

Build a Vanity Cabinet



Add a
handcrafted touch
to any bathroom

BY MARIO RODRIGUEZ

Browsing at a country flea market one weekend, I came across a vendor selling interesting architectural pieces. There were fireplace mantels, stained-glass panels, doors, and some odd lengths of ornate moldings. What really caught my eye, though, was a bathroom wall cabinet of Victorian vintage. It was simple and graceful, with a soaring cornice and nearly perfect proportions. Miraculously, it still wore its original finish. Over the years the cabinet had developed a deep, rusty color and a wonderful patina, punctuated by a brass Victorian cupboard latch. This was a piece worth copying.

I took some measurements, snapped a few photos, and then returned to my shop to draw up plans for a similar piece. This cabinet is the result. I made it out of quartersawn white oak. The ray-fleck grain patterns give a nice flair to the simple lines of the cabinet. What's really nifty is how the mirrored door is made. I assembled the parts with slip tenons—nothing revolutionary—but before cutting the joinery, I rabbeted the pieces for the mirror. This method creates half-lap joints and a perfectly square recess for the mirror without any need for chisel work in the corners.

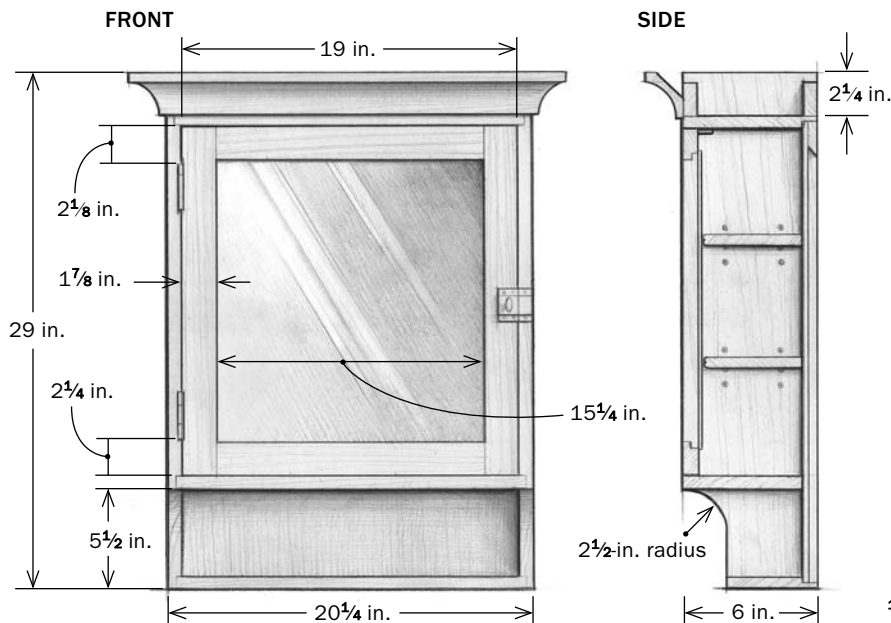
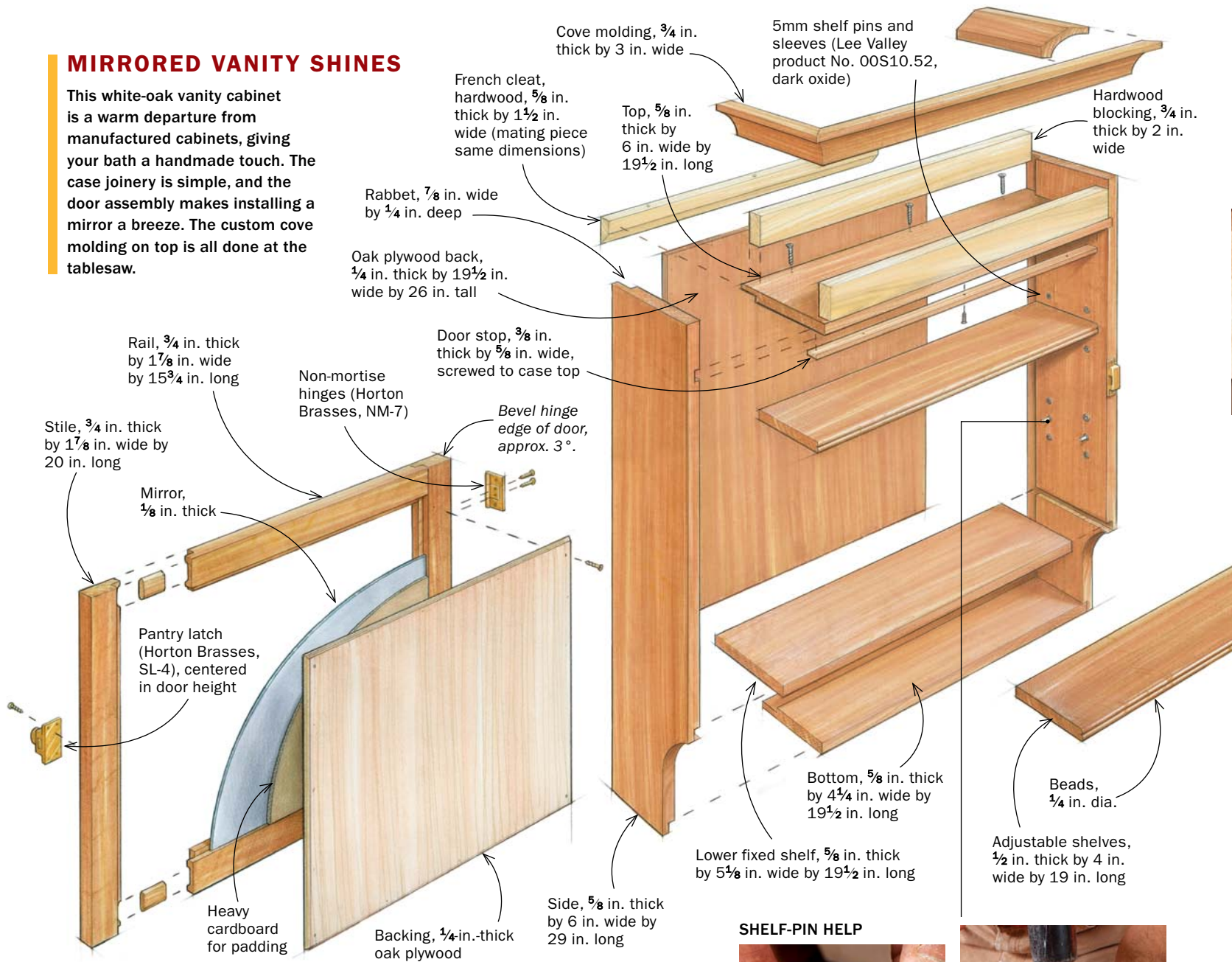
This piece is a popular class at my school, and I understand why. It doesn't take long to build, and it adds a handmade touch to any bathroom.

Case joinery comes first

The joinery is really straightforward, and it's all done at the tablesaw using a dado set. However, all the joints are visible, so make sure they're clean and tight. Once the case joinery is done, use a bandsaw to cut out

MIRRORED VANITY SHINES

This white-oak vanity cabinet is a warm departure from manufactured cabinets, giving your bath a handmade touch. The case joinery is simple, and the door assembly makes installing a mirror a breeze. The custom cove molding on top is all done at the tablesaw.

