

A Classic Spin on Curved Aprons



Round bistro table is a great way to try a traditional brick-laid construction technique

BY RAYMOND FINAN

I occasionally do repair work on antiques, which has given me the opportunity to examine up close the construction techniques used centuries ago. One that really intrigues me is the old method for making curved table aprons. These days, with modern power tools, vacuum systems, and high-tech adhesives, curved work is often accomplished using bent lamination. Without the benefit of these modern methods, the craftsmen of yesteryear used a straightforward bricklaying process to form curved aprons; then they applied beautiful veneers on the show side to hide the brick wall.

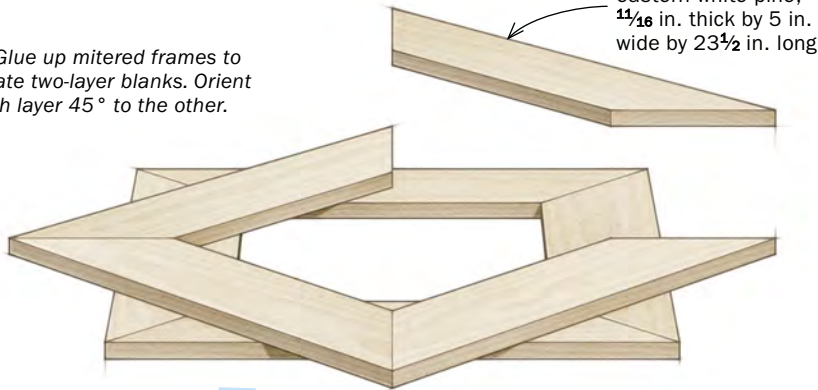
I've used this process on circular and elliptical aprons, and it can even be used in forming compound curves. In this article, I'll show you how I've modernized this traditional technique using a router and router table, plus a little MDF, to build a circular table apron. I'll also show you how I cut the bridle joinery to attach the legs to the apron, and I'll demonstrate a simple process for applying veneer to a curved surface. The result is a bistro table that's a great place to sip your morning brew.

A cue from masons

Masons typically build brick walls with a running bond, in which the bricks in each course stretch across the end joints in the course below. This layout creates more "long-grain" bonding, hence more strength. The principle holds true for wood, too.

BRICK-LAID APRON, START TO FINISH

1. Glue up mitered frames to create two-layer blanks. Orient each layer 45° to the other.



2. Saw and rout the first blank to a ring, add the second, and rout that round as well to create the brick-laid apron core.



3. Veneer the outside face in four sections. Position the seams at the leg locations.



4. Dado the apron for the legs. The inside and outside faces, as well as the bottom edge, get dados.



Top, 7/8 in. thick by 24 1/2 in. dia.



Groove for tabletop fasteners



Apron, 1 1/16 in. thick by 23 3/4 in. wide by 22 1/8 in. dia.

Outside face of leg tapers to 1 1/2 in. wide at top.

Leg, 1 5/8 in. thick by 2 in. wide by 45 3/8 in. long

Stretchers, 1 in. thick by 1 3/4 in. wide by 23 3/8 in. long

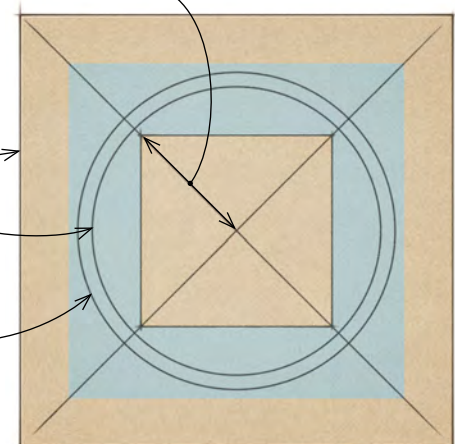
Tenons, 1/2 in. thick by 1 1/2 in. wide by 2 1/32 in. long

9 1/2 in.

