

Solid Edging for Curved Tops



How to get a durable, beautiful edge and a flawless fit

BY CRAIG THIBODEAU

While I often use veneer to edge veneered panels, whenever those panels need a more durable edge to withstand regular contact—such as chest lids, tabletops, or desktops—I go with a solid-wood edging. Solid wood can be shaped and repaired easily, and it's far more resistant to abuse than a veneered edge. The solid edge also adds a handsome detail, whether you've matched and applied the central veneers yourself, as I do, or you go with nicely veneered hardwood plywood.

Adding a solid-wood frame is easy on straight edges but gets trickier on curves. But that doesn't have to stop you. I have a simple method for shaping the edging to fit the panel precisely. The more time you spend fitting, the better the joints will be. But an absolutely perfect seam isn't always necessary. I often add a



CUT THE CURVED PANEL

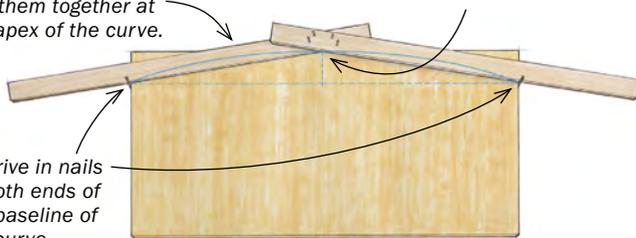
Thibodeau uses a simple jig to draw large single-radius curves, and then cuts them on the bandsaw.

Set your pivot points. Clamp the veneered panel to a slightly larger plywood panel, and drive finish nails at the beginning and end of the curve.

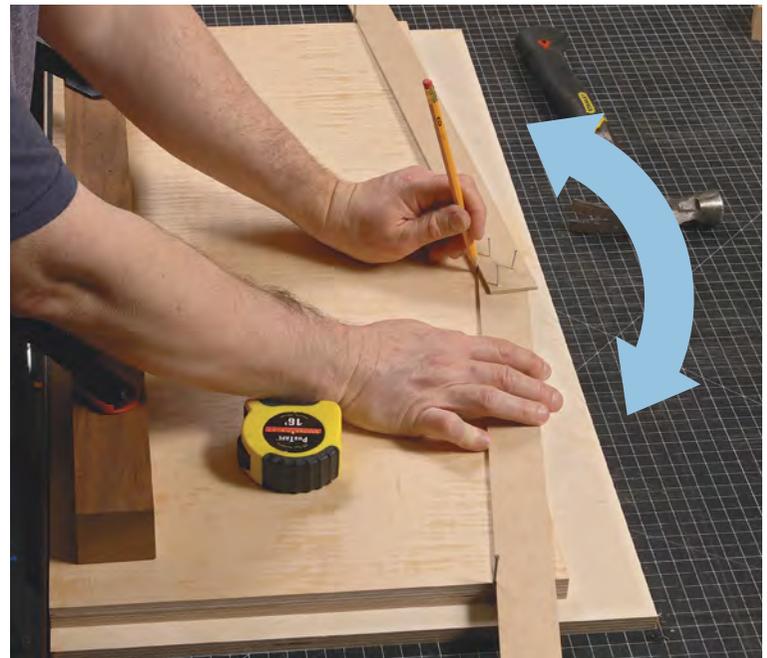


2. Angle a pair of thin plywood strips so they contact the nails, then nail them together at the apex of the curve.

3. Place a pencil at the apex and slide the assembly side to side to draw the curve.



1. Drive in nails at both ends of the baseline of the curve.



Nail two scraps together and draw. Rest two thin strips against the pivot nails, and fasten them so they meet at the apex of the intended curve. To draw a long curve that connects those three points, rest your pencil in the junction of the two strips and slide the strips along the nails.



Saw outside the line. Bandsaw as smooth a curve as possible, staying just outside your layout line. A disk sander is a great tool for smoothing the curve. Work steadily up to the line without passing it, or you might lose track of the curve and end up with flat spots.



thin stringing or banding, centered on the joint, which hides minor gaps and adds another decorative detail. If your design looks better without the inlay, just keep fitting until the tiny gaps are gone.

You can use these techniques for a variety of curved shapes, from full circles to gently curved edges. But they must be single-radius curves, like an arc of a circle. For more complex curves, I use a spindle sander and compass plane.

I almost always make the edging thicker than the panel to avoid the standard $\frac{3}{4}$ -in. dimension of factory sheet goods. I glue it on so the edging's top face is slightly proud of the panel, and sand it flush afterward. Because it overlaps the bottom of the panel by $\frac{1}{8}$ in. or more, I pre-sand that side before gluing on the edging.

