



# Arched Entry Table

Smart approach to building this elegant design

BY MICHAEL PEKOVICH



‘I’d like an entry table in the Arts and Crafts style, but nothing I’ve seen before.’ It was an interesting request from an interesting client—my brother, actually. Up to that time, I had built a number of mostly Stickley-inspired pieces, but hadn’t really pushed beyond that. This was an opportunity to try a more original design while staying true to the basic elements of the style. Since I knew the client, I didn’t face the nerves that typically accompany a commissioned piece. The table I came up with features a dovetailed drawer box supported by a trestle base. The original had tiles inset into the top, but on this version I went for a cleaner look, opting for a solid top capped with breadboard ends.

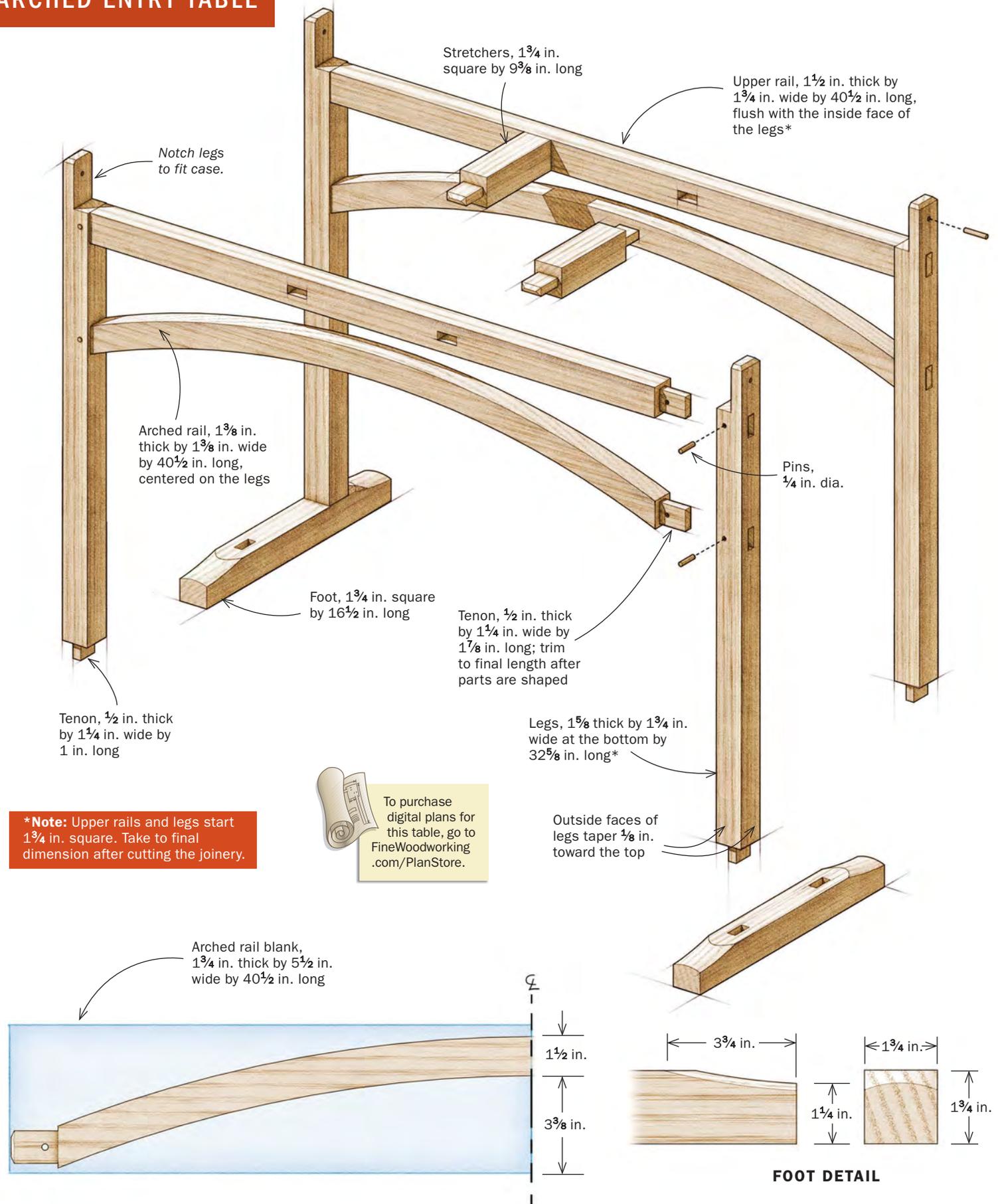
## Work begins with the base

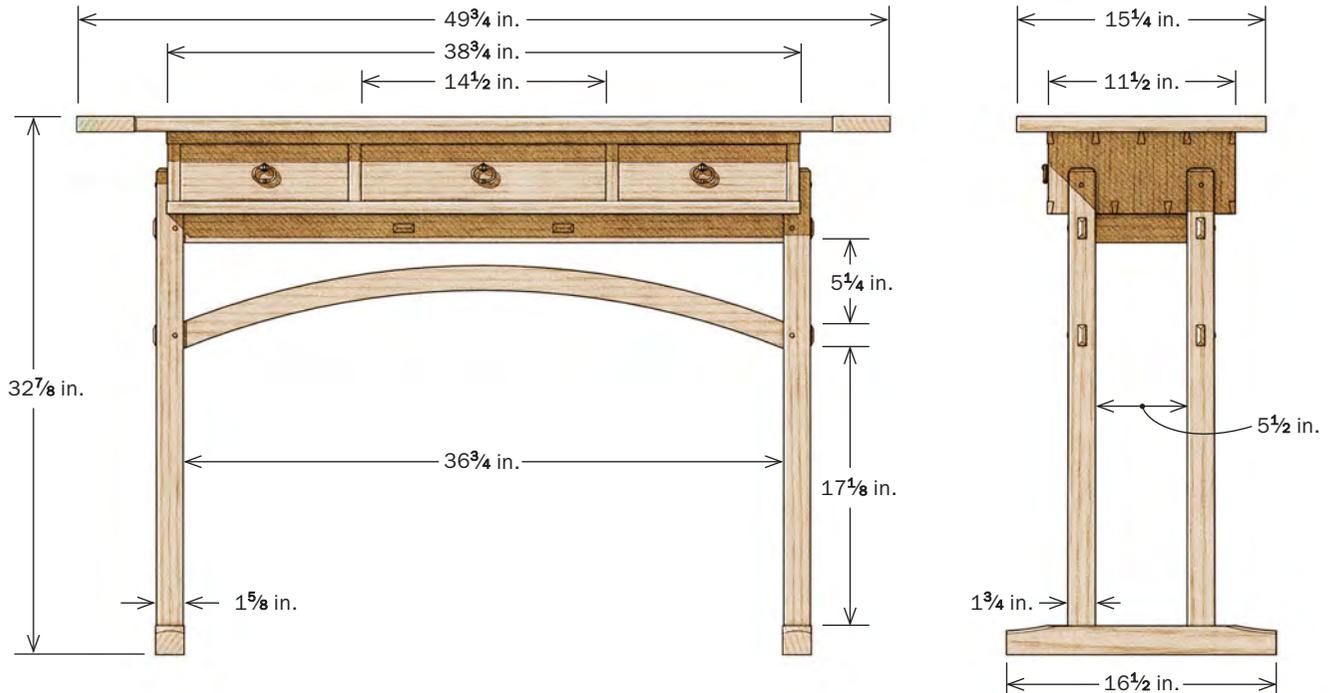
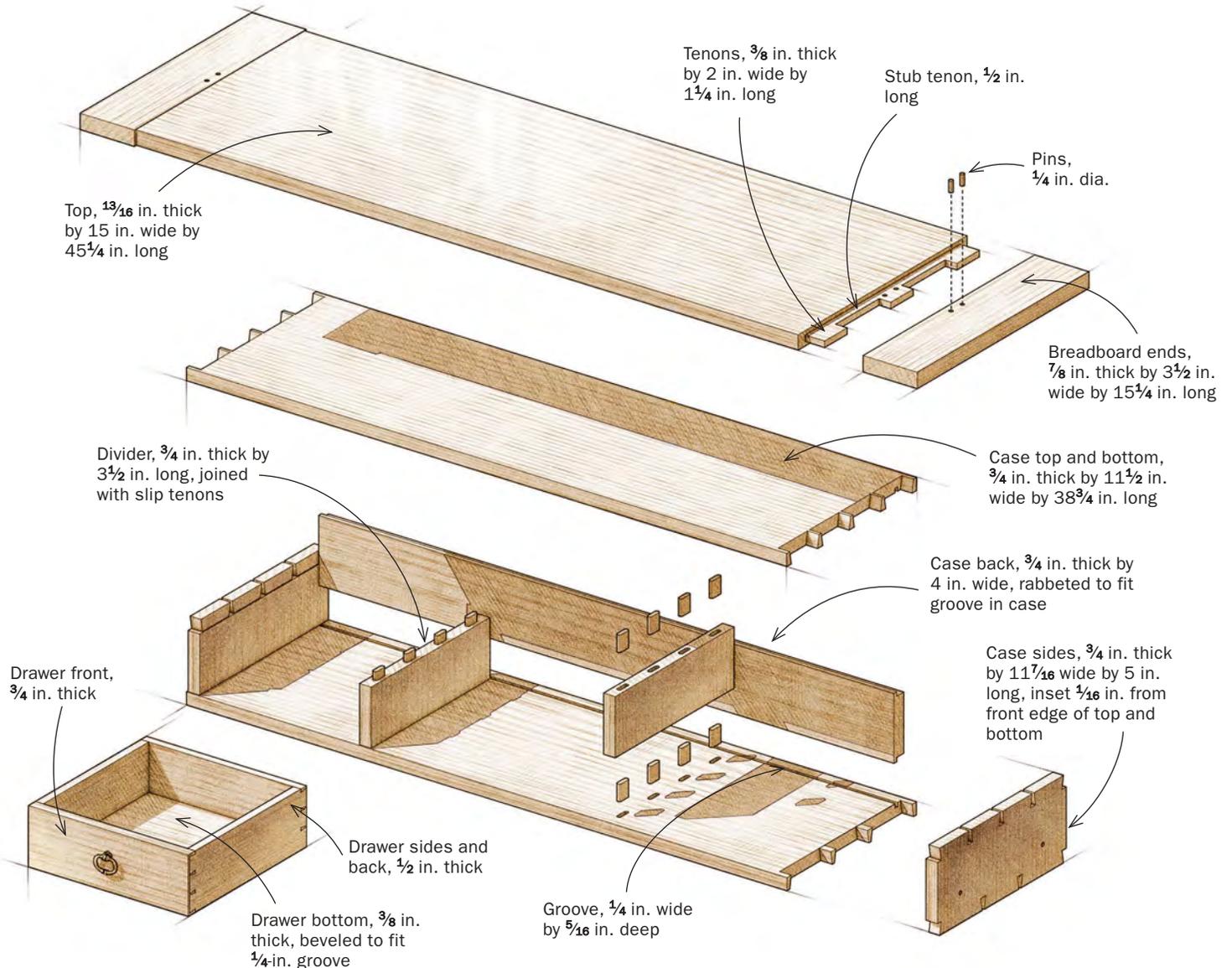
The construction of the base is fairly straightforward. Drawbored tenons hold everything together, and arched rails help give the