Template, 1/2 in. thick MDF, 30 in. square

10-in. radius

11-in. radius



ASSEMBLY TEMPLATE

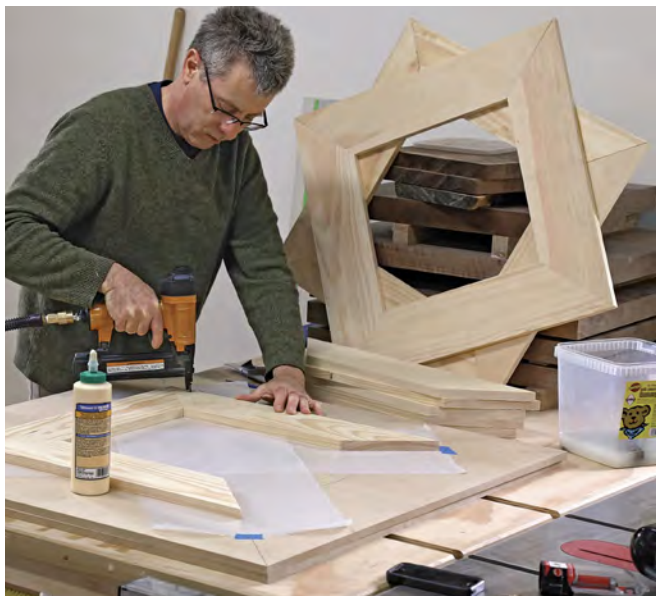
LAYER UP THE APRON

Start with an assembly template.

After drawing diagonals on a square sheet of MDF, Finan uses a beam compass to mark the apron location.



Glue up two layers at a time. Tack down the first layer to the template (right), using the diagonals as a guide for positioning, and gluing only the end grain. Then glue and tack the second layer in place (below). Be careful not to nail in the finished ring area.



When I brick-lay an apron, I use eastern white pine for the bricks for a few reasons. First, it's abundant and cheap, which is good since this process generates a fair amount of waste. Second, it is very dimensionally stable, making it an ideal substrate for veneering. It is also very lightweight compared with hardwoods, so it does not add a lot of unnecessary heft to the piece.

Make the assembly and ring templates

To make the apron, you'll need two MDF templates: an assembly template and a ring template. For the assembly template, start by cutting a 30-in.-square piece of MDF and drawing diagonals from corner to corner. Then, using a beam compass with its point at the intersection of the diagonals, draw two circles: the inside and outside faces of the apron. Finally, make a mark on each diagonal $9\frac{1}{2}$ in. from the intersection. Connect the marks to create a square within the inner circle. This will serve as a reference for laying out the first layer of bricks.

To make the ring template, first tack a square of $\frac{1}{2}$ -in. MDF to a backer board using a brad nailer. Lay out the diagonals and the apron circles as you did with the assembly template. Add some brads between the two circles, then outfit a router with a $\frac{1}{4}$ -in. spiral upcutting bit and mount it to a trammel. Screw the trammel to the MDF where the diagonals intersect. Set the depth of cut to about $\frac{9}{16}$ in. and rout the inside diameter of the ring. The brads keep the pieces from shifting once you rout through the template. Reset the trammel and rout the outside diameter. Carefully pry off the ring template and remove the brads. Don't erase the diagonals on the ring. You'll use them to mark the leg locations on the apron.

Stack the bricks, build the apron

For this project, the apron is $2\frac{3}{4}$ in. wide, and I build it up using four layers of bricks in a running bond. The brick blanks are flatsawn, so when stacked and sawn out they produce a ring of wood that is quartersawn



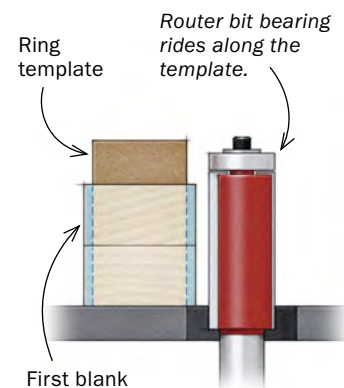
ROUT IT TO SHAPE



Make a ring for routing. Mark out a ring template to match the assembly template. Then rout out the ring using a shopmade router sled screwed to the center of the MDF sheet.