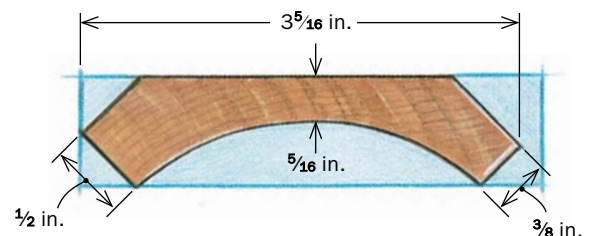


SHELF-PIN HELP



No-fuss shelf supports. To add longevity, Rodriguez chose shelf pins that are housed in hollow sleeves. The easiest way to set the sleeves flush is to use a special punch (leevalley.com, 00K61.02) as shown.

COVE DETAIL

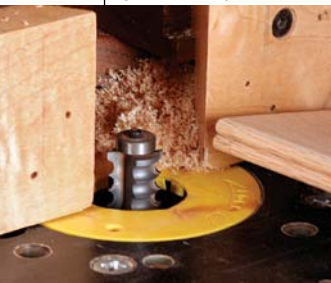


the arc on the bottom of each side. This arc gives the cabinet a slimmer look and provides more clearance to reach items stored on the bottom shelf.

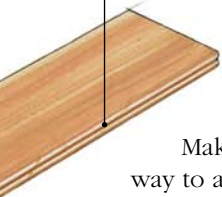
Plane and sand all the parts, then you're

ready to glue up the case. After assembly, drill for the shelf pins that will support the adjustable shelves. To ensure the shelf-pin holes were aligned side to side, I made a drilling template out of 1/4-in.-thick plywood. I clamped it to one side of the cabinet, drilled the holes, then slid it to the other side to drill the others.

SHELF EDGE DETAIL



Pretty beads. The two adjustable shelves have a decorative bead routed on their front edges.



Cut the cove for the cornice

Making your own molding is a great way to add a custom touch. Most can be done with a router, but the cove molding for this piece is too large for standard bits, so I used a slick technique on the table saw (see p. 38). I passed the stock over the spinning blade at an angle, guiding it between two fences clamped to the saw top.

You don't need a complicated formula to determine the angle of the fences. Simply raise the blade to the full height of the cut and angle the stock until the ends of the arc align with the leading and trailing teeth of the blade. Now clamp the two fences on either side of the stock, raise the blade to about 1/16 in., and run the stock over it. Raise the blade in 1/16-in. increments with each pass. As you approach the finished profile, take smaller, 1/32-in. bites, which will leave a slightly smoother surface that will be easier to clean up.

After finishing the cove profile, make a series of 45° edge cuts on the table saw. These cuts project the cove molding at a 45° angle from the cabinet, which looks attractive and presents a solid and stable surface for installation.

Pre-built miters stay tight

Most people fit and miter cornice moldings right on the case, but it can be difficult to get gap-free miters. I have a better way. I preassemble the moldings, ensuring that the corners are tight, then attach the entire

Dado set handles all the joinery

The joinery is really straightforward—nothing more than a few dados and rabbets cut at the table saw using a dado set.



Dadoes and bottom rabbet. After cutting the rabbet for the bottom, cut the dadoes for the top and fixed middle shelf (left). Any tearout on the back will be removed when you cut the rabbets for the back panel and French cleat (right). Bury the blade in a sacrificial fence when rabbeting.