This curly maple veneered panel, framed in solid mahogany, is

based on the hinged top for a small blanket chest I built. While the front edge is curved, the back and sides are straight. For cutting the rear miters, see "Tablesaw Sled for Miters" in *FWW* #257 for the jig I use to cut accurate miters on straight edging. Here I'll focus on the front edge, which needs to be fitted to the curved edge of the panel, and has non-standard miters.

Shape the panel first

The process always starts with the panel. For tops like this, I cut a rectangle first and then cut the curve on the bandsaw. The single-radius arc can be drawn with a long pivoting trammel or long string, but locating the faraway center of the curve is tricky. To draw a shallow, single-radius curve with a known length and



MAKE THE CURVED EDGING BLANK

Join multiple pieces to create curved edging with grain that follows the curve.



Transfer the curve and centerline. Lay the panel on the edging and use a framing square to mark the joint line (left). After tracing the panel's curve onto the edging, use a notched spacer to draw the outside edge (above).

width, I use a method demonstrated by Paul Schürch ("Drawing Big Curves," *FWW* #175). It requires just a few nails and three pieces of plywood (see photos, opposite).

I cut long curves like this on the bandsaw, staying just outside the line, and then use a disk sander, edge sander, or compass plane to bring the curve close to the line. I leave the pencil line visible so I know I haven't oversanded. You'll have a chance to fine-tune the panel's curve later when you sand the matching edging.

Prep the edging stock

For best grain appearance on curved edging, I almost always make it from multiple pieces. For a long, shallow curve like this one, two pieces, butt-jointed in the center, give a pleasing mirrored look, especially if you resaw them from one thick board. You can also use one long piece with very curved grain. In any case, the closer the grain matches the curve, the better the edging will look.

Mark the parts and join the halves—I position each piece of edging under the curved panel, one at a time, to do the layout. First, I mark the butt joint by referencing a framing square off the back edge of the panel. Next, I trace the panel curve onto the solid stock and mark the approximate miter angles at the ends. Then I draw the outside curve on the edging stock, offset 1½ in., which is the desired width in this case. I use a spacer to hold the tip of the pencil as I trace the curve. Last, I draw a triangular block that will provide purchase during clamping and be sawn off afterward.

The butt joint probably won't be square to either piece of edging stock, so be careful when setting up your crosscut angle. I make this cut on the miter saw, being careful to hit my line exactly so all the curves line up the way they should.

Then I add a small Domino tenon to the joint, and glue it together. A biscuit works well too, though I like the added depth and strength of the tenon. Make sure to locate it so it won't be exposed when you cut the curved outer edge.



Glue up the edging stock. Use a miter saw for the angled cuts where the parts meet. Be sure to add mechanical reinforcement to this end-grain joint—be it a Domino, biscuit, or a couple of dowels—and clamp it tightly together.

MAKE ONE CURVE MATCH THE OTHER

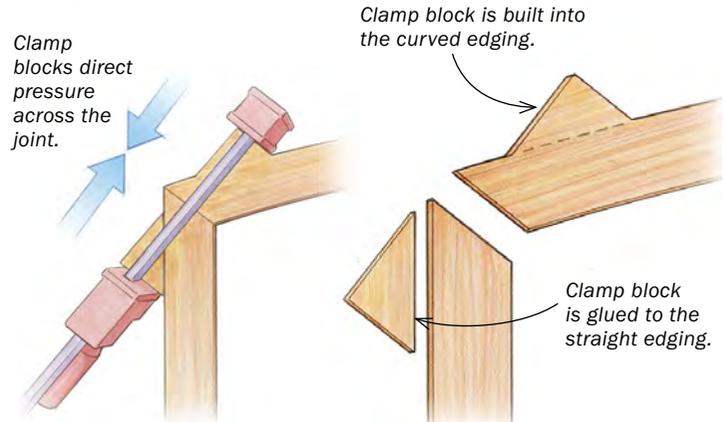
Thibodeau's technique uses each curve to refine the other in a back-and-forth sanding process that matches them perfectly.

Saw the edging. After cutting the outside curve and clamp blocks, Thibodeau cuts the inside curve, staying just inside the line.



HOW CLAMP BLOCKS WORK

Triangular clamping blocks, whether built into the edging stock or glued on afterward, create parallel surfaces that keep clamps square to the miter joint. For this slightly irregular miter, the blocks won't be exactly 45°.



Stick sandpaper on the panel edge. Cut long strips of self-adhesive, 120-grit paper, and press it onto the panel edge. Rub the edging back and forth along the curve (right), trying to keep it flat and square as you do.



