips, mitered and screwed on. You can make acceptable mitered corners by attaching and overlapping the strips at the corners with squared ends, then cutting through both at 45 degrees with a hacksaw. A  $\frac{1}{4}$ " x  $1\frac{1}{2}$ " strip screwed, but not glued, to the forward ends of the track acts as a stop. Before it is attached, the screen can be slid into the track.

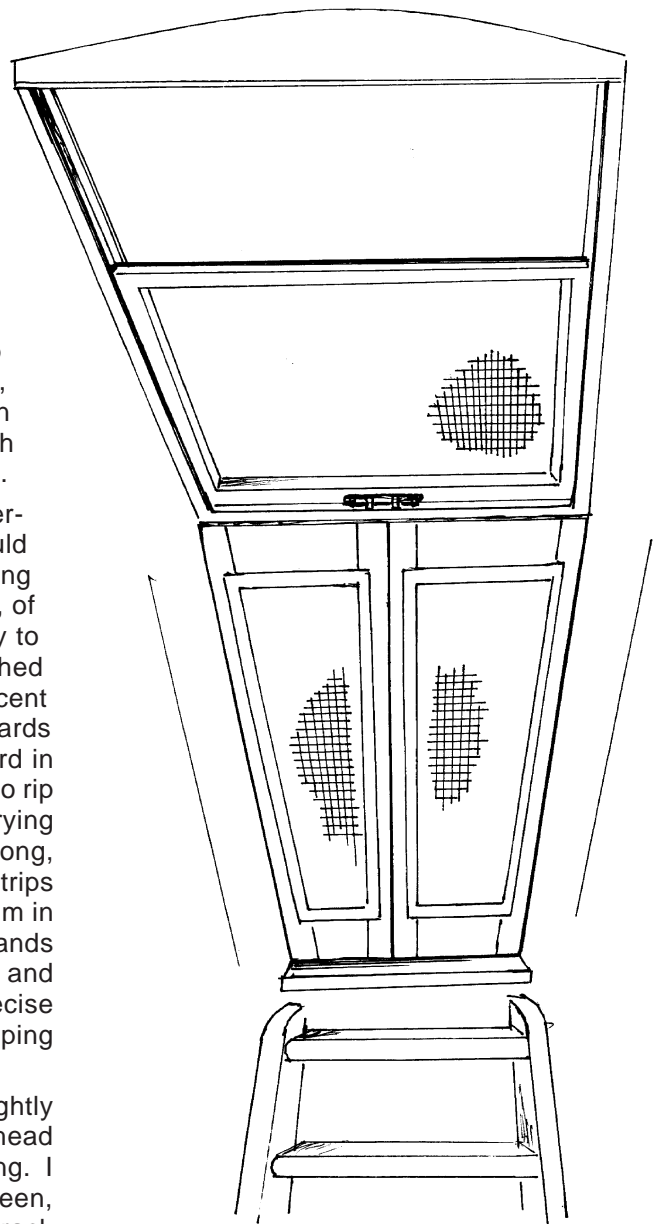


Figure 1. Completed unit as viewed from inside

\* Originally published in *The Hook*, newsletter of the Chesapeake Tartan 30 Association

