

Display

Eye-catching details and contrasting woods make this a case to remember

BY MICHAEL PEKOVICH

I first came across the writings and work of James Krenov while in college, and they have influenced my approach to the craft ever since. His signature piece was the cabinet-on-stand, and he made many throughout his career. Each one was an exploration of joinery, grain, and form. While this cabinet is definitely an ode to Krenov, my aim wasn't to create an exact reproduction. Instead, I wanted to tackle the design challenges the form presents. I hope this article prompts you to try a case of your own, whether based on this project or by following your own muse.

Straight grain adds to quiet beauty

I had a few goals in mind when working out the design. Like a lot of my work, my aim was a quietly interesting piece, rather than something that shouted too loudly. On a quiet piece, small details make a big difference. To that end, I made the joinery the star of the show. I also added some contrast by building the case and base in different woods. I chose ash and white oak because while they differ in color, each has very strong grain that complements the other. To further unify the different woods, I used riftsawn stock for each species. Its tight, straight grain kept the two woods from clashing, and helped to reinforce the lines of the cabinet.

Getting riftsawn stock required a different strategy for each wood. For the base, I started with an 8/4 flatsawn white oak board. I looked for a board with tight rings that dove at a diagonal at the edges. The base parts were taken from those edges, where the rings ran corner to corner and yielded tight straight grain on each face. For the ash case, I started with the widest flatsawn 4/4 boards I could find and ripped off the outer riftsawn sections to glue up for the case sides. I usually try to minimize glue-ups in case parts, but the straight grain of the riftsawn stock made for almost seamless joints, and the quiet grain was worth the effort.

A light, sturdy base

The base needs to support a lot of weight and look good doing it. To make it strong but keep a light look, I used a pair of aprons on the front and back of the case. The narrower doubled aprons offer the same resistance to racking that a single, wide apron would, but without the visual weight. I lightened the look of the lower apron



Cabinet on a Stand



STRAIGHT GRAIN FROM FLATSAWN BOARDS

The subtle lines of the cabinet are enhanced by tight, straight grain on the base and cabinet parts. Pekovich used two different strategies to get the riftsawn, or diagonal, grain he wanted from flatsawn boards.



For the cabinet. Pekovich started with the widest ash boards he could find. He ripped off the outer edges, where the straight grain is, and used those pieces to glue up the case parts. The straight grain made it easy to hide the gluelines.



For the base. Again, cutting away the outer portions of a white oak board yielded the riftsawn stock for the legs and the aprons.

