Additional information regarding the wind chute

1. The basic design does not function quite as described. The wind catcher panels are too short, and will readily "blow out" of the chute in even a light breeze.. I added an 8-inch triangular extension to these panels (Part B in figure 9.2) (an isosceles triangle the full 40" width of panel diagonal, with an 8" vertical dimension). An 8" longer panel B (44" instead of 36" would probably also work. That would change the 6" measurement in step 7, page 64 to 14".
2. I used ripstop nylon instead of spinnaker cloth. Spinnaker cloth might be more air tight, but it also might be noisy until the resins break down some.
3. I made pockets for the spreader sticks on the upper panel, instead of using grommets (see photo).
4. If used as described inside the hatch, the bottom opening (with the screen) should be 4" to 5" larger than the inside dimension of the hatch. Adjust the 30" dimensions in figure 9.2 as necessary. Also, make sure that the side dimension of the bottom of the chute is about the diagonal dimension of your hatch opening, so the entire wind chute can be assembled on deck and the lower section dropped through the hatch. For example, my hatch opening is 16.5 inches square with slight radius on the inside corners, and the finished dimension of the bottom of the chute is 21 inches square. It just fits through the hatch, and seals well when the halyard is pulled snug. I see no reason why a wind chute could not be made for a rectangular hatch.
5. Be sure to measure all your modifications and buy the correct amount of material the first time. You can also be creative and make your wind chute two or more colors to coordinate with your boat. Use left over scraps or buy a little extra material to make a storage bag.
6. Make sure to use a screen with as much open area as possible (i.e. fine threads). On my first try, the screen (mosquito netting) had insufficient open area, and not much breeze came through.
7. When "flying" the wind chute on a front deck hatch, especially if you are anchored facing into the wind, it helps to hoist using a staysail halyard or spinnaker pole topping lift brought around the front of the headstay to hold the chute vertical or slightly angled into the wind

Chapter nine

A SIMPLE WIND CHUTE

A wind chute is a device that funnels breezes below decks to cool the interior and ventilate stuffy places. It is a necessity and a blessing when cruising the tropics, and a welcome one in most warm climates where little breeze flows in the evening. In poorly ventilated boats that lack opening ports or Dorade ventilators, a wind chute will do an amazing job to help keep the boat's interior fresh and dry.

This particular wind chute has four wind catchers that will catch air from any direction and divert it below. Whether sitting at dockside or lying at anchor into the wind or current this wind chute will funnel air below without having to be repositioned as the wind changes direction. The chute is placed in a forward hatch and is secured by two wood dowels that are placed in the chute from below deck. A jib or genoa halyard is then used to lift the chute and hold it taut, and this lift causes the dowels to pull up tightly against the underside of the hatch frame. The chute described here is designed to fit any forward hatch up to 30" square. You can, however, customize the chute so that the bottom of it fits tightly around the outside of your forward hatch frame and fastens with snaps rather than dowels. This can be done by making the bottom measurements of the wind tunnel the same as the size of your hatch. For instance, the wind tunnel here is 30" square. If your forward hatch frame is 24 × 30, cut two of the side panels of the wind

tunnel 25 inches wide at the bottom and cut the other two panels 31 inches wide. Allowing for half inch seams this will give you finished dimensions of 24 × 30. If you choose to customize your windchute, the screen will have to be sewn higher in the wind tunnel to accommodate the hatch frame. Customizing is nice but not necessary, as this wind chute works very well in all hatches up to 30" square.

Dimensions: Top 29" × 29" (approx.); Bottom 29" × 29" (approx.); Height 6'.