Reverse the paper and repeat the process. Stick the paper to the edging this time, and use it to sand the panel edge. Be especially careful to keep the edging stable and level, to avoid rounding the edge. Gaps will likely be gone at this point, but you can repeat the process if they aren't.

Cut and fit the edging, then tackle the irregular miters

Bandsaw the outer profile of the edging first, including the clamp blocks. If you forget to include the blocks or don't have enough material for them, you can glue on triangles afterward.

Then cut the inner curve. Try for a nice smooth line here, following the pencil line as closely as you can.

The back-and-forth sandpaper trick—This is the heart of my fitting method. Instead of using compass planes, spindle sanders, and curved blocks to smooth the inside curve to the pencil line, I use the panel itself—with sandpaper stuck to it—to fair the edging. Then I stick sandpaper to the edging to fair the panel. This quickly creates a beautiful seam all along the curve.

Because of the curve, the front miters aren't exactly 45°. I approach them by marking and cutting the miter on the curved part first, and then using that miter to mark its mate.

Start by leaving all of the edging pieces long, and don't cut the back miters until after the front ones are fitted. That way if you make a mistake there will be extra material to work with.

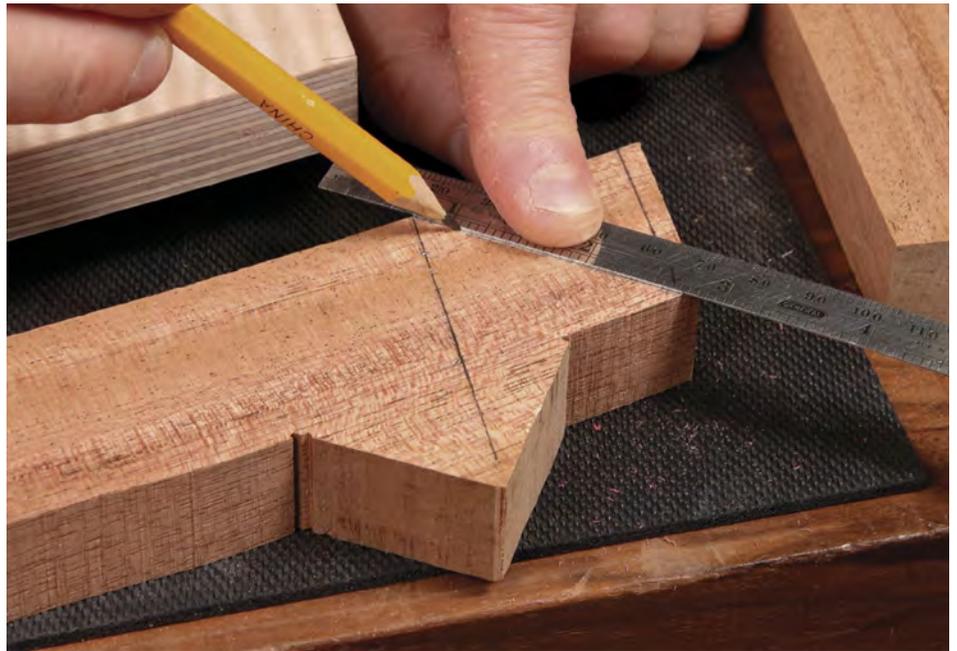
Miter the curved edging first—To mark the irregular miters at the front corners of my panel, I jack up the panel a bit so I can

MITER THE CURVED EDGING

The miter joints between curved pieces and straight ones are not exactly 45°. Thibodeau has some great tips for marking and fitting them. Start with the miter on the curved piece.



Mark the overlap. Hold the side edging in place and trace its inside and outside edges onto the curved rail (above). Then connect those lines to lay out the miter (right).



Cut and trim that joint. Cut this irregular miter on the bandsaw, leaving a little extra, and then refine it on a disk sander, bringing it up to the line. Then check the fit at both ends of the curved edge, making sure the base of each miter hits the panel's corner exactly. Sand the miters further if necessary.



Online Extra

Craig Thibodeau discusses his new book on our podcast. Find the link at FineWoodworking.com/277.

Transfer the angle. Put the pieces back in their overlap position, with the curved part on top this time, and transfer the miter angle to the straight edging. Bandsaw and sand it as you did the other.

APPLY ALL THE EDGING IN A SINGLE GLUE-UP

Rather than gluing on the pieces one by one and fussing with the miter alignment, Thibodeau applies them all at once, choosing polyurethane (Gorilla) glue because of its extended working time. This slippery glue also makes it easier to insert biscuits or Dominos.



Glue a clamp block to the straight edging. You can do that with a rub joint, rubbing the block hard until it starts to grab and leaving it there for the glue to set up. With the front miters fitted, you can mark, cut, and fit the standard 45° miter joints at the back of the panel.