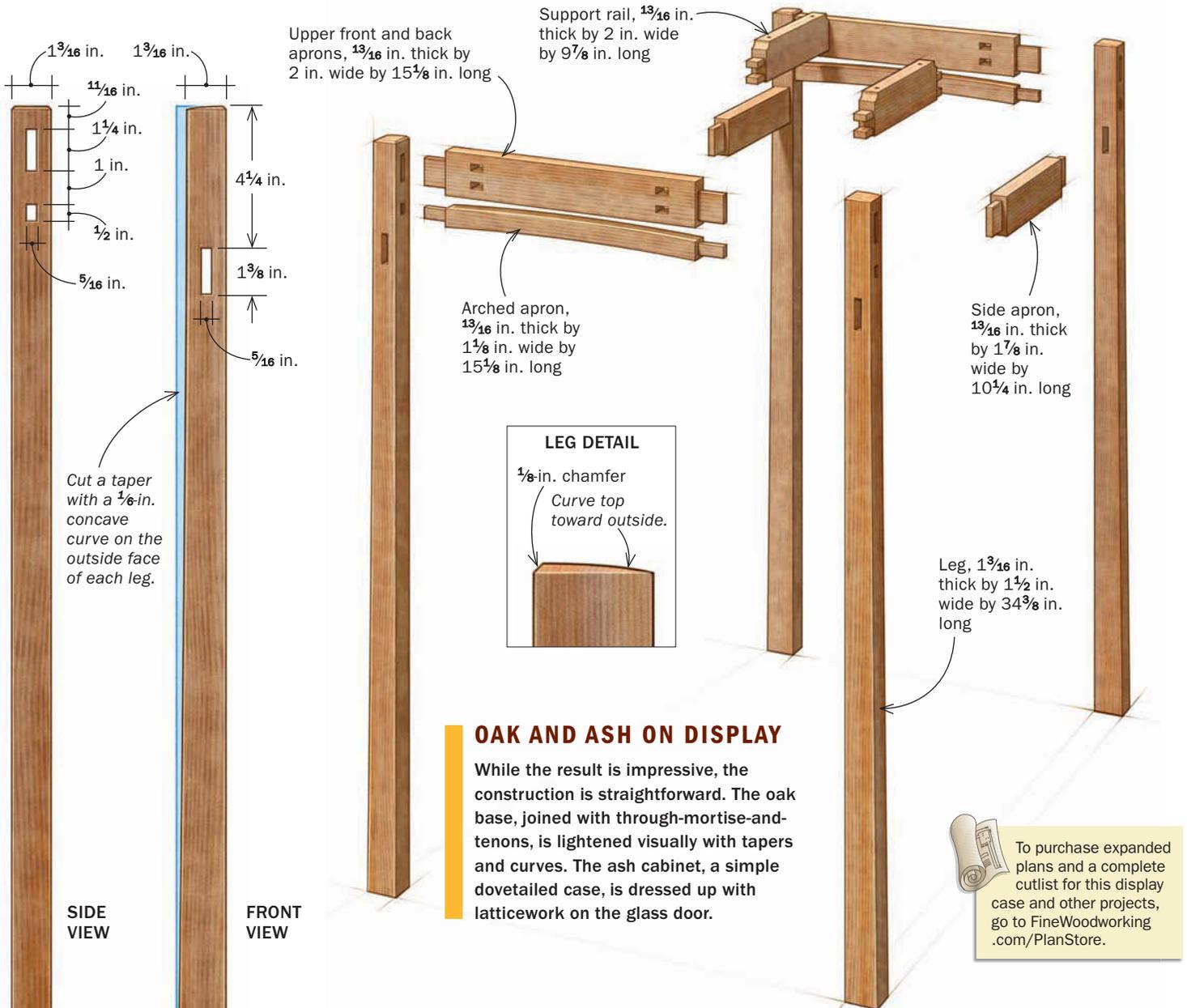
even further by giving it a subtle arch. On the sides I used single aprons, set down low. Between the side aprons I used a pair of rails that connect the front and back aprons. These two rails add strength to the base and also support and elevate the case, making it appear to float. The construction results in a delicate-looking base that still offers a solid foundation for the case.

Through-tenons add strength and beauty

The base is joined with through-tenons to add a little pop and a lot of strength. While they're not much more difficult to cut than regular tenons, care must be taken when cutting to prevent tearout on the through-mortises and chipped corners on the tenons.

I handle the mortises quickly on a hollow-chisel mortiser, but you can use any method you want. No matter how you do it, the important thing is to work in from each face. This will prevent tearout along the edges of the mortise. For this method to work, you must scribe the mortise accurately on each face to avoid off-setting the mortise walls. This can make fitting difficult and lead to gaps in the joints.