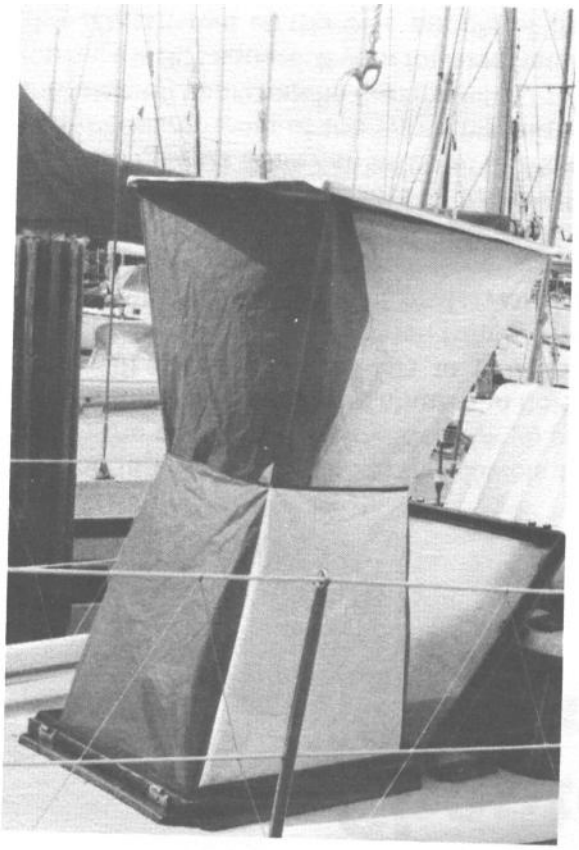

Photo 9-1 *Wind Chute*

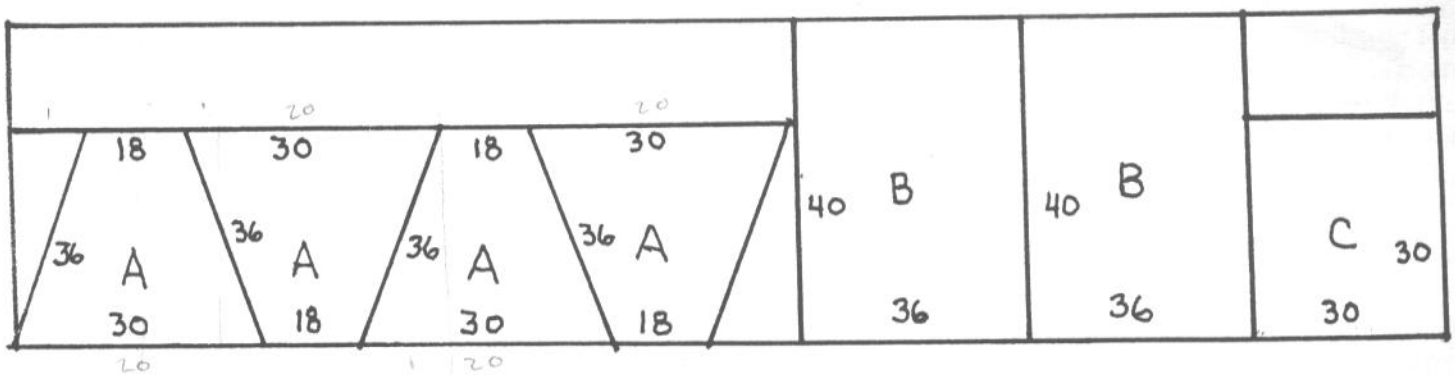

Fig. 9-2 *Layout for Cutting Wind Chute*

MATERIALS

6 yds. nylon spinnaker cloth, preferably 1.5 oz.
248" of nylon webbing, 1 to 2 inches wide
9 grommets
12" of light line
4 ½" wood dowels, 42" long
2 spools polyester thread
1 pc. fiberglass screen 31" square

CONSTRUCTION

Step 1. Cut the following pieces:
4 panels for wind tunnel (A) 30" x 36" x 18"
2 panels for wind catcher (B) 40" × 36"
1 top (C) 30" x 30"
1 screen (D) 31" × 31"

Wind Tunnel

Step 2. Place two of the "A" pieces right sides together so that the edges match. Stitch along one long edge ½" from the edge of the cloth. Open the two pieces so that they lie flat. Sew a flat-felled seam by folding the seam allowance under. Repeat this procedure with the remaining two "A" pieces, then sew the third and fourth seams to complete the tunnel.

Step 3. Fold ¼" of the bottom edge of the wind tunnel to the outside. Stitch. Stitch the nylon webbing around the bottom of the wind tunnel so that it covers the raw edge of the folded edge yet extends a bit below the bottom of the spinnaker cloth. Overlap the beginning and end of the tape and stitch securely.

Step 4. Hem the top edge of the wind tunnel by folding the material over twice. This hem should be as narrow as possible.