Rough out the ring. Trace the ring profile onto the blanks (left), and cut away most of the waste. Use a jigsaw on the inside of the ring, then turn to the bandsaw for the outside (above).

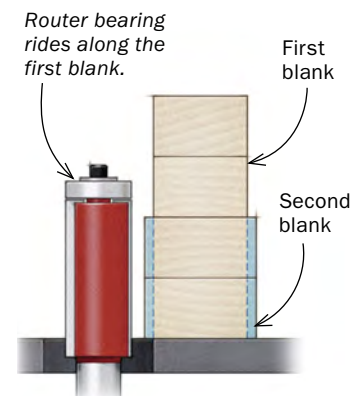


Use the ring template for routing the first blank. Tack on the template and use a bearing-guided bit to flush-trim the inside and outside faces of the ring.

in its height, making an excellent substrate for veneering. Cut 45° miters on the ends of each brick. For this table, you will need 16 bricks to create the four square layers. If your table is bigger, you may need to go with six- or eight-sided layers to create a shape that fits the design without resulting in too much waste.

Tape waxed paper to the assembly template so the bricks don't stick. Apply glue to the ends of the bricks, line up the short edges with the square you laid out, and tack the bricks in place, being sure to shoot the brads well clear of the ring. Don't get fussy if the butt joints aren't perfect, as the strength of the apron comes from the long-grain surfaces overlapping the butt joints. Besides, the veneer will cover small imperfections.

The second layer of bricks comes next. With a square, mark the centerline on each brick of the first



Attach the second ring and use the first as a guide. The first ring, glued to the second, now serves as a template.

veneer the apron

TIP

FAST, FLEXIBLE
CLAMPING CAUL



A scrap of white oak with deep sawkerfs makes a bendable caul that can disperse clamping pressure evenly.

Middle and ends first. After Finan secures the middle of the caul, he clamps the ends (right), making sure the veneer stays aligned with the apron. He then adds clamps, working from the center out (below).



frame. These lines will dictate where you place the corners of the second frame. Apply glue to the bottom and ends of each new brick and, using brads to clamp the bricks in place, build the second frame onto the first one. When the glue has set, pry up the two frames from the assembly template and remove the brads. Set the pair aside and repeat the process for the second ring blank, composed of the third and fourth brick courses.

Shape the apron

To cut the apron to shape, start by laying the ring template on one of the blanks. Line up the diagonals of the template with the mitered ends of the second brick course and trace the inside and outside diameters of the ring. Using a jigsaw, cut away the waste on the inside. Be sure to leave a little waste, since blade deflection from the jigsaw could undercut the ring profile. Use a bandsaw to remove the waste on the outside. Repeat for the second ring blank. Be sure to keep the outside offcuts. You'll need them later for the router jig that helps cut the bridle joints for the legs.