Add some mechanical reinforcement. Biscuits or slip tenons are very important for aligning the pieces in this complex glue-up. Thibodeau puts two pieces of paper under the Domino joiner's fence when mortising the panel, so the edging ends up a hair proud.



Good sequence for a successful glue-up. You have about 15 minutes of working time with Gorilla glue, so keep moving. Thibodeau starts by using the clamp blocks to clamp the miters. He follows with clamps across the panel, and last, puts a vertical clamp on each miter to make sure its faces are flush.



place both mating pieces against it at the same time and mark their overlap on the curved piece. That lets me draw a diagonal line that represents the miter angle at both ends of the curved piece.

Since these miters are on curved pieces and not at a perfect 45°, I cut them on the bandsaw, using a disk sander to flatten them and creep up to my layout line. Before moving on, be sure to place the curved edging against the panel again and check that both miters end precisely at the corners of the panel. If it's slightly long, use the disk sander to trim one of the miters.

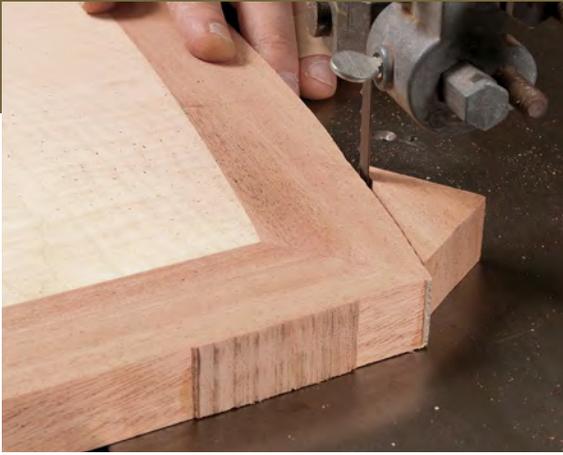
To mark the corresponding miters in the side edging, I overlap the parts again and transfer the miters from the curved edging

to the straight pieces. I make these cuts on the bandsaw as well, using the disk sander to work my way up to the line. Once both these miters are fitted, mark and cut the back miters as you would for any other framed panel.

Glue-up and finishing touches

To add strength and help with alignment, I add Dominos every 6 in. or so around the panel and inside the miter joints.

Glue up the panel as shown in the photos. I use Gorilla polyurethane glue because it has plenty of open time and creates a rigid glueline. Also, compared to yellow glue, it introduces very little



Clean up the edging. Saw off the clamping blocks and use a handplane to take care of the remaining waste. To bring the edging flush with the veneered panel, Thibodeau sticks sandpaper onto a hard block (right), taping the front edge to protect the panel.



water into the Domino joints, which would make them swell. With polyurethane glue, one piece gets the glue, and the other gets a very light spritz of water. Also, be sure to let the sticky squeeze-out dry completely before trying to remove it.

Clamp across the panel and across each miter. I also add a clamp on top of each miter joint to hold it flat. Once the glue has dried overnight, cut off the clamp blocks at the bandsaw and sand the outside edge. To clean up the curved edge, I make a curved sanding block. I use that same block as a router fence for adding the optional inlay shown in the photos on this page. □

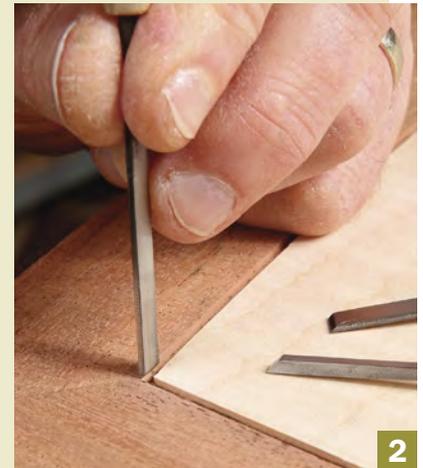
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Add a decorative bead

Here's how to add a thin, contrasting inlay at the glue line. Step one is buying or making stringing to match the diameter of a small spiral router bit that is $\frac{3}{32}$ in. dia.



1



2



3



4

Thibodeau used a curved fence to rout a groove along the front edging (1), and a straight fence along the sides and back. Center the bit over the glue joint as you attach the fence. Proceed slowly to avoid breaking the tiny bit. Then square the corners with a small chisel (2). Saw a miter at the end of each piece (3), and then fit it into the groove to mark the other end. Put a thin bead of glue in each groove and tap the stringing into place. After it dries, use a sharp scraper and a sanding block to level it with the panel (4).