



BOAT CANVAS BASICS

Learn the basics of marine canvaswork by sewing a pair of custom fitted handrail covers.

By Brian Gilbert

I recently installed a pair of brand-new teak handrails on my old MacGregor Venture 222. With about four coats of varnish, they look fairly spiffy, but I knew from experience that after a season or two in the sun, they won't look nearly so nice. A pair of canvas covers would help preserve the varnish job by keeping the sun off the teak, and would look nice as well. Looking through the catalogs, I was only able to find an ugly, wrinkly cover that was the wrong color for my boat, as well as a lousy 'universal' fit for \$38 each, and I needed two! Add the cost of the rails, and you've nearly got the book value the boat. I decided to make my own. In the process I discovered that this is a really easy project, and a great way to learn the basic principles of marine canvaswork.

Once you've learned how, there is almost no limit to the number of useful things you can make for your boat. They can be simple and inexpensive, like the handrail covers that I'll describe in this article. Or they can be difficult and expensive, like a dodger. Most projects, though, will fall on the easy/inexpensive side of the scale, once you've mastered a few techniques. I'm not anywhere near an expert with canvas my skill level registers somewhere between average and Cro-Magnon and I've gotten some pretty good results. My covers are certainly better than I could get from a catalog, at a fraction of the cost. With a little practice, you can do it, too.

Tools

There are a few tools that you'll need to gather to do canvaswork for your boat. Most are basic, like needles and thread, some good scissors, etc, but the biggest is a sewing machine. Don't panic...you don't need an expensive sail-making machine to do canvaswork. In fact, you don't need a machine at all to do small projects. But it does make quick work for sewing together long seams.

The sewing machine I use is an old straight-stitch machine from the forties. A good friend bought it in a garage sale for ten dollars, and since he had three, he gave it to me to use. It weighs a ton, since there are nearly no plastic parts in it. As a result, it's pretty rugged. With a special needle installed, it can sew through four layers of canvas, though I wouldn't try to do this all day long. I had to replace the rubber belts and some of the wiring, but that took an afternoon.

Garage and estate sales are good places to find machines like this. They can sometimes be found at sewing machine repair shops, and you might even find one that can do a zigzag stitch, though the only place where a zigzag is an absolute requirement is when the fabric and seam need to stretch uniformly, like in a sail.

If you've never operated a sewing machine before, don't worry, it's pretty straightforward. Nearly all older machines use the same basic design, and they're threaded and adjusted the same way. My machine didn't come with a manual, but I was able to figure out how to thread, adjust, and oil the machine with the help of a basic sewing book from the library. The trickiest part is getting the top and bottom thread tension adjusted properly. This is important because you want the stitches to cross in the center of the cloth. The top tension is usually



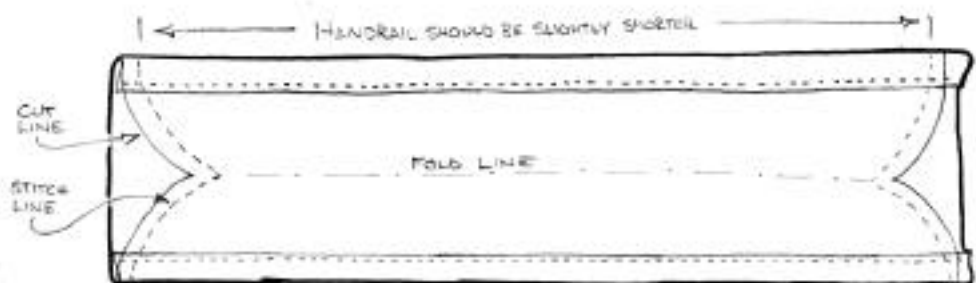
adjusted with a knob, but the bottom thread is adjusted by a screw on the bobbin case. It's done by trial and error. I adjust the bobbin first, and then balance the tension on the top thread. Sew together small scraps of cloth until the stitches look similar from both sides of the cloth.

There are a few other tools you should gather together before you start. A seam ripper is really handy if (or should I say when) you need to remove a seam that was incorrectly stitched. To mark up the cloth, I used colored pencils. Chalk will work in a pinch, but leaves a thick line that's harder to follow accurately. Used with a yardstick, a colored pencil leaves faint, fine line so you can sew neat, straight seams. I also learned that a worn-out bar of soap, that's worn down to a thin sliver, makes a great marker for sewing.