Fig. 9-3 *Stitching the Wind Tunnel*

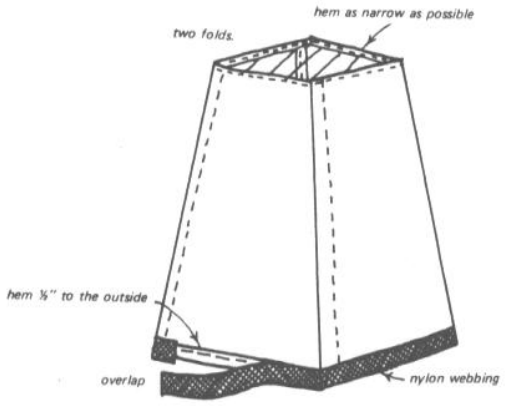

Fig. 9-4 *Placing Webbing and Hem in Wind Tunnel*

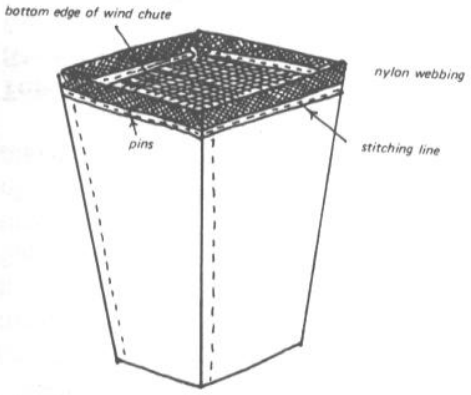

Fig. 9-5 *Pinning the Screen*

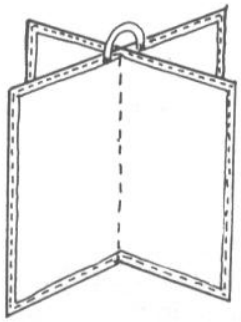

Fig. 9-6 *Wind Catcher*

Step 5. Screen (optional). Pin the screen to the top edge of the nylon webbing and inside the bottom of the wind tunnel. Place pins perpendicular to the stitching line. Make double folds in the corners of the screen to take up the ease. Stitch all the way around the screen.

Wind Catcher

Step 6. Hem all four outside edges of both B pieces by folding over ¼" once and ¼" again, and then stitching all around. Place one B piece over the other, matching all edges. With the longest edges as top and bottom, find the center line by folding the two pieces in half, matching the 36" edges. Pin the center line and stitch the two pieces together along this line. Sew a small loop of nylon webbing to the top of the wind catcher over the center seam to use as a lifting ring.

Sew Wind Catcher to Wind Tunnel

Step 7. We want the wind catcher to fit inside the wind tunnel as if it were an "X". To do this we will sew the bottom corners along the vertical edges of the wind catcher to the corner seams of the wind tunnel so that 6" of the wind catcher is inside the tunnel.

Now you will find that the diagonal of the wind catcher (36") is *longer* than the diagonal of the top of the wind tunnel (25½") thus creating a "bagginess" in the catcher. This extra material balloons inward as the wind is caught, directing a maximum flow of air below decks.

Take the 36" side of one of the flaps of the wind catcher and place the bottom 6" of it inside the wind tunnel and pin it to one of the tunnel's seams. Working around the tunnel pin the 36" side of the next flap to the next corner and then the next flap to the next corner and then the final flap to the last corner of the wind tunnel. Stitch each flap of the catcher in place.

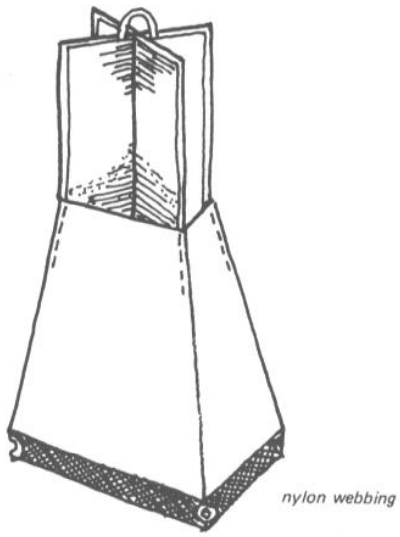

Fig. 9-7 *Sewing Wind Catcher to Wind Tunnel*

Top

Step 8. Hem all edges of the top piece C as you did the wind catcher pieces. Sew the nylon webbing to the outside edge of the top so that it makes a curtain that hangs down below the top ¾ of an inch. The grommets that hold the dowels in place will be set in this webbing so there must be enough room for them. To do this begin sewing the webbing on to the