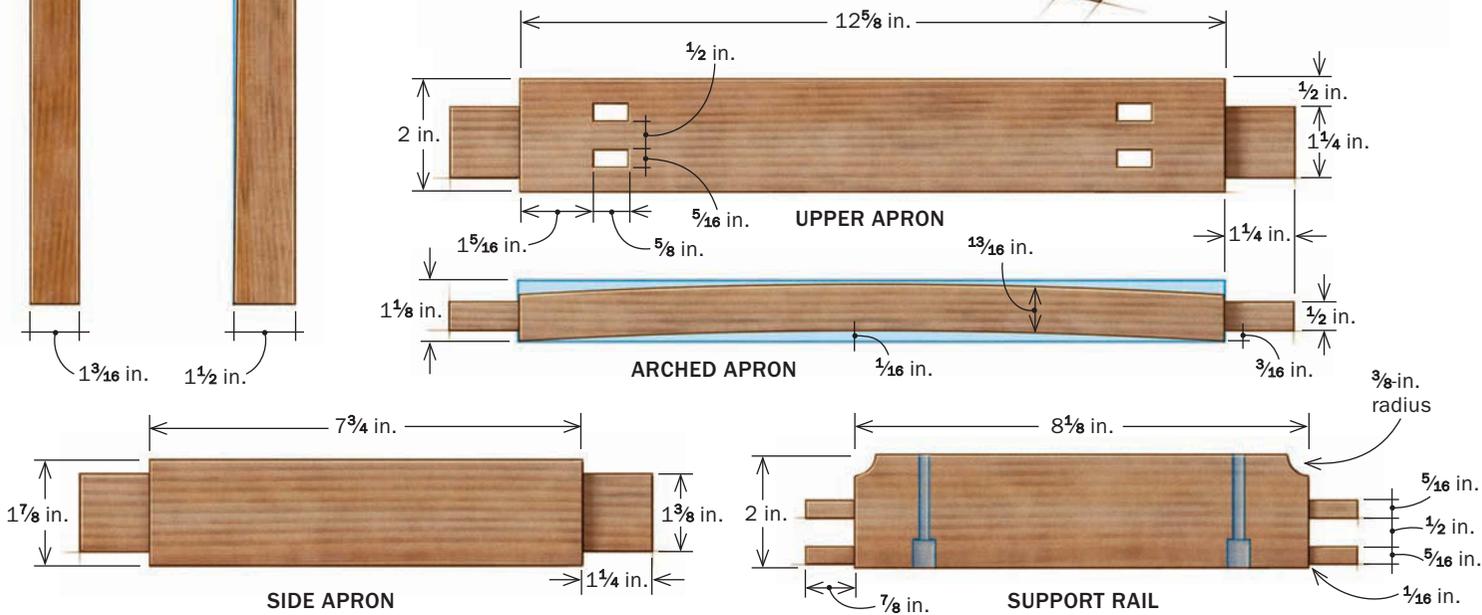
I usually use a dado blade to cut tenons, but it can chip the corners at the ends of the tenon. This is not a big deal with normal

