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Classic Project

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Victorian-Style Wall Shelf

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Victorian-Style Wall Shelf

A wall shelf that looks this good can be put to use almost anywhere in the house. Our shelf is made from mahogany, but cherry or walnut are other good choices for wood. It's a perfect size for displaying a couple of collectible plates, so we added a groove to help keep them in place when they are stood on edge.

We felt 3/4 in. thick stock looked a little heavy for this project, so we opted to use 5/8 in. thick stock. If you don't have a thickness planer, check to see if your local lumberyard or millwork shop will plane it for you. They usually don't charge much, especially if you buy the stock from them. Another option, of course, is to sharpen up your hand plane, clamp the stock to your workbench, and go at it with vigor.

The Bracket

As shown in Fig. 1, you'll need a piece of stock measuring 5/8 in. thick by 6 3/4 in. wide by 12 in. long in order to make the bracket (A). Once the stock is cut to size, you can transfer the full-size pattern from the drawing to the stock using carbon or tracing paper. Or if you have access to a photocopy machine, you need only copy the pattern and fix it to the stock with a spray adhesive or rubber cement. For maximum strength, you'll want to make sure the grain of the wood runs in the direction shown in the drawing.

Next, with the table saw miter gauge set to 45 degrees, make the two angled cuts as shown. Then, use the scroll saw to cut the various curves and also the corner notch. (You'll need to bore starter holes in order to make the oval and triangular cutouts.) Once everything is cut, some work with files and sandpaper will smooth the sawn edges.

The Back

To make the back (B), cut 5/8 in. thick stock to 2 in. wide and 18 1/2 in. long. Transfer the full-size pattern to the stock, including the location of the keyhole shaped slot.

The keyhole slots are made with a special cutter called a keyhole or picture framing router bit, which is available from most mail-order catalog outfits. The bit cuts a lipped slot that serves to grip the head of a nail or screw that's been driven into the wall. We used it here because, unlike most hanging hardware, it permits the project to fit flush against the wall.

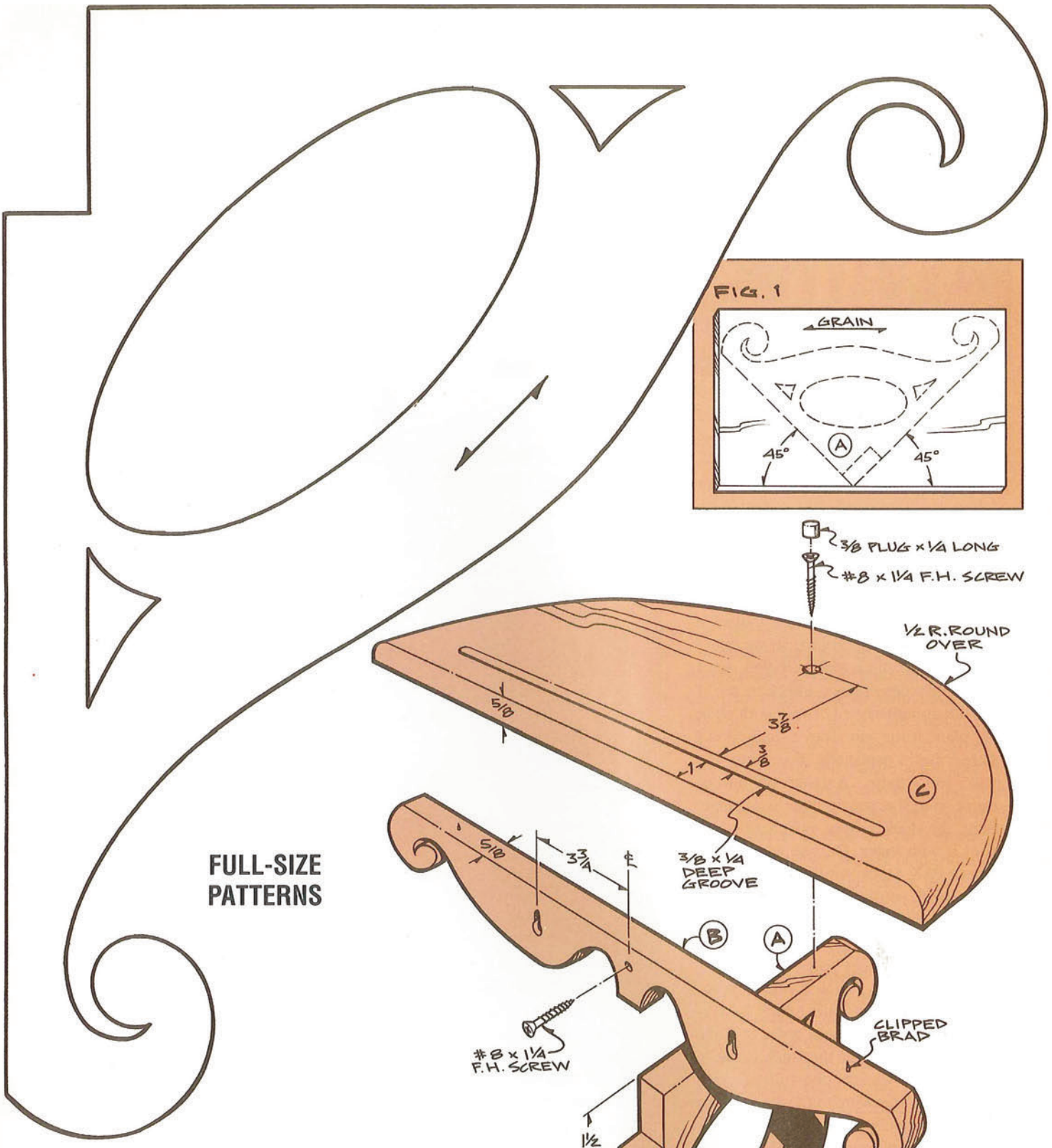
Although this bit is designed to be used in a router, for this project we found it easier to cut the slots using the drill press set up shown in Fig. 2. To use the drill press, first set it to the highest speed (8,000 rpm for our Sears model), then set the depth stop so that the cutter makes a 5/16 in. deep cut. Locate a fence 5 1/2 in. from the centerline of the router bit. Also, make a pusher by cutting 1/2 in. or 3/4 in. thick stock to about 4 in. by 6 in.