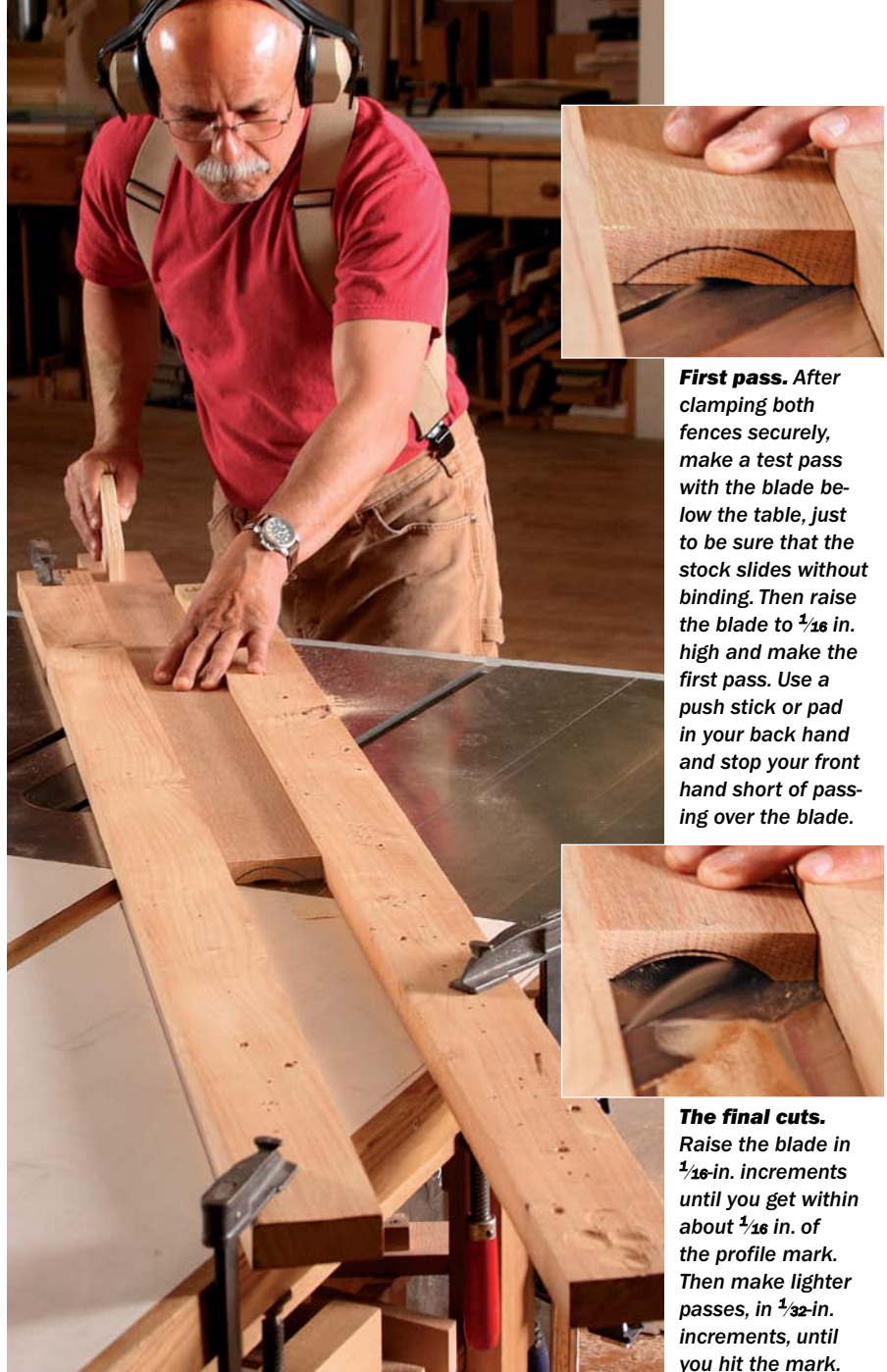
Bandsaw the bottom curve. The cutout at the bottom of the cabinet gives the case a slimmer look. Smooth the bandsaw marks with a spindle sander, a spokeshave, or curved sanding blocks.



Clamp it up. After planing and sanding the case parts, glue them up. Do a dry run first to make sure that everything comes together cleanly and squarely.

Cove-cutting on the tablesaw

You can't cut a cove this big with a router bit, but a time-tested tablesaw technique handles it easily. Take time to set up the cut accurately, and take light passes to creep up on the profile.



First pass. After clamping both fences securely, make a test pass with the blade below the table, just to be sure that the stock slides without binding. Then raise the blade to $\frac{1}{16}$ in. high and make the first pass. Use a push stick or pad in your back hand and stop your front hand short of passing over the blade.