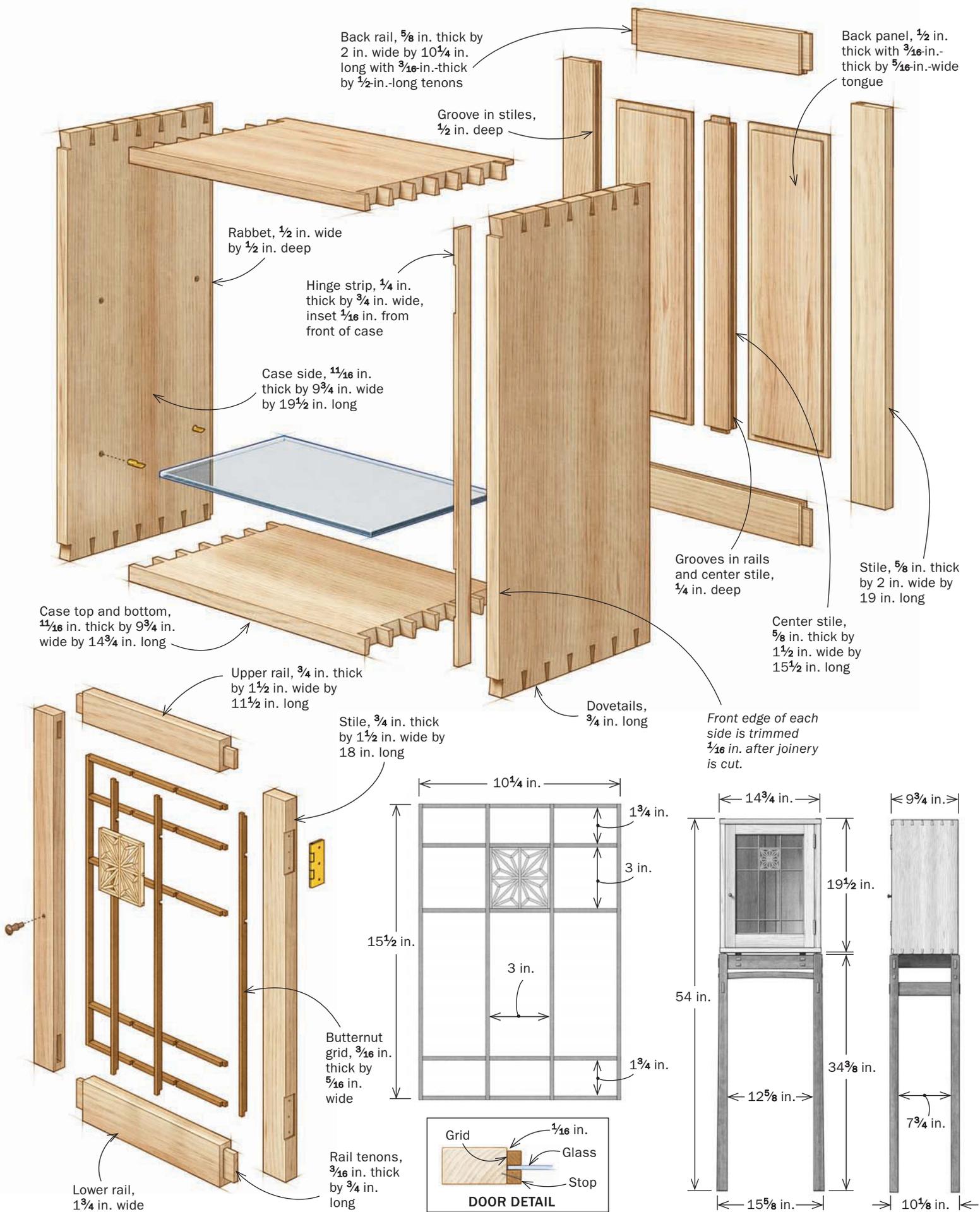


OAK AND ASH ON DISPLAY

While the result is impressive, the construction is straightforward. The oak base, joined with through-mortise-and-tenons, is lightened visually with tapers and curves. The ash cabinet, a simple dovetailed case, is dressed up with latticework on the glass door.

To purchase expanded plans and a complete cutlist for this display case and other projects, go to FineWoodworking.com/PlanStore.





SPACER MAKES PERFECT TENONS

Pekovich uses a tenoning jig and spacer to cut the through-tenons of the base. The spacer ensures tenons of consistent thickness regardless of variations in stock thickness.



Fast and accurate. Position the tenoning jig to cut the outside cheek, and raise the blade just below the shoulder. Cut the outside cheek (left), then slip a spacer between the stock and the fence (above) to cut the inside cheek (right).



hidden tenons, but it's a problem for through-tenons. So instead I used a combo blade and tablesaw tenoning jig. Rather than cutting one cheek and rotating the stock to cut the remaining face, I cut one cheek and added a spacer between the jig and workpiece for the second cut. This results in consistent tenons regardless of variations in stock thickness. The spacer's thickness equals the width of the tenon plus the width of the blade's kerf. To make it, start with a long board slightly thicker than you need and cut off one end to use as a spacer for a test cut. Take light passes through the planer, cutting off sections for testing until you get the fit you want.

A pair of spacers for the double mortise-and-tenons—The double tenons of the support rails are tricky to fit, but a pair of spacer blocks makes the process easy. You've already made the first spacer that determines the thickness of the tenons, but you'll need a second spacer to set the gap between the tenons. The thickness of the gap spacer is equal to the distance between the tenons plus the width of the tenon. Its exact thickness isn't critical because you'll use it to cut both the mortises and the tenons.

Set up the mortiser fence to cut the outside mortise, then add the gap spacer to cut the inside mortise. To cut the tenons, set up for the outside face of the outer tenon. Make a cut and slip in the tenon spacer to cut the second cheek. Now remove the tenon spacer and add the gap spacer to cut the next tenon cheek. Finally, add the tenon spacer to the gap spacer to make the final cut.