To cut a slot, start the drill press, lower the cutter 5/16 in. deep to the stop and lock it to that depth. Now, using the pusher, feed the stock into the cutter to make the 1/2 in. long slot. Once the slot is cut, shut off the drill press, slide the stock so the bit is at the entry hole, then release the lock and raise the cutter from the slot. Next, flip the stock end-for-end, move the pusher to the other side of the cutter, and repeat the process.

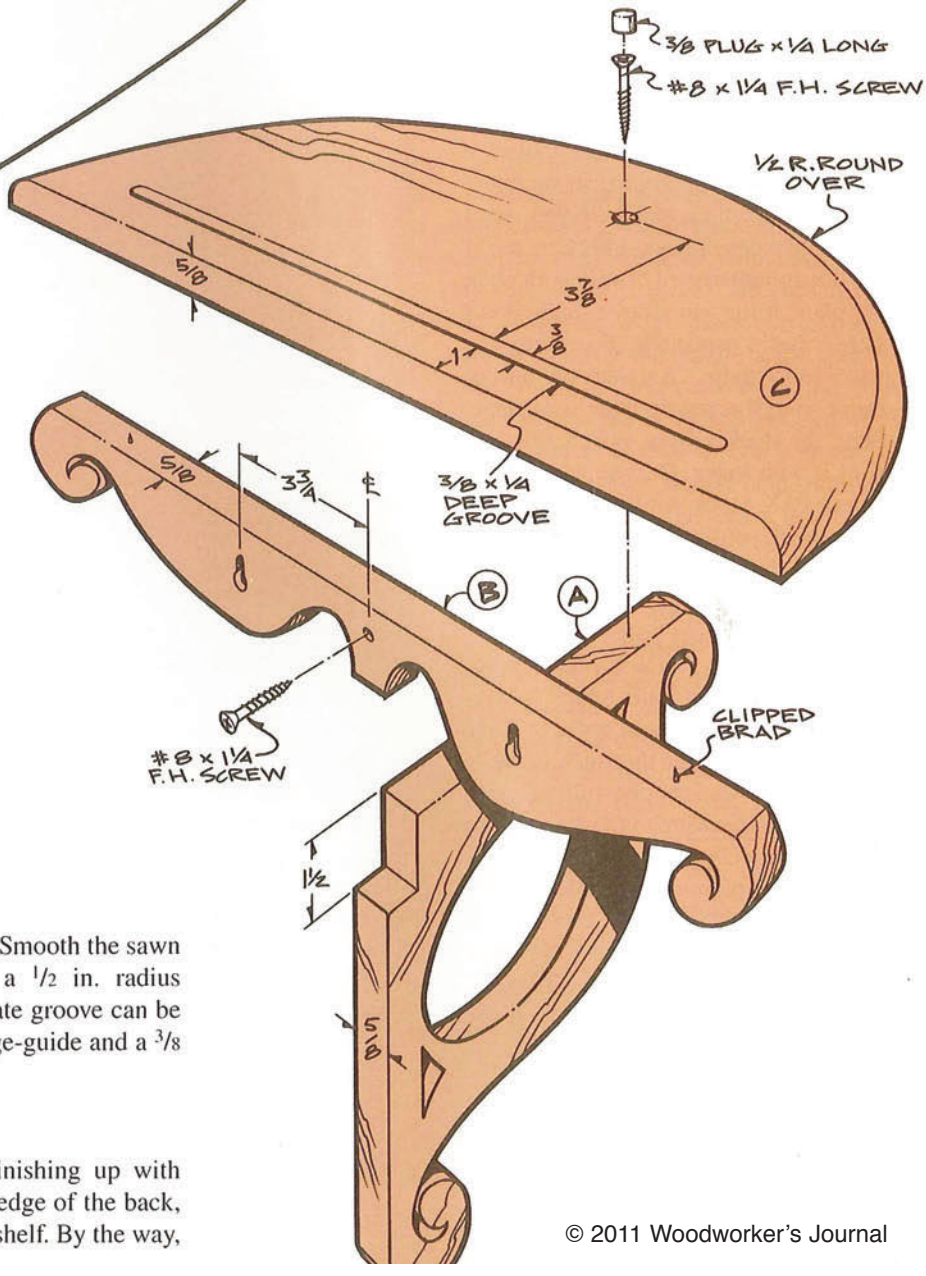
Now, using the scroll saw, follow the pattern traced earlier to cut the curves. As you did with the bracket, sand the edges smooth with files and sandpaper.

The Shelf

A piece of 5/8 in. thick stock measuring at least 7 5/8 in. wide by 18 1/2 in. long is needed for the shelf (C). Transfer the



FULL-SIZE PATTERNS



pattern and cut it to shape with the scroll saw. Smooth the sawn edge, then round it using the router and a 1/2 in. radius bearing-guided router bit. The 1/4 in. deep plate groove can be cut using a router that's equipped with an edge-guide and a 3/8 in. diameter core box bit.

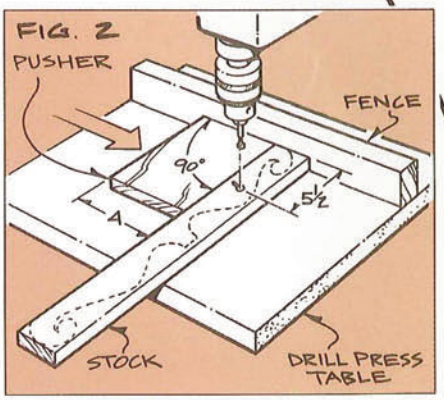
Assembly

Give the three parts a thorough sanding, finishing up with 220-grit. Apply a thin coat of glue to the top edge of the back, then glue and clamp it to the underside of the shelf. By the way,

before adding the glue, it's a good idea to drive a couple of small brads into the edge of the back (see exploded view), and snip the heads off so that about 1/16 in. protrudes. The brads will keep the parts from sliding out of position when clamp pressure is applied.

Next, join the bracket to the shelf/back assembly with a pair of flathead screws as shown. Note that the top screw is counterbored and plugged. When drilling the shank hole for this screw, make it slightly oversized to allow the shelf to expand and contract with seasonal changes in the wood's moisture content. If the shelf is unable to move, stresses can build which could cause it to crack. And, for the same reason, don't use any glue here.

A coat of Minwax Mahogany Wood Finish followed by two coats of penetrating oil will complete the project.



Bill of Materials
(all dimensions actual)

Part	Description	Size	No. Req'd.
A	Bracket	5/8 x 6 3/4 x 12*	1
B	Back	5/8 x 2 x 18 1/2	1
C	Shelf	5/8 x 7 5/8 x 18 1/2	1

* Allows extra stock, see Fig. 1

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Matt Becker
Internet Production Coordinator