SETUP

Height, then angle. Raise the blade to meet the apex, or high point, of the arc (above). Now angle the fences so that the ends of the arc align with the leading and trailing teeth of the blade. Mark that angle on the tablesaw top and then clamp the fences in place (right).



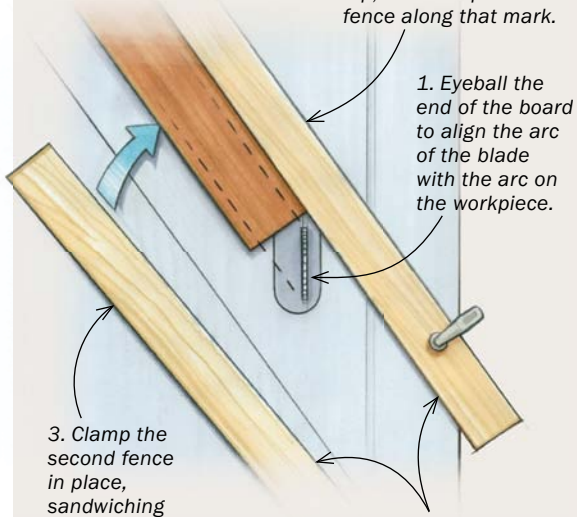
SET UP THE FENCES

2. Mark the approach angle on the tablesaw top, and clamp the first fence along that mark.

1. Eyeball the end of the board to align the arc of the blade with the arc on the workpiece.

3. Clamp the second fence in place, sandwiching the workpiece.

4. Make a test pass with the blade down to be sure the stock moves freely between fences.



The final cuts. Raise the blade in $\frac{1}{16}$ -in. increments until you get within about $\frac{1}{16}$ in. of the profile mark. Then make lighter passes, in $\frac{1}{32}$ -in. increments, until you hit the mark.

Online Extra

To watch a free video of this cove-cutting technique, go to FineWoodworking.com/extras.



Trim the molding. Now make the 45° trim cuts on both edges to finish off the molding.



Clean up before mitering. Use a gooseneck scraper and a curved sanding block to remove the tablesaw marks.

Better way to miter molding

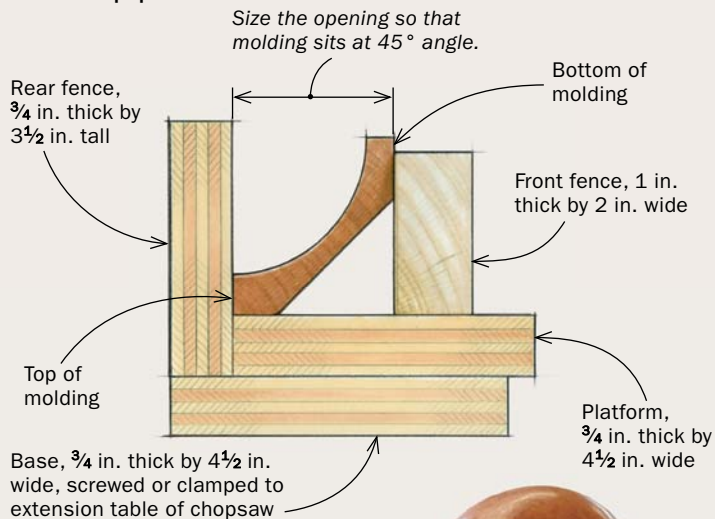
Rodríguez assembles the molding before attaching it to the cabinet. This way he can ensure tight miters with no gaps.



No rocking in this cradle. To turn the compound-angle miters into simple 45° cuts, Rodríguez supports the work in a cradle. He makes both left and right cuts in the front fence first, and then uses those kerfs to line up the molding cuts.