With the tenon cheeks cut, saw off most of the waste with a backsaw or coping saw to prevent it from getting caught between



Finish them off. Remove most of the waste with a backsaw before trimming the shoulders at the tablesaw (above). Finally trim the ends of the tenons at the bandsaw to avoid chipping the corners (left).

ADD A SECOND SPACER FOR DOUBLE TENONS

Pekovich adds another spacer to cut the double mortise-and-tenons. His method guarantees perfect alignment.



Cut the mortises first. Start by cutting the mortise farthest from the fence, plunging halfway down from each face to avoid tearout. Then insert the gap spacer between the stock and fence (above) to cut the inside mortise (right).



Combine spacers to cut the double tenons. The stock was too wide for his tenoning jig, so Pekovich clamped a stop block with a hold-down to his crosscut sled to make the cuts. Set the stop to cut the outermost tenon cheek, then insert the tenon spacer to cut the next cheek (1). Next, use just the gap spacer to cut the outer cheek of the inside tenon (2). Finally, use both spacers to cut the innermost cheek (3).



GIVE THE LEGS A LITTLE SHAPE

The legs widen at the bottom to give the base a solid stance, while subtle curves lighten the look just a bit.



Taper the outside face of each leg. After cutting the joinery, Pekovich bandsaws the legs to their final shape. The taper has a slight concave curve, which is planed smooth after cutting.

the blade and the fence, and then cut the shoulders at the tablesaw. Finally cut the tenons to width at the bandsaw.

Quiet curves enliven the base

With the joinery complete, turn your attention to giving the base some shape. The lower aprons are arched to add a little lift to the base, and the legs widen at the bottom for a solid stance. In addition to the taper, the legs also have a little curve to them.

At the bandsaw, cut a taper with a slight hollow on the outside faces of the legs and smooth the surface with a block plane or sandpaper. To enhance the curve of the leg, plane a tapered chamfer on the outside corners. Start about 10 in. below the top of the leg, and make successively longer passes with a block plane until you reach the top and bottom corners of the leg. This tapered chamfer exaggerates the curve of the legs and results in a leg with a slightly narrowed waist that appears to flare out just a bit as it reaches the floor and the case.

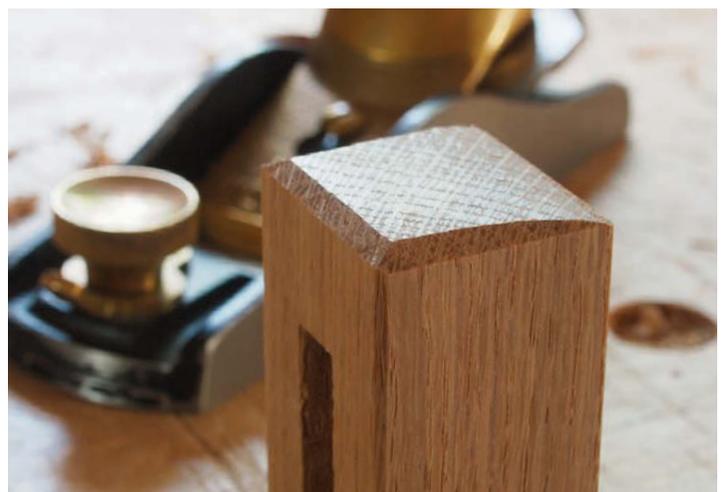
The top of each leg gets a slight curve as well. Start by planing a heavy chamfer along the four edges of the top. Then plane a curve onto the top starting at the base of the outside chamfer and ending at the top of the inside chamfer.

Bring the base together

Gluing up the base is a bit of a challenge. Start by gluing the case rails to the front and rear aprons. It's important that this frame assembly sits flat, so clamp it to a flat surface while it dries if necessary. The next step is to glue the legs to the side aprons. To maintain the vertical alignment of the legs, dry-fit the leg assemblies to the frame while clamping. Finally bring all the parts together into a single unit with the last glue-up.



Chamfers enhance the curves. By starting at the upper third of the leg and taking successively longer passes with a block plane, you create a tapered chamfer that exaggerates the curve of the leg (above). To shape the top of the legs, start with a heavy chamfer (left), then plane a curve starting at the top of the inside chamfer and ending at the bottom of the outside chamfer (below).