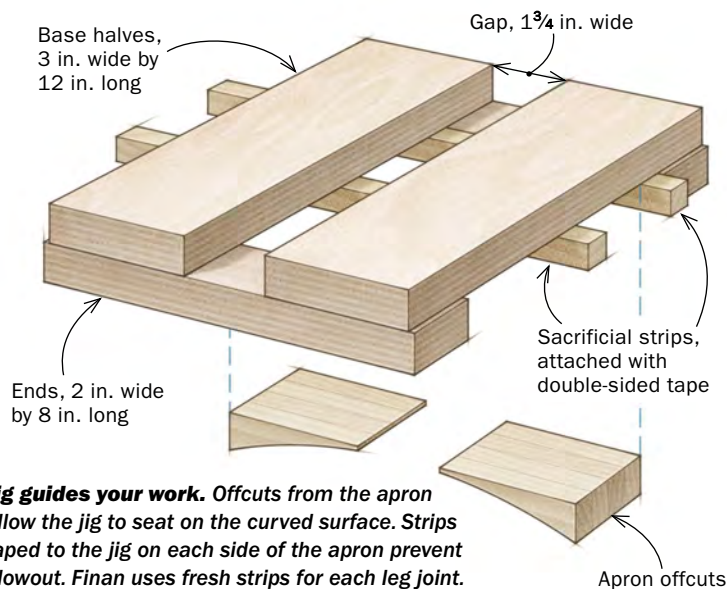
Now, tack the ring template to one of the blanks with a few brads. Using a bearing-guided straight bit at the router table, flush the inside diameter with the template. Next, rout the outside flush and remove the template. Glue the completed ring to the second blank, making sure to align them so that the glue lines alternate in a running bond. Now use the first ring as the template for routing the second ring flush.

Add veneer

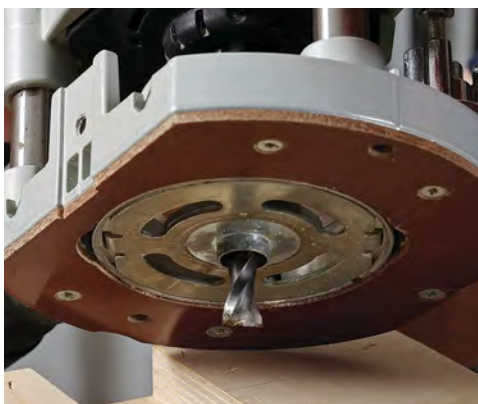
The next step is to apply veneer. Using the ring template, transfer the diagonals to the apron. These marks will be the centerlines for the legs and will be used to line up the router jig. I use four pieces of shop-sawn veneer, approximately $\frac{1}{16}$ in. thick, laid out in sequence for continuous grain. Each piece of veneer covers from one leg to another and extends into the area that will be cut for the bridle joint. This way, when the leg joinery is cut, the fit between the legs and veneer is tight and gap-free.

I begin by making a flexible clamping caul out of a $\frac{3}{4}$ -in.-thick piece of white oak slightly longer and wider than the strip of veneer. Cut a series of kerfs in it, about $\frac{1}{8}$ in. apart and $\frac{5}{8}$ in. deep, so about $\frac{1}{8}$ in. of continuous stock remains. The kerfs

