

So what if you don't sew? This authentic Shaker case piece is drop-dead gorgeous in any room.

This tailor's cabinet was brought to my attention by a customer who wanted one just like it. She had seen the piece in John Kassay's "The Book of Shaker Furniture." The original was made in Watervliet, N.Y., during the first half of the 19th century using plain and figured maple, and pine for the panels and interior pieces. The book also describes the drop-leaf on the original as being of walnut, indicating it may have been added later. My customer wasn't looking for a walnut leaf or pine sides, and I assured her I could make those changes.

This is a great storage piece for any number of rooms in the house, and while the leaf adds character, it doesn't add all that much space. While the leaf may never be used, I like the way it looks; so it's well worth the effort.

The basic construction of the cabinet is frame and loose panel for the sides and back. The front is a mortise-and-tenoned frame filled with drawers. Construction starts with the legs. Cut them to size according to the Schedule of Materials, then mark the foot of each leg for the simple tapered turning. The taper starts $4\frac{7}{8}$ " from the bottom. At the top of the taper the leg is turned from a $1\frac{5}{8}$ " square post to a $1\frac{1}{2}$ " round, then tapered to 1" at the base.

With all four legs tapered, determine the arrangement of the legs to show off the best figure and mark them to keep them straight. The sides and back of the cabinet are made of panels and rails with tenons that fit into grooves that are cut on the inside faces of the legs. The grooves are $\frac{3}{8}$ " wide x $1\frac{1}{8}$ " deep and are run $\frac{1}{4}$ " in from the outside edge of the leg. I used a router table to run the grooves, lowering the leg onto the bit to start the cut and lifting at the end of the cut. Use indexing

Shaker Tailor's Cabinet

by Glen Huey

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Photo by Al Parrish



1-G



With the tenons and mortises formed, and the legs turned, the puzzle begins to take shape by gluing up the front frame. Notice the double-tenon used in the legs for extra strength.

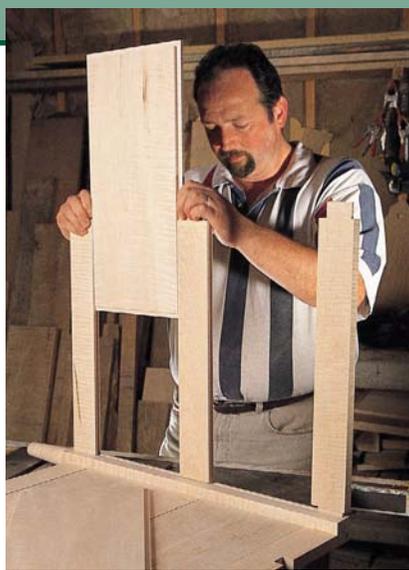
marks on the router table fence to indicate when to start and stop the groove. Make the same groove in the side and back rails and stiles to hold the panels in place. The groove will be off-center on the rails, so determine which face is most attractive and run the grooves with the best side on the $\frac{1}{4}$ " offset while the router table is set up.

The next step is to cut the mortises in the legs, then form the tenons on the front rails. You'll see in the photo above that the front rails have double tenons for extra strength. Mark the mortise locations on the front legs, then use a mortiser or router to cut the mortises. While using the mortiser, mark the locations for the 10 drawer runners on the inside of the face rails and cut those mortises as well. Then set your table saw to cut the double tenons on the ends of the front rails.

The front stile dividing the upper four drawers is attached to the second rail with a half-lap or bridle joint, cut exactly in the center of the rail and the stile. I made these cuts on the table saw, nibbling away with repeated passes. Assemble the front frame by starting with the stile, attaching it to the top and third rails using pegs through the rails.

Next cut the tenons on the ends of the side and back rails and back stiles. I again used the table saw to make these cuts. The tenons are centered on the pieces and offset from the center to match the grooves.

Cut rabbets on all four sides of the side and back panels. As these are $\frac{1}{2}$ "-thick pieces, a $\frac{1}{8}$ " rabbet forms the tenon easily so that the inside faces of the panels and the rails will be flush on the inside. By setting your table saw's rip fence to $\frac{3}{8}$ " (with the blade set at $\frac{1}{2}$ " high) the rabbets can be easily cut on the saw by running the



It never hurts to check the fit when so many pieces come together in one place. Check the spacing of the panels and rails into the legs and adjust as necessary.

panels on end.

To add a nice detail to the piece, put a beading bit in your router and run a $\frac{1}{4}$ " detail on both edges of the side center rail and on the inside edges of the top and bottom rails. Cut the notches for the drop leaf support in the top back rail according to the diagram, then assemble the back and rear legs. Use glue on the rail and stile tenons, but don't glue the panels so the wood can move.

Drawer Supports

While the glue is drying, turn to the drawer supports. There are four side supports and two center supports for the upper drawers, and four side supports for the lower drawers.