ORDER OF ASSEMBLY

Don't try to glue up the base at once. Follow these three steps, and you'll avoid headaches.



1

Start with the base frame. Prefinish the parts and apply glue to the tenons only to avoid squeeze-out as much as possible. If necessary, clamp the assembly to a flat surface while the glue dries.

Glue the legs and side aprons. To ensure that the leg assemblies are glued square, dry-fit them to the base frame while clamping (below). This will guarantee that parts come together easily during the final glue-up.



2



3

Finally, bring everything together. Remove the leg assemblies from the frame, then add the arched aprons before gluing everything together. Make sure all four legs hit the floor when clamping, and shift the clamps as necessary for a stable stance.

A SIMPLE CABINET

Proud dovetails add a little interest, and a frame-and-panel back creates a rigid case.



Dovetails with a built-in rabbet. The back panel is glued into a rabbet in the case. Cut the rabbet before dovetailing the case parts. A half-tail at the back of the case accommodates the rabbet.



Dovetailed case is straightforward

The case is just a dovetailed box with its rear edge rabbeted for a frame-and-panel back. Hinge mortises are cut into a $\frac{1}{4}$ -in. strip and attached to the case side. This allows the door to be inset slightly from the case front. For more visual interest, the case sides are planed so that they are inset from the top and bottom. The dovetails are left proud as well. All of these add subtle interest to the case, but the real star of the show is the door front.

Dressing up a glass door

A thin butternut gridwork adds interest to the glass panel without obscuring the contents of the case. The grid is assembled with half-lap joints, and its border also creates a stop for the glass. Start by planing a board to $\frac{3}{16}$ in., the thickness of the grid. Then crosscut the board into two lengths, one equal to the height of the door opening, the other to the width. Make this a snug fit to avoid gaps between the grid and door frame.

Before ripping the stock into individual strips, rabbet the ends and cut dadoes at the grid intersections. For this, I use a simple finger jig clamped to a crosscut sled. The width of the blade kerf will determine the width of the grid parts. For a $\frac{3}{16}$ -in. grid, I use a single blade from a box-joint blade set, which is available from a number of manufacturers.

Start by cutting a rabbet on the ends of the stock the width of the blade. Then clamp the jig in place to cut the dadoes. Register the rabbet against the indexing pin to cut the outermost dadoes. Then seat the dadoed stock onto the indexing pin to cut the remaining dadoes. Finally rip the stock into strips that match the width of the dadoes.

Assemble the frame in the door opening, adding a drop of glue at each joint, but don't glue the grid to the door at this point. When it's dry, slip the grid out of the door and reinstall it once the case has been finished. To set its height in the opening, drop



Add the hinge strip. Mortise the strip for the hinges, and use a combination square to inset it from the front edge of the case. Drive a pin through the hinge locations to hold the strip in place while the glue dries.

a $\frac{3}{8}$ -in.-thick piece of plywood into the opening and slide the grid down onto it. Glue or pin it in place with a 23-gauge pin nailer. You can fill out the center of the grid with a square of kumiko, a Japanese decorative lattice technique. For more on that, see *Master Class*, pp. 82–86.

I finished the cabinet by wiping on a few coats of blond dewaxed shellac followed by steel wool and wax for a friendly feel. I drilled shelf-pin holes at the grid locations. The bottom shelf may look a little low, but it raises the items above the lower door rail so they are not obscured. □