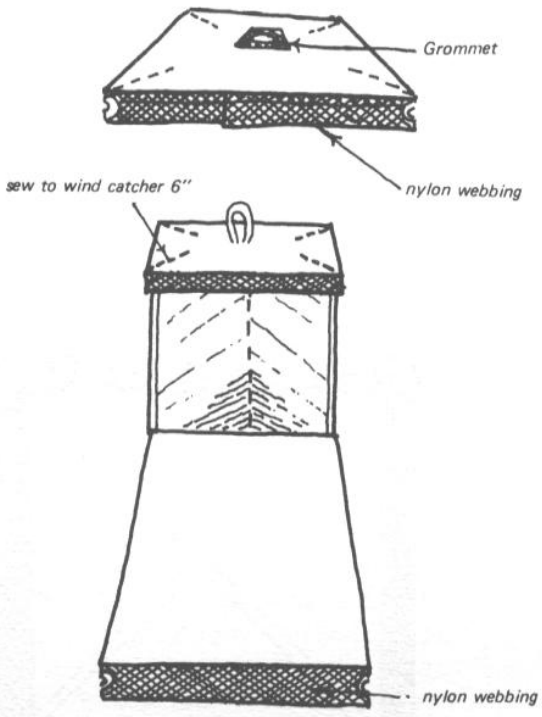

Fig. 9-8 *Sewing Top to Wind Catcher*

top in the middle of one edge. When you get to the corner, put the needle of the machine down through the webbing and cloth exactly at the corner. Then turn the top 90 degrees and bend the webbing around so that it matches the edge of the top again. Stitch the webbing flat to the next corner and repeat the corner procedure. Continue in this manner until the webbing has been sewn all around the top. Overlap the ends of the webbing and stitch securely. Turn the corners right-side-out so that the tape extends down from the top like a short curtain all the way around. Find the middle of the top and sew a small patch of nylon webbing to the very center on the wrong side of the top. This patch will reinforce the grommet that will eventually be placed there.

Step 9. Now you will find that the diagonal of the wind catcher (40") is *shorter* than the diagonal of the top (42½"). The fact that the sewn flaps do not extend all the way to the corners of the top leaves room for the installation of the dowels. (Step 10) Secure the top to the wind catcher by sewing 6" of the top edge of each wind-catcher flap to the top piece, placing each flap as close to the corners as possible.

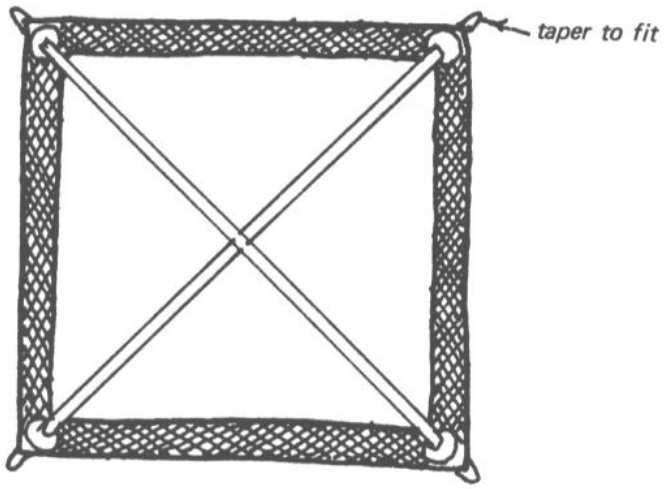

Fig. 9-9 *Setting the Dowels*

Finishing

Step 10. Set grommets in all four corners of the top and bottom nylon webbing. Set one grommet in the center patch of the top. Tie the small piece of line to the nylon loop at the top of the wind catcher. Thread the other end of this line through the grommet in the middle of the top. Place two dowels corner to corner in the bottom and the top of the wind chute. Center them and mark them so that they will extend slightly beyond the edges of the wind chute. Cut the dowels to size and taper the ends to points so that they will fit tightly into corner grommets.

Rig the chute aboard and enjoy wonderful fresh air below.


17/08/2005