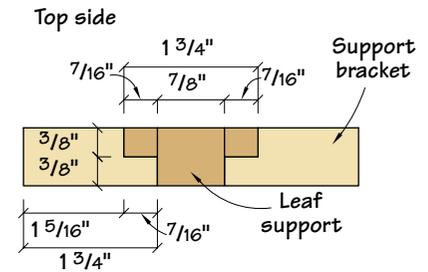
Cut the supports to the sizes given in the Schedule of Materials. The supports



To guide the drawers smoothly, I attach simple poplar strips with a brad nailer to the drawer supports. A little wax on the supports and the drawer runs smooth as silk.



With everything sitting in place, it's time to add the back and clamp everything down. Notice the two drawer support rails attached to the back.



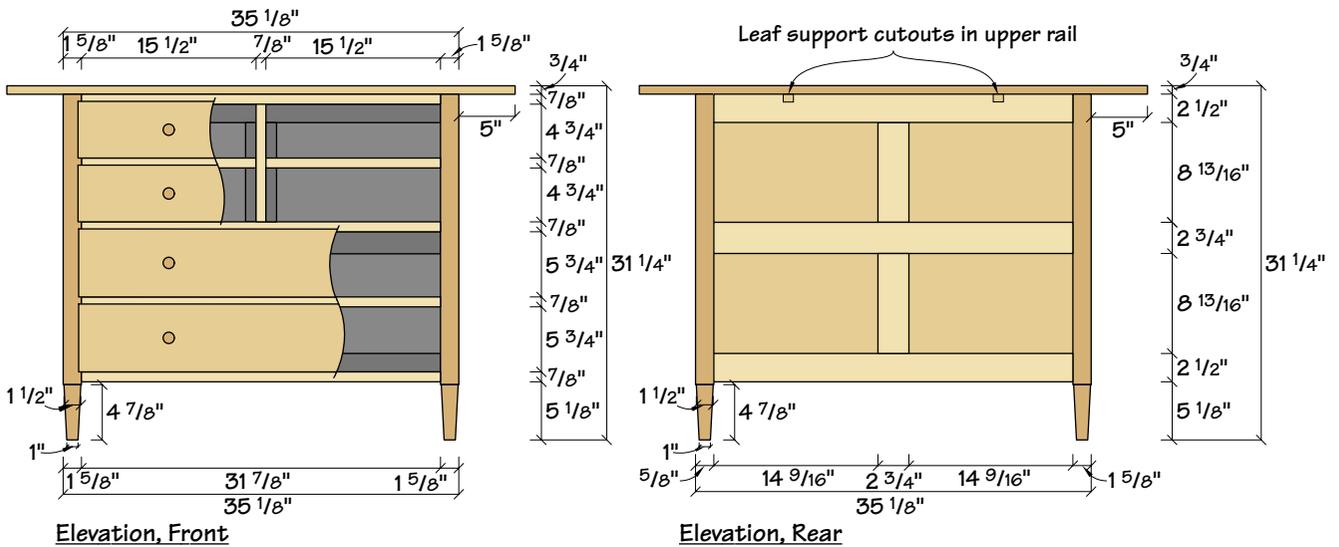
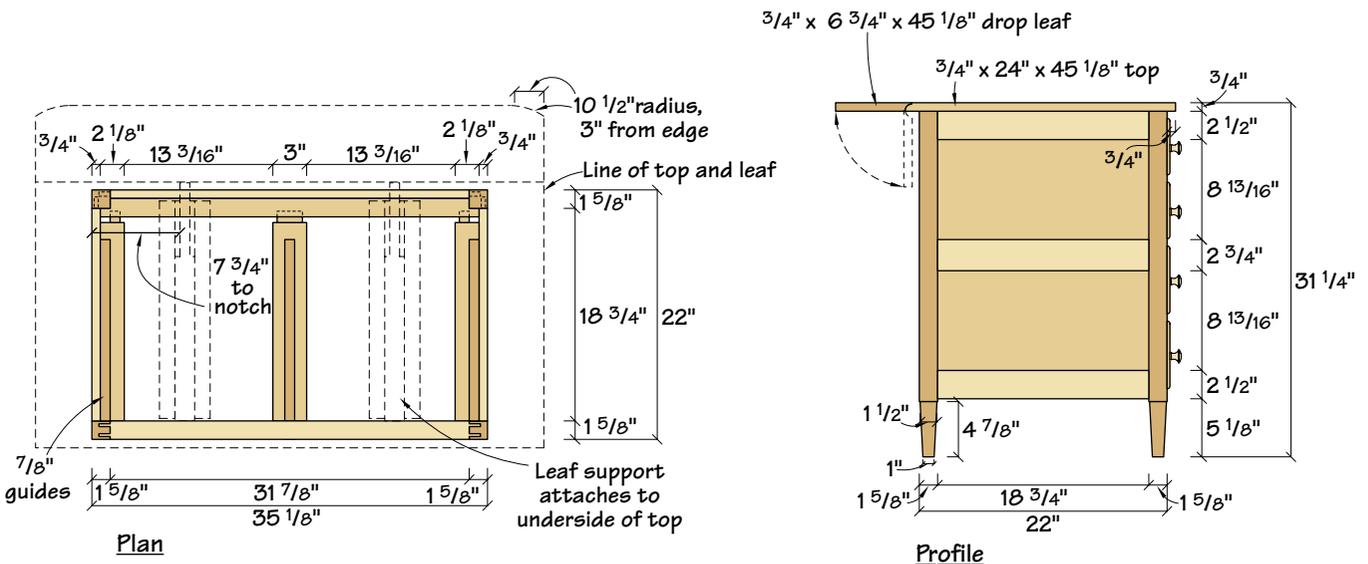
Leaf Supports & Brackets