CRADLE MAKES COMPOUND-ANGLE CUTS EASY

With this cradle you can make a compound-angle cut with a simple 45° miter cut on the chop saw. The key is that the molding is held at its installed angle. All parts are plywood, except for the front fence, which is poplar.



assembly to the case. Attaching an assembled cornice lets me build it square with tight miters, and then coax it into position.

The cornice requires a compound-angle miter. It's common to make this cut with a tablesaw or compound-miter saw. With the tablesaw you need to angle both the workpiece and the blade; with the compound-miter saw you need to angle the blade in two directions and find a way to support the molding. Once again, I have an easier way. I cut the miters on a simple chop saw, with the workpiece nestled in a cradle that holds it at the correct angle (see above).

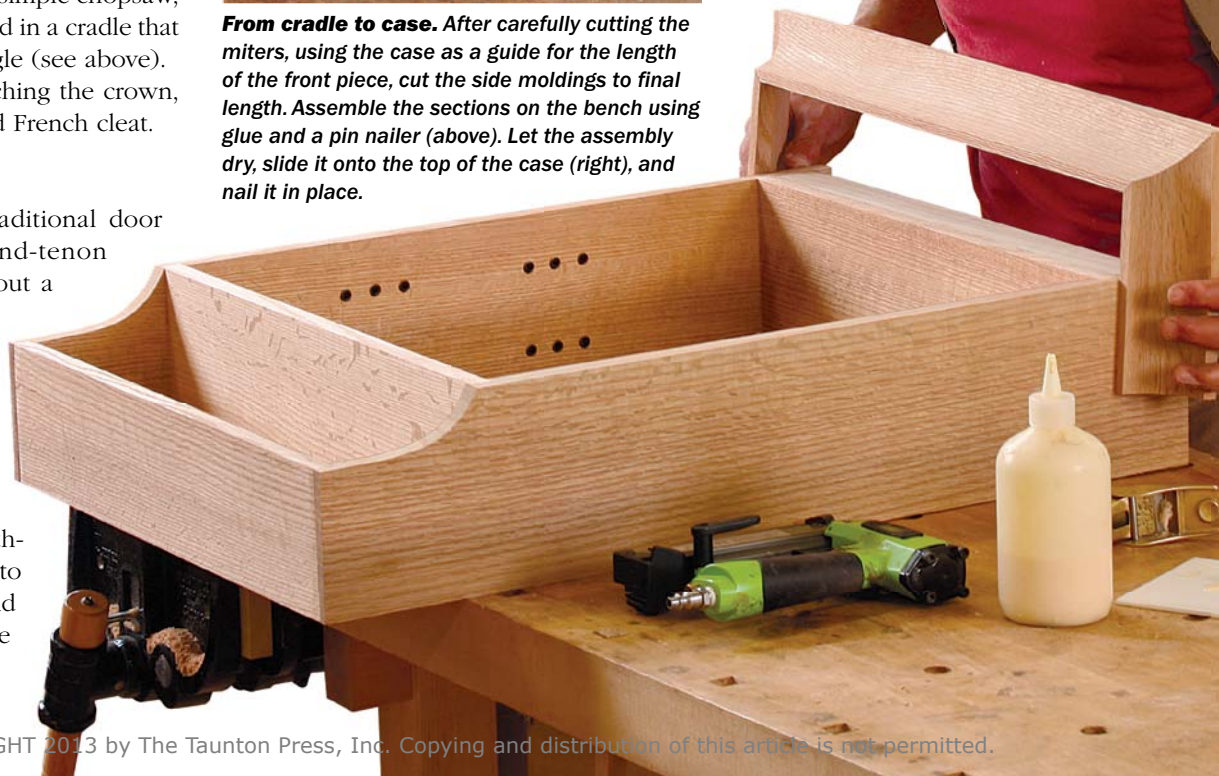
After mitering and attaching the crown, install the back panel and French cleat.