table its personality. The legs have a subtle taper, thinner at the top, to keep the table from looking top heavy. And the various parts are offset where they meet to create visual interest. While the parts of the base end up with different dimensions, they all start out the same, which makes cutting the joinery easy. Even the arched rails start as a rectangular blank and are then shaped once the joinery is complete.

Start by milling all the base parts except the arched rails  $1\frac{3}{4}$  in. square and cutting them to length. For the arched rails, make a single  $1\frac{3}{4}$ -in.-thick by 5-in.-wide blank. From there, turn to the mortises. I mount a  $\frac{1}{2}$ -in. bit in a hollow-chisel mortiser and attack each mortise by cutting halfway in from each face. This prevents any tearout that would result from mortising all the way through the stock. Lacking a mortiser, I’d drill out most of the waste and square up the mortises with a chisel, still working halfway in from

# ARCHED ENTRY TABLE





# Begin with the base joinery



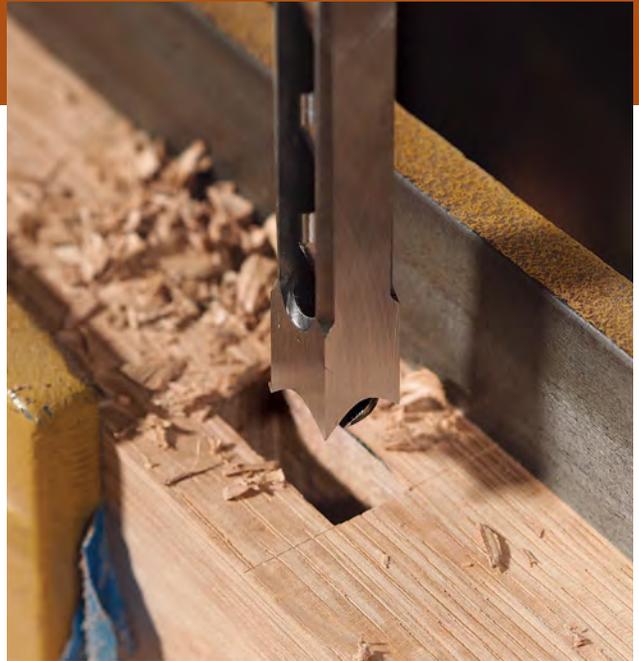
**Mortises first.** For more accurate layout, clamp the parts together and scribe them all at once. A set of bench risers allows you to flip the parts over to mark the opposite side without removing the clamp. Pekovich uses a hollow-chisel mortiser, drilling halfway, then flipping the stock to finish the mortise.

## Tenon cheeks at the tablesaw.

Use a dado blade and take multiple passes to cut the tenon. The rip fence acts as a stop and a miter gauge backed with a wooden fence guides the stock and prevents chipout on the trailing edge.