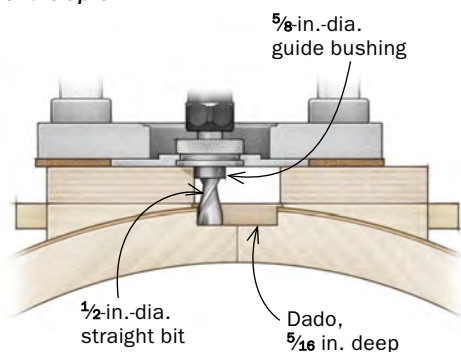
NOTCH THE FACE



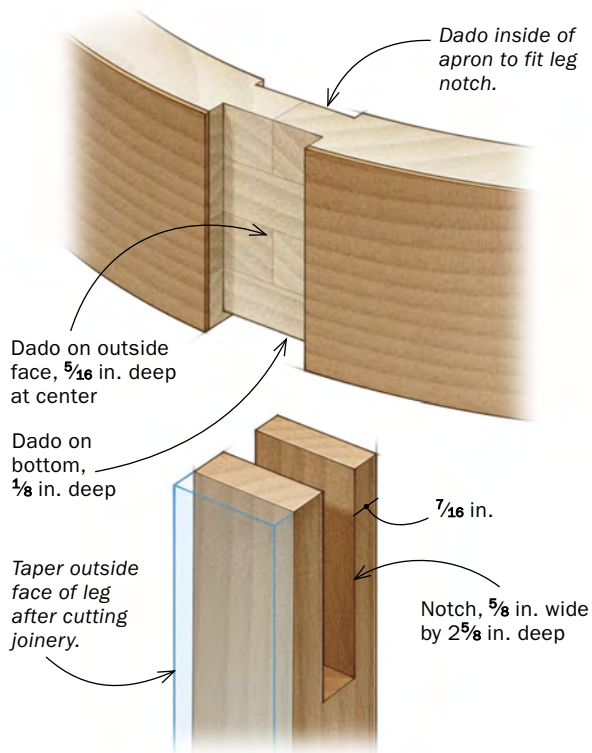
allow the caul to bend freely when clamping the veneer to the apron. Apply yellow glue to the apron between two leg location lines, center the veneer and hold it in place with a single wrap of blue tape around the middle, and then add the caul, smooth side down. Using a series of F-clamps, lightly secure the center of the caul and then clamp the ends. Add clamps, working from the center toward the ends. Let the glue



Clamp and rout. Finan clamps the jig in place and uses a router equipped with a guide bushing and spiral straight bit to dado the outside faces of the apron.



FIT THE LEGS



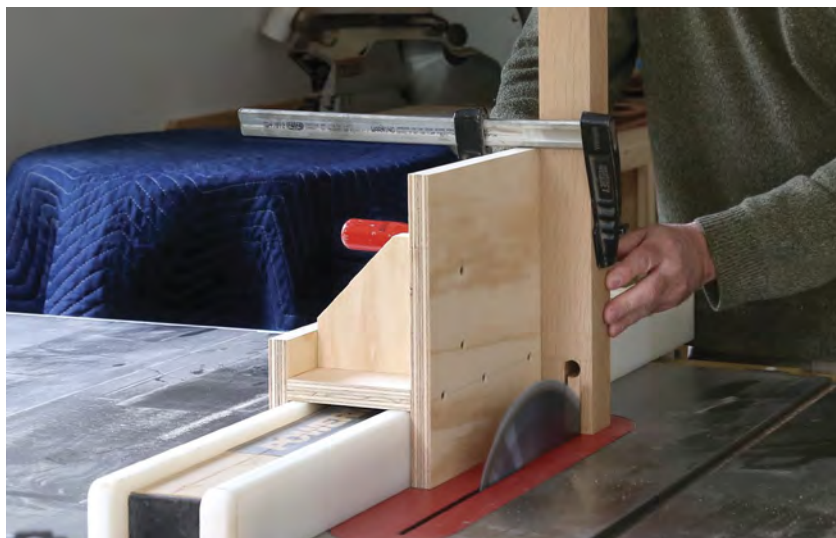
cure for a few hours before repeating the process for the next piece of veneer.

Bridle joints connect the legs and apron

To allow the legs to lock into place, material must be removed from both the outer and inner surfaces of the apron. The outer dados can be completed with a special jig and a router with a spiral upcutting bit. The inner dados are best cut with hand tools because of the tight radius on the inside of the apron.

The router jig's top surface, a platform for the router to ride on, is made from two pieces of plywood. The halves are spaced apart and their inside edges provide the bearing surfaces for the router's guide bushing as you cut the joint. On the jig's underside are off-cuts from the apron's outside diameter. These curved wedges help stabilize the jig when it's clamped to the apron. The jig also has a centerline on one of the end pieces to line it up with the leg marks on the apron. I set the depth of the router bit to remove $\frac{5}{16}$ in. from the outer face of the apron. This allows the leg to sit $\frac{1}{8}$ in. proud of the apron surface. After I rout all four outside dados, I focus on the legs before completing the inside dados.

