

## Add a bead to a curved apron

A STACK OF THIN VENEERS  
CONFORMS  
TO ANY CONTOUR

BY MIKE KORSAK

**F**or a recent chest of drawers, I designed aprons whose bottom edge ripples in a series of asymmetrical, flowing curves. To accentuate the curves, I decided to apply thin beads of contrasting wood to the bottom edge of the aprons. The challenge was how to make beads that would conform to the sinuous profile.

I considered cutting the beads from solid stock and using a hot pipe to shape each bead to its apron. I also thought about using steam to make solid bead stock pliable, and then pressing the stock in a bending form. Either of those approaches might have worked, but I wondered how precise the fit to the apron would be. I decided instead to make the bead as a bent lamination. I built a two-part bending form and glued up six layers of thin rosewood veneer (purchased online) to yield beads that exactly matched the apron's every squiggle.

## Create a template, then the apron



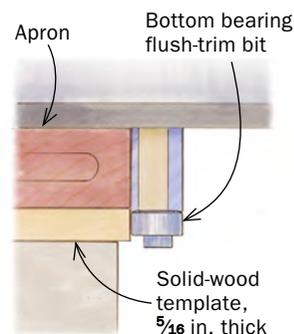
**Template first.** Korsak glues a full-scale drawing of the apron to a thin piece of solid wood and cuts it to shape on the bandsaw. After, he refines the curves with hand tools.



**Rough-saw the real apron.** Trace the template on the apron, then cut close to the line with the bandsaw. To simplify the joinery, cut the mortises in the apron while the stock is still square.



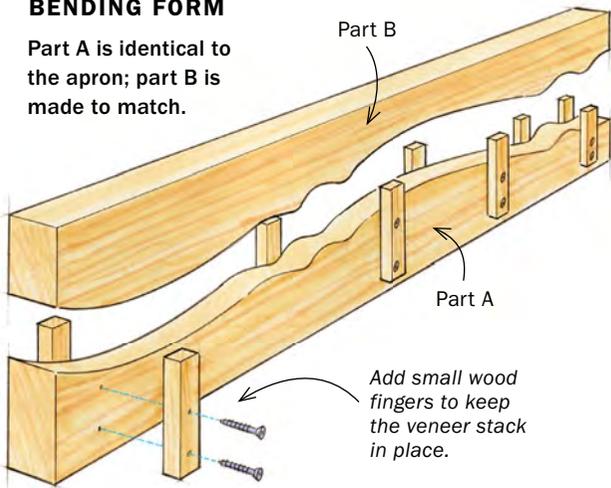
**The template takes over.** With the template clamped beneath the apron, Korsak flush-trims the apron to final shape.



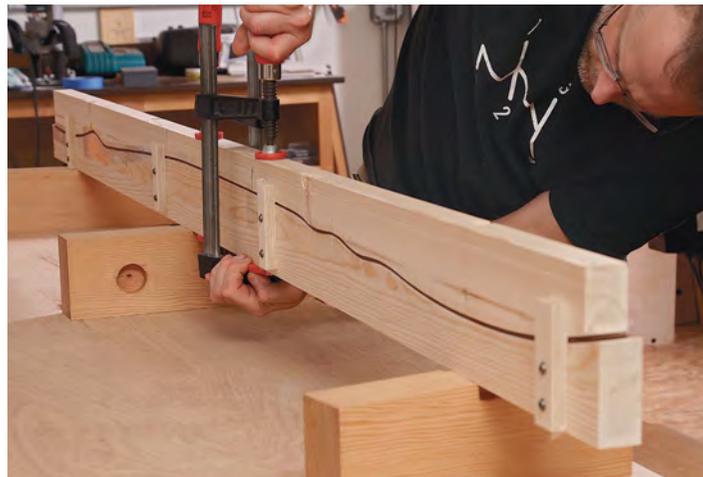
# Laminate veneer to make the bead

## BENDING FORM

Part A is identical to the apron; part B is made to match.



**Laminated bead needs a two-part form.** After using the apron template to generate part A of the form, Korsak traces part A onto a blank for part B. He uses a stack of veneers as a spacer to create a pencil line offset by the thickness of the bead. Then he bandsaws out part B and cleans up the curves with a sander and hand tools. Turn to p. 45 to see how you can create huge bends with a two-part form.