Mirrored door is easy

I could have made a traditional door frame, with mortise-and-tenon joints, and then routed out a rabbet for the mirror. But routing the rabbet after assembling the door often results in tearout when you change direction. It also can be difficult to support the router on the frame without tipping, which leads to a bumpy or wavy cut. And you have to square up the

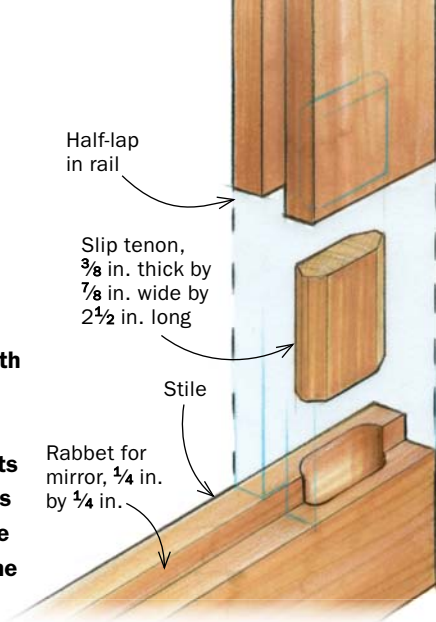


From cradle to case. After carefully cutting the miters, using the case as a guide for the length of the front piece, cut the side moldings to final length. Assemble the sections on the bench using glue and a pin nailer (above). Let the assembly dry, slide it onto the top of the case (right), and nail it in place.

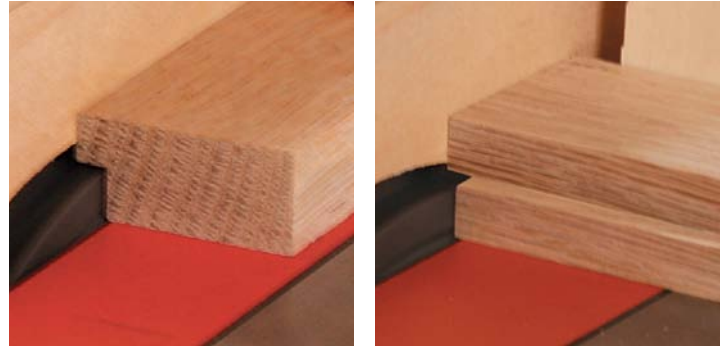


Simple but sturdy door joints

The door is assembled with slip tenons. But before cutting the mortises, Rodriguez cuts the rabbets for the mirror. The process creates a perfectly square recess plus half-laps at the joints.



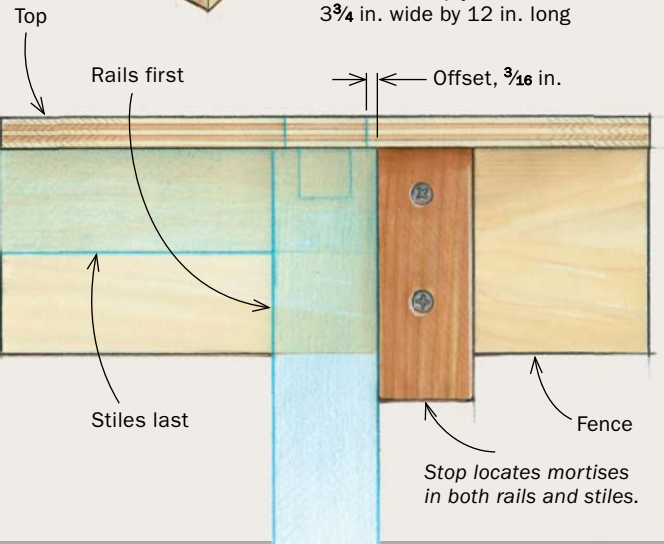
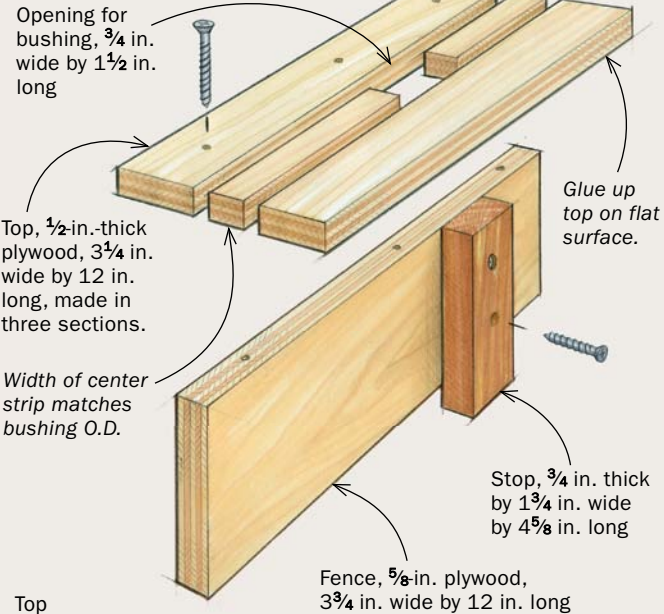
RABBET FIRST