are all a little different, but let's start with the front end. Make $\frac{3}{8}$ " x $1\frac{3}{4}$ " x $\frac{3}{8}$ "-long tenons on the front of all the side supports. Make $\frac{3}{8}$ " x 2" x $\frac{3}{8}$ "-long tenons on the front of the two center supports. Only the six top supports have tenons on the back end. Make the side support tenons $\frac{3}{8}$ " x $1\frac{3}{4}$ " x 1" long, and the two center supports $\frac{3}{8}$ " x 2" x 1" long. The four lower drawer supports are notched $\frac{3}{4}$ " x 1" around the rear leg, and then tapered on the inside edge. These are then nailed in place, with reproduction nails, to the rear leg after assembly.

To attach the upper drawer supports at the rear of the cabinet, mortise and then



The three-piece leaf supports are kind of clever if I do say so myself. By trapping the support itself between the front and back of the case, the support has a built-in stop in both the open and closed position.



SCHEDULE OF MATERIALS: SHAKER TAILOR'S CABINET

No.	Item	Dimensions T W L	Wood	Notes*	No.	Item	Dimensions T W L	Wood	Notes*
4	Legs	1 5/8" x 1 5/8" x 30 1/2"	P		8	Drwr sides	1/2" x 4 1/2" x 19"	S	
4	Side rails, top/bott.	3/4" x 2 1/2" x 20 3/4"	P	1" TBE	4	Drwr backs	1/2" x 3 3/4" x 15 3/8"	S	
2	Side rails, middle	3/4" x 2 3/4" x 20 3/4"	P	1" TBE	4	Drwr fronts	7/8" x 5" x 16 1/8"	P	3/8" lip 3X
2	Back rails, top/bott.	3/4" x 2 1/2" x 33 7/8"	P	1" TBE	4	Drwr bottoms	5/8" x 16" x 19 1/4"	S	CTF
1	Back rail, middle	3/4" x 2 3/4" x 33 7/8"	P	1" TBE	4	Drwr sides	1/2" x 5 1/2" x 19"	S	
2	Back stiles	3/4" x 2 3/4" x 10 13/16"	P	1" TBE	2	Drwr backs	1/2" x 4 3/4" x 31 3/4"	S	
5	Front rails	7/8" x 1 5/8" x 33 7/8"	P	1" TBE	2	Drwr fronts	7/8" x 6" x 32 3/8"	P	3/8" lip 3X
1	Front stile	7/8" x 1 5/8" x 10 3/8"	P	Half-lap	2	Drwr bottoms	5/8" x 32" x 19 1/4"	S	CTF
4	End panels	1/2" x 9 3/8" x 19 3/8"	P	3/8" TAS	1	Top	3/4" x 24" x 45 1/8"	P	
4	Back panels	1/2" x 9 3/8" x 15 3/16"	P	3/8" TAS	1	Leaf	3/4" x 6 3/4" x 45 1/8"	P	
4	Drwr runners	3/4" x 2 1/8" x 18 7/8"	S	3/8" TOE	4	Support brackets	3/4" x 1 3/4" x 19 3/16"	S	
2	Drwr supports	3/4" x 1 5/8" x 33 1/8"	S		2	Leaf supports	3/4" x 1 3/4" x 21"	S	
4	Drwr runners	3/4" x 2 1/8" x 18 7/8"	S	3/8" / 1" T	10	Drawer guides	3/4" x 7/8" x 16"	S	
2	Drwr runners	3/4" x 3" x 18 7/8"	S	3/8" / 1" T					

*TBE=tenons both ends; TAS=tenons all sides; TOE=tenon one end; x/xT=size of tenon on each end; 3X=on three sides; CTF=cut to fit

MAKING A RULE JOINT

The rule joint for the top and leaf attachment requires a certain amount of accuracy, but it pays off in the end. With a little care, a test piece isn't even necessary. I used

$\frac{1}{2}$ " cove and roundover bits sold separately (CMT 888-268-2487, #838.880.11 - \$40.50 & #837.850.11 - \$38.90). You can find sets in other catalogs.