**The bead gets bent.** After coating the thin veneers with polyurethane glue, Korsak lays them into part A of the form, then adds part B.



**Careful clamping.** With the bending form elevated on blocks for clamp clearance, Korsak starts clamping at the middle and works outward.

## Fine-tune the laminated bead

### **Joint the edge.**

After flattening the front edge of the bead on the jointer, Korsak fine-tunes it by pulling the bead across an inverted jack plane clamped in a bench vise.



### **Check for flat, then rip.**

Korsak uses his workbench to check that the jointed edge is flat, then rips the bead to width at the bandsaw. He'll flush the sawn edge to the inside face of the apron after glue-up.



Once the bead was made, I rounded its front edge and glued it to the apron.

### **Template shapes the apron and the bending form**

I used a template made from my full-scale drawing to help shape the apron and the bending form. After roughing out the design of the apron's bottom edge in freehand sketches, I refined it using drawing bows, French curves, and an adjustable curve.

When I had the final design, I made the template by cutting out the drawing and gluing it with spray adhesive to a 5/16-in.-thick piece of solid wood. I cut nearly to the lines of the drawing at the bandsaw, and cleaned up the curves with hand tools.

To shape the curving edge of the apron, I first traced the outline of the template onto the apron blank. Then, after bandsawing close to that line, I clamped the template to the apron and flush-cut to the template with a router.

I used the same template (and the same tracing and shaping process) to make the first part (part A) of the two-part bent-lamination form for the bead. The second part of the form (part B) had to match part A exactly—but with the thickness of the bead stock taken into account. To achieve this, I traced part A onto the blank for part B using a few pieces of thick veneer as a spacer between my pencil and the edge of part A. Then I cut close to the line with the bandsaw and faired the sawn curves with a drum sander and hand tools.



**Rounding over a squiggle.** After chalking the jointed front edge of the bead, Korsak rounds it over with a spokeshave followed by a block plane, files, and sandpaper.



**Prepare for attachment.** Korsak countersinks the bead for screws that will keep it from shifting during glue-up. He ebonized the bead with leather dye, then applied shellac.

### Bend and shape the bead

With both parts of the form made, I checked their fit by dry-clamping the six bead veneers between them. Then, for the real lamination, I brushed on polyurethane glue and clamped the veneers in the form for a minimum of two hours of cure time. Afterward, when I pulled out the bead, there was no springback at all—it mated perfectly with the apron.

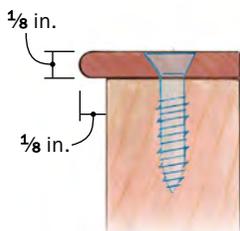
Next I needed to create a roundover on what would be the proud front edge of the bead. First I flattened that edge on the

jointer. To smooth the jointed surface further, I used my jack plane clamped sole-up in a bench vise. Then I cut the bead to width on the bandsaw.

To shape the roundover, I first rubbed chalk on the jointed edge. Then I shaped the profile, using one hand to hold the bead and the other to operate a spokeshave. I did the rounding solely by eye; as the chalk on the jointed edge disappeared, I could gauge how close I was to the centerline of the bead's thickness.

## Fix the bead to the apron

**The bead goes on.** While drilling pilot holes for the screws, Korsak uses an adjustable square to locate the bead for an even overhang. Then he drives the screws and removes them.



### Attaching a bendy bead

After the bead was shaped and sanded, I predrilled countersunk holes for the screws that would aid in positioning when the bead was glued to the apron. The final steps prior to assembly were to dye the bead black (the rosewood veneer was not as dark as I'd hoped) and apply shellac. I used shellac on the bead to provide a shiny contrast to the matte Osmo Polyx finish on the rest of the piece.

I used part B of the bending form as a caul when I glued the bead to the apron. The screws kept the bead in place while the caul provided even clamping force over the entire length of the bead. I used polyurethane glue again and applied it sparingly, as squeeze-out around the bead would have been difficult to clean up. □

*Mike Korsak makes furniture in Pittsburgh, Pa.*

### Glue time.

After applying polyurethane glue, Korsak redrives the screws, then uses part B of the lamination form as a clamping caul (above).

**The tail of the bead.** Once the glue cures, Korsak trims the bead flush to the end of the apron, starting with a backsaw and finishing with a chisel.