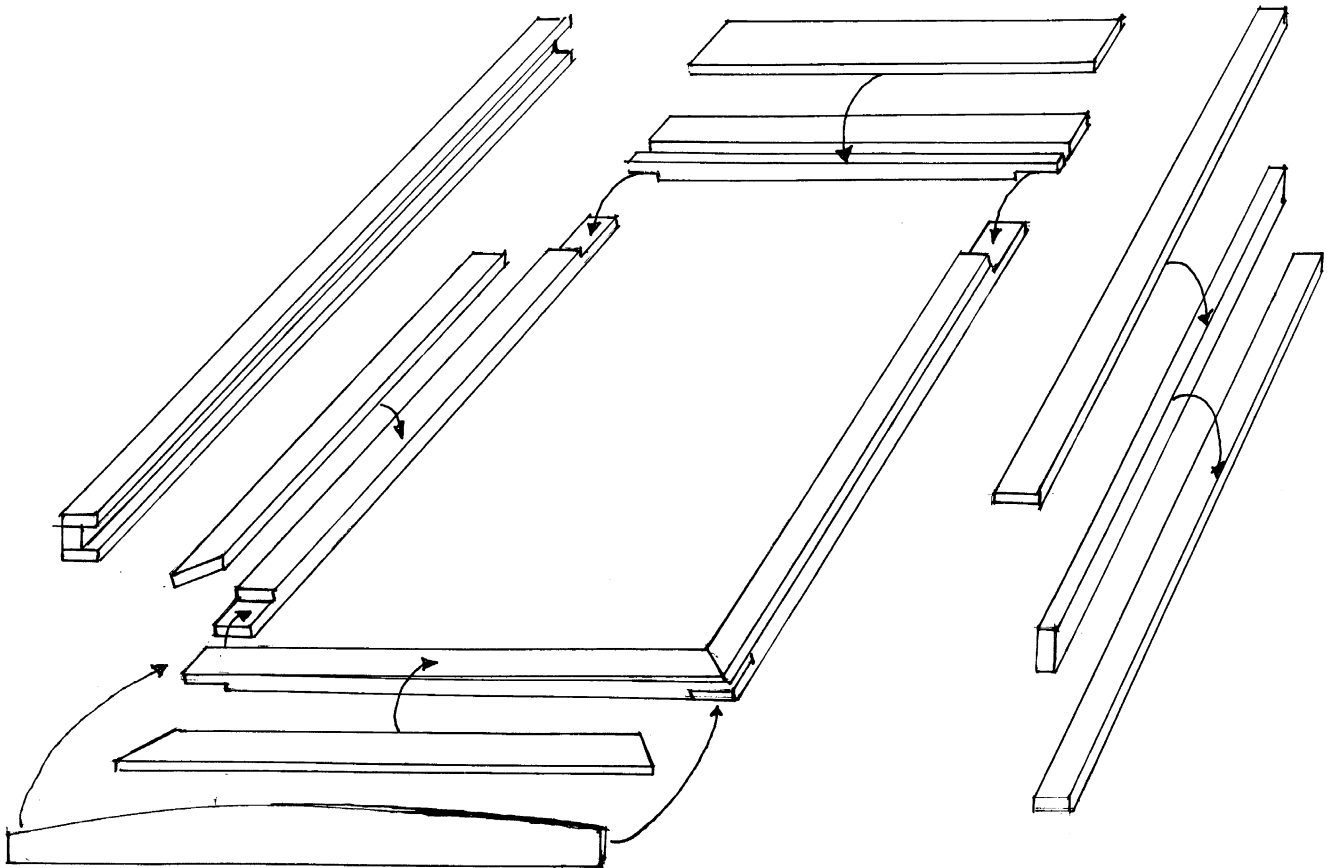


Figure 2. Exploded view of the overhead frame

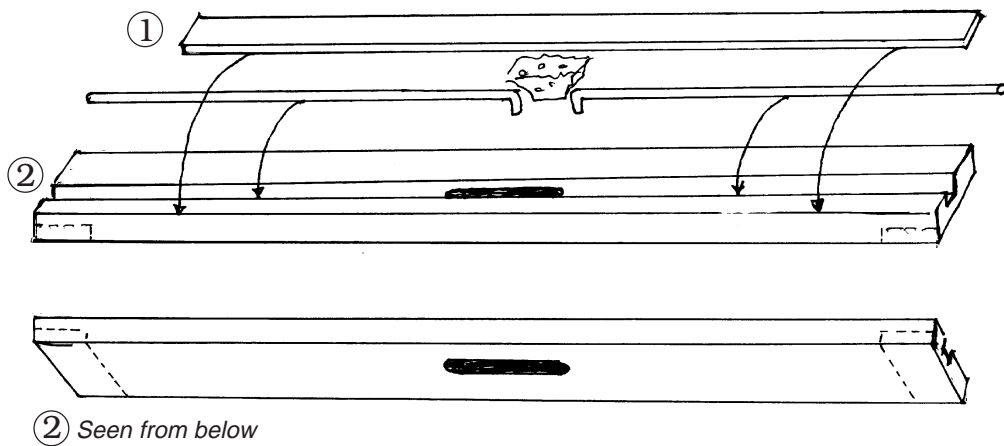


Figure 3. Aft side of the overhead frame, showing latch assembly

Since my wife once fell through the companion-way to the cabin sole, I make the aft side of the screen frame strong enough to support the weight of a body falling against it, using a 1" x 2" piece of hardwood (more if you have someone quite heavy in your crew). I manufacture a positive catch to hold it in place. For the catch I rout a 1/2" x 1/2" groove in the top of the frame and a slot in the bottom of this groove centered and about 1/2" x 3" in size. I take a 3/8" diameter aluminum rod and cut two pieces about half the width of the frame. I heat and bend to 90 degrees one inch of the end of each rod. The rods fit in the groove with the bent ends down through the slot. Holes are drilled in the track to accept about 1/4" of the ends of the rod when the screen is closed. A piece of foam rubber in the groove between the center end gives the necessary springing to engage the latch when the screen is closed, but the frame is easily opened by squeezing together the bent ends sticking out of the bottom of the frame. A 1/4" strip screwed over the groove conceals and holds together the mechanism while adding a little more strength to the unit.

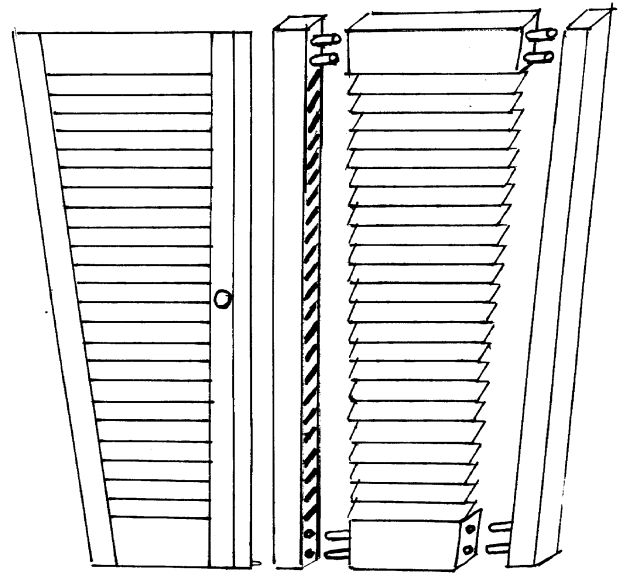


Figure 4. Louvered doors as viewed from cockpit

If you want louvered doors you can buy louvers and side frames with angled grooves cut to accept the louvers. You need only to cut the side frames to the proper length, lay them out in the correct angle and measure and cut the louvers, allowing an extra 1/8" at either end to fit into the grooves. Then you need top and bottom pieces, 1" x 2" or 1" x 3" in size. I used dowels to join the tops and sides, a 1/4" x 3/4" strip to cover the center split of the two doors and small brass knobs on each door. I used piano hinges and put a 1/2" strip on the sill to back the outward opening doors at the bottom. At the top they close against the latched side of the screen frame. I put screen on the inside of the louvers with strips to cover the edges. My doors were tight enough that, closed together, they snapped into place, requiring no catches. I did find that the louvers interfered with air flow to a greater degree than I wished in hot weather, so on my latest addition I eliminated the louvers, producing screen doors with solid panels that I could insert from inside in cold weather (since I am living on this boat during the winter).

The overhead screen slides inside the hatch. The doors are hinged inside the track for the drop boards. So, when you want to lock up and leave the boat, you can close the screen and doors and then close and lock the hatch and drop boards in the conventional manner. This provides necessary security and protects the doors from sun and weather. A few coats of Cetol finish the teak and provide a handsome and convenient addition to your Tartan 30.