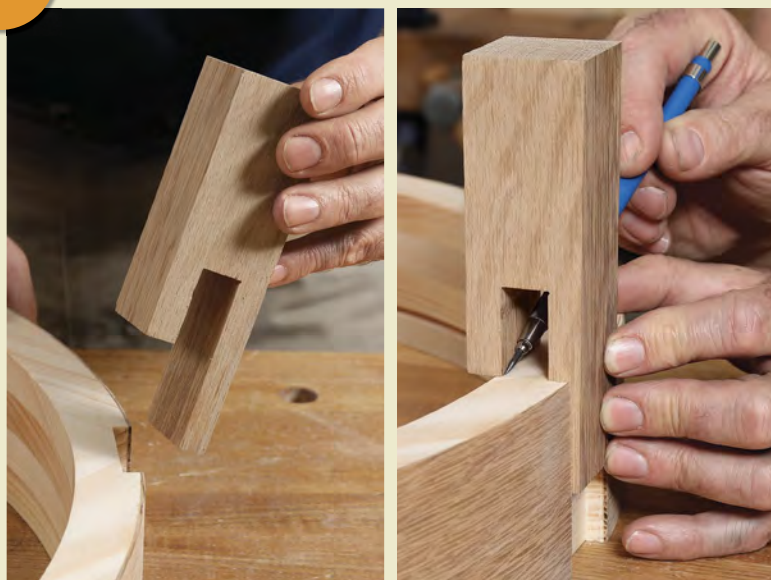
I mill the legs to a strong $1\frac{5}{8}$ in. by 2 in. and cut them to length. Milling them a little wide allows me to fit the legs into the apron dados tight and gap-free. Next, lay out the bridle joints on the legs. Using a $\frac{5}{8}$ -in. Forstner bit, drill through the leg at the bottom of the



Notch the legs. After drilling a $\frac{5}{8}$ -in. hole at the bottom of the joint, Finan uses a shopmade tenoning jig to cut the cheeks at the tablesaw (above). He then chisels to the baseline (left), working in from both sides to avoid blowout.

TIP

MAKE A LAYOUT BLOCK FOR THE INSIDE DADO



Short leg handles a tall task. Notch a block and shorten one of its cheeks by about 1 in. Slide the longer cheek into the outside dado in the apron and use the shorter end to mark the width and depth of the interior dado.



Saw and pare. After kerfing the inside of the apron with a handsaw, chisel in from both edges to remove the waste. The goal is a snug fit that's easy to bring together. When the inside's done, turn to the dado at the bottom edge. Kerf that before slicing lightly from the outside in. This dado makes sure the joint looks clean.

joint. Cut the cheeks at the tablesaw and square the joint with a chisel. Now cut the through-mortises for the lower stretchers. Once the leg joinery is complete, taper the legs.

Returning to the apron, I'll mark the location and depth of the inside dadoes. I repurpose a test leg—used previously to dial in my tablesaw setup for the leg bridles—as a layout aid. With the joinery accurately cut on the test leg, I saw about 1 in. off of the top back portion of the bridle joint. Use this piece to mark the dadoes on the apron's interior. Because there is only a shallow dado to cut, I just make a series of kerf cuts with a handsaw and chisel away the waste. When the leg can slide on easily but fits snugly, I use the same handsawing and chiseling technique to create the dado at the bottom of the apron that connects the inside and outside dadoes.

Attach the legs

After making the half-laps that join the stretchers and dialing in the mortises and tenons joining the stretchers to the legs, it's time to assemble the table. The assembly must follow a specific sequence. Glue each stretcher to its corresponding legs. You will have two leg assemblies, one with the open portion of the half-lap facing up and the other with it facing down. Fit the pairs together and attach them to the apron as a single unit. Clamp the bridle joint tightly. Finally, attach the top with table-mounting clips, sometimes called Z-clips, which are slipped into a groove routed in the apron and screwed to the underside of the top. □

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Assemble the base. After gluing the legs to the stretchers in pairs and letting them cure, glue the stretchers to each other and the legs to the apron all at once. Afterward, Finan drives a screw into the half-lap joint of the stretchers from below.