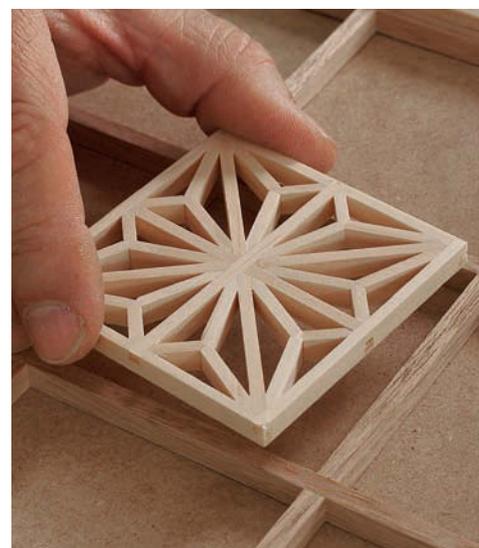
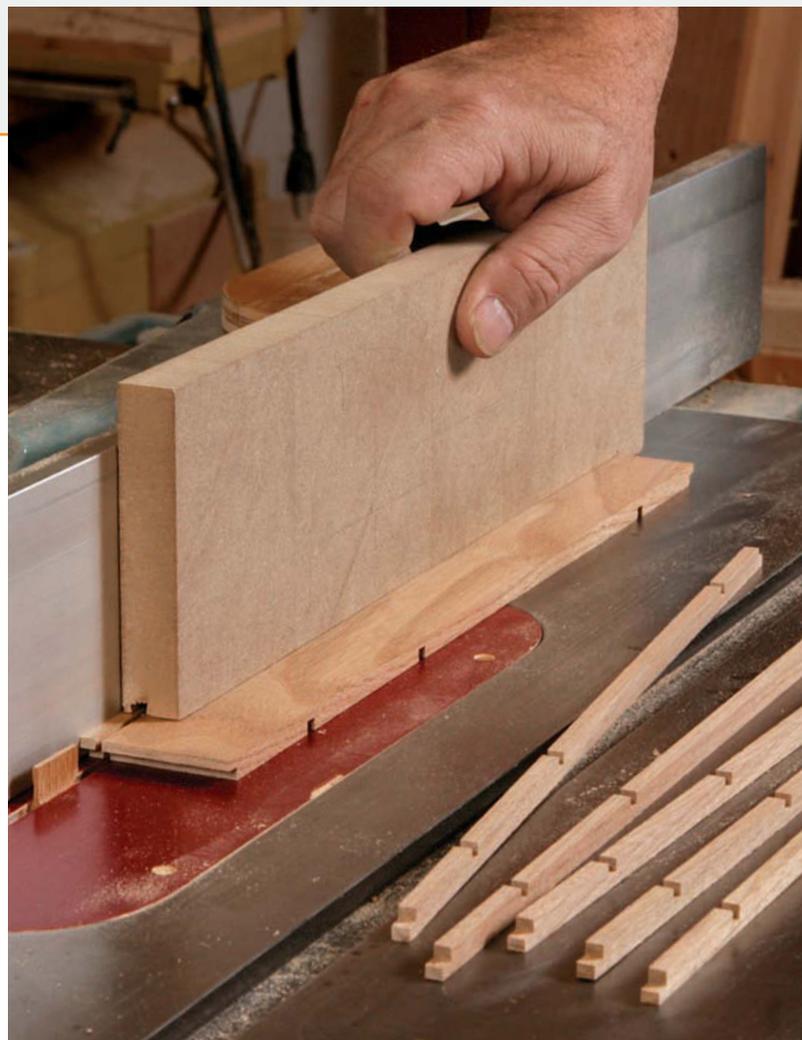
Michael Pekovich is a furniture maker, instructor, and FWW's executive art director.

A HALF-LAP GRID FOR THE DOOR

A butternut lattice dresses up the door front and acts as a stop for the glass panel. Half-lap joinery makes assembly fast and accurate.



Finger-joint jig for the lattice. To make the jig, cut a notch in a piece of MDF and glue in a strip of wood (index pin) to register the workpiece (top). Cut the lattice stock to length, and rabbet the ends (above left). Then register the rabbet against the index pin to cut the dados (above right). Then fit the dado over the pin to cut the remaining dados. Finally, rip the strips to final width (right).



Install the lattice. Wait until the door is trimmed and finished before gluing the grid in place. The parts can be left bare or finished with a light coat of shellac or oil before assembly. Glue the outer strips to the door frame and add a drop of glue at each intersection. Pekovich finishes off the lattice with a square of kumiko (above); see pp. 82–86 to learn how to make it.