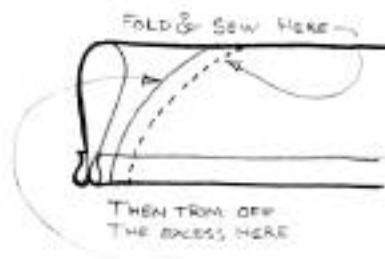
Materials

You have a couple of choices when it comes to material. The industry standard is Sunbrella acrylic canvas. It holds up really well in the sun and is easier to sew than natural canvas. The downside is the cost, usually more than double the price of canvas. Its also slightly less resistant to abrasion. An alternative is treated natural canvas. Brand names are Vivatex, Graniteville, and Terrasol. In my part of the country, though, marine supplies are difficult to find. I found some canvas at a domestic sewing store at about \$7 a yard. The sales people had no idea what brand it was, or if it was treated or not..."mystery canvas..." but it was the right weight. I bought two yards, and have plenty left over for other projects. Depending on the length of your handrails, you might be able to get by with one yard.

For thread, a regular cotton-covered polyester works well with most machines. I used a heavy button and craft thread. A contrasting white thread on a dark canvas looks nice, but shows off mistakes. If you're not too confident of your sewing skills, choose thread that is the same color as your canvas.



While you're at the fabric store, you'll need to pick up some snaps and a snap setting tool. I used a large size snap. They're made of chrome-plated brass, and are basically tubular rivets that



are set with a hammer and block of wood. The special tools to set the snaps came in the package. The directions are easy to follow, and setting the snaps is straightforward. The marine variety of snaps (by Taylor-Made) are very heavy-duty, high-quality snaps, but they're pricey. The inexpensive fabric store variety snaps have worked well for me, and haven't corroded yet, though your results may vary.

Lay Out a Pattern

Now that you've gotten your stuff together, let's get sewing. I made a pattern out of newspaper by wrapping the handrail and marking where it contacted the deck. If you use natural canvas like I did, don't wrap the handrail too tightly. Natural canvas will shrink a little, so you need to allow for this in your pattern. I marked the length of the rail as well, again leaving extra material for shrinkage.

Armed with my newspaper pattern, I went inside to transfer the dimensions to the canvas. It's important to remember that the pattern gives the approximate size of the finished handrail covers, not the size of the cloth needed to make them. I added 3/4 inch to the top and bottom edge to make a hem. When I laid out the cloth, I marked both the "fold" line, and the bigger "cut" line. The fold line represents the finished edge of the cover... don't get the two mixed up.

Cut and Sew

Next I cut out the cloth. The long edges are sewn first, and the ends last. As I prepared to sew the edges, I discovered an advantage to using natural canvas. The material I bought had some sort of coating that was slightly waxy. This is probably sizing added in the manufacturing process, since my canvas isn't waterproof.

It makes the cloth stiff... so stiff, in fact, that I could fold the seam with my fingers, and the fold stayed in place, like a piece of paper. Normally you will need to pin the hems down in order to sew them, especially if you're using Sunbrella. Some people have had good results using staples or double-sided tape for this step. I like plain old pins, though with this canvas I was able to avoid fastenings altogether and sew the hems by folding them in place.

Before you sew the hems, make sure the machine is adjusted correctly by sewing some scraps together. Keep your stitches as straight as possible, especially if you use a contrasting thread color. It's usually a good idea to "lock" your stitching so that it doesn't unravel. At the beginning and end of each row of stitches, lift the presser foot, and go back and stitch over the threads you just laid down. If your machine is reversible, then all you need to do is stitch backwards for a few stitches, then continue as normal. Once you've hemmed the top and bottom edges of the cloth, then you're nearly finished with the covers.

At this point I was ready to sew the ends, and there's a trick to this. In most canvas projects, you sew the inside surfaces, then turn the piece "inside out" to finish. Here's how this works with the rail covers: Fold the cloth in half lengthwise, with the cut edges to the outside. Using the pattern, mark the curved ends of the covers and sew along this line. Trim off the excess cloth from the ends about a half an inch from the stitching.

Now you can turn the piece rightside-out, Check the fit of the covers on your boat, just to be sure your measurements were correct. If everything looks okay, then you can mark the locations of the snaps.



Optionally, you could use velcro to secure the covers to the rails.

When I made my covers, I did a little hand stitching at the corners. I nearly always do some hand stitching on canvas projects... it's one step that most professional lofts can't afford to do, but would if costs weren't a consideration. You and I can easily afford a few extra minutes to make things stronger.

The only detail remaining is to set the snaps. This involves cutting a small hole, inserting the snap and back, and hammering the two together. There's a nifty vise-grip type tool that you can buy, but it's very expensive and doesn't do the job any better, only faster.

Other than fastening these to your boat and basking in compliments, that's all there is to it. These definitely take less time to make than a sanding and varnish job, and will open the door to dozens of other projects that will improve the looks of any boat.

ADDITIONAL READING: *The Big Book of Boat Canvas*, by Karen Lipe
Canvaswork and Sail Repair, by Don Casey
Practical Boat Canvas Work, by Lisa Carr
The Complete Canvas Worker's Guide, by Jim Grant