The first step is to run the roundover bit on the top piece, leaving about an $\frac{1}{8}$ " shoulder at the top.

Next, use the cove bit to run the profile on the leaf, making the cut less deep than should be necessary. Then place the two pieces together to check the fit, and adjust the depth of

the cove cut deeper until the top surfaces are flush.

Next, turn the top and leaf over and mark the locations for the hinges so that the center of the barrel is $\frac{1}{2}$ " from the lip of the top. With the location marked, use a $\frac{5}{16}$ " straight bit

to make a relief cut in the underside of the top piece that's deep enough for the barrel of the hinge to slip into. Allow for the thickness of the hinge leaf when determining the depth of the recess.

With the barrel recessed into the top, mark the hinge location on the top and leaf, and rout a recess for the hinge leaves into both pieces. The same bit used to rout in the barrel should

work for this operation as well.

When you rout for the hinge leaf recess, make the cuts short of the pencil line, then use a chisel to clean up the recess. Start the clean-up by defining the perimeter of the recess

using a chisel. Pare the material at the pencil marks. Then use the chisel held flat to remove the waste. Now simply attach the hinges, mark the length of the top and cut the top and leaf to length.

The drawers are constructed using dovetails (half-blind on the front and through at the back) and a beveled bottom slipped into grooves in the front and sides (**right**). A trick from our clever ancestors was to cut a slot in the back edge of the solid wood bottom and nail the bottom in place at the slot (**below**), with the bottom glued to the front. This allows the bottom to move with changes in humidity.



nail two support battens in place on the back legs.

You're now ready to assemble. Test fit the side panels and rails in the back legs, and check the fit of the front frame to the sides. If everything fits well, lay the face frame on your work surface and glue the side rails to the front legs (again leaving the panels glue-free) then glue the drawer supports into their mortises in the front frame. Lower the back into place, leaving the tenons on the drawer supports glue-free. Check for square and clamp the cabinet until the glue is dry.

The drawer supports provide support for the bottom of the drawers, but to get them to move well they also need some guides to control side-to-side movement. These $\frac{3}{4}$ " x $\frac{7}{8}$ "-wide strips are simply tacked in place to the drawer supports to guide the drawer sides.

While you're still working on the inside of the cabinet, cut the leaf supports and the four brackets to support them to size. Each pair of brackets is rabbeted $\frac{3}{8}$ " x $\frac{7}{16}$ " on one side, and the leaf supports are rabbeted on both sides to form a stubby "T" cross-section. Then notch the support as shown in the photo and chamfer or round the end to avoid sharp corners. Later you will screw the brackets to the underside of the top with the arm protruding through the notches you cut in the back rail.

Drawers and Details

The drawers are of standard construction (by 19th century standards, that is) with hand-cut dovetails and a solid wood bottom. Cut a $\frac{3}{8}$ " x $\frac{1}{2}$ " rabbet on three sides of the drawer fronts, then use the same beading detail as on the side rails to dress up all four edges of each drawer.

It's now time to get to the rule joint that attaches the drop-leaf to the top. First glue up the large top, leaving it oversized



for length until after the top and leaf have been attached by the hinges so the lengths will match perfectly. Use the information at left to cut the rule joint. I use standard hinges for my drop-leaf. If you purchase special drop-leaf hinges, then you won't have to rout a recess for the barrel as shown.

The top is attached to the cabinet by using rectangular wooden "buttons" that have a short tongue. The tongue slips into grooves cut in the side rails with a router and a slot cutter. If you don't feel like making your own buttons, you can purchase metal clips through most hardware catalogs. Cut the slots wide enough to allow the top room for wood movement. Attach the leaf supports to the top at this time.

After a good sanding, the cabinet is ready to finish. If you've read any of my earlier pieces in *Popular Woodworking* you may have noticed I have a favorite finish for curly maple furniture. I used that finish again on this piece. (Moser's Golden Amber Maple, a water-based aniline dye, available from Woodworker's Supply, 800-645-9292 as item #W14904 for \$10.40.) After the dye is dry, lightly sand the entire piece to remove any raised grain, then top coat the piece with lacquer or your favorite choice of protective finish. **PW**

SUPPLIES

Rockler 800-279-4441

3 brass-plated table hinges, 1 $\frac{1}{2}$ " wide and 3 $\frac{3}{16}$ " long, item # 29249, \$3.99 a pair.

Metal tabletop fasteners item# 34215, \$1.99/pack of eight