Make way for the mirror. Use the same dado set to rabbet the stiles and rails (left) and to cut half-laps in the rails (right).

CLEVER JIG FOR MORTISING

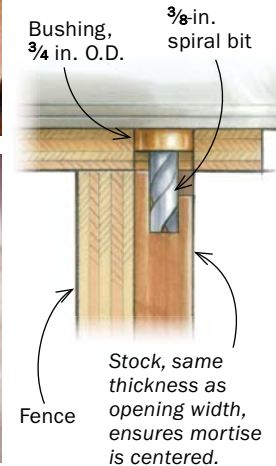
This simple shopmade jig makes it easy to center a 3/8-in.-wide by 7/8-in.-long mortise on both the rails and stiles, using a 3/4-in. O.D. bushing and 3/8-in. spiral bit.



ROUT FOR LOOSE TENONS



Rout the rail first. Clamp the jig in a vise, with the bottom of the rail tight against the stop and with the end tight to the top, then rout using a 3/8-in. spiral bit and guide bushing.



Stiles next. Butt the end of the stile tightly against the stop and tight to the top.

EASY GLUE-UP

Slip tenons don't slip. Once the mortises are cut, mill slip-tenon stock to precise thickness and width. Chamfer the edges to fit the round mortises and then chop them to length (right). Be sure to check for square as you glue up the door frame (below).



corners with chisels afterward. Instead, I cut the rabbets for the mirror in the rails and stiles first, and I joined the parts using slip tenons. This gives me a strong door with a perfectly square rabbet for the mirror.

For an easy door installation, I chose Horton's non-mortised hinges (NM-7, \$9 a pair; horton-brasses.com). When installed, these hinges allow a generous $\frac{1}{16}$ -in. reveal. After cutting the door to size, allowing $\frac{1}{16}$ in. spacing all around, you have to cut a 3° back bevel on the hinge side/edge of the door to give clearance for the door to open and close without binding. Once the door is hung, install the pantry latch and strike (SL-4, \$17), and then the door stop.

Now cut the mirror and cardboard backing to fit the door rabbet. Then cut and screw the plywood backing over those pieces.

For the finish, you need to choose something that will hold up in a steamy environment. I warmed the oak with amber shellac, then sprayed the cabinet with lacquer. If you don't have a sprayer, any wipe-on varnish or oil/poly mixture will work. □

Mario Rodriguez helps run the Philadelphia Furniture Workshop (philadelphiafurnitureworkshop.com).

www.finewoodworking.com

Final touches

HINGES

Non-mortise hinges are easy to install. And they can be adjusted slightly to dial in the gap. But you have to bevel the hinge side of the door to create clearance for the hinge barrel.



MIRROR

The plywood backer over the mirror is cut from the same $\frac{1}{4}$ -in. oak plywood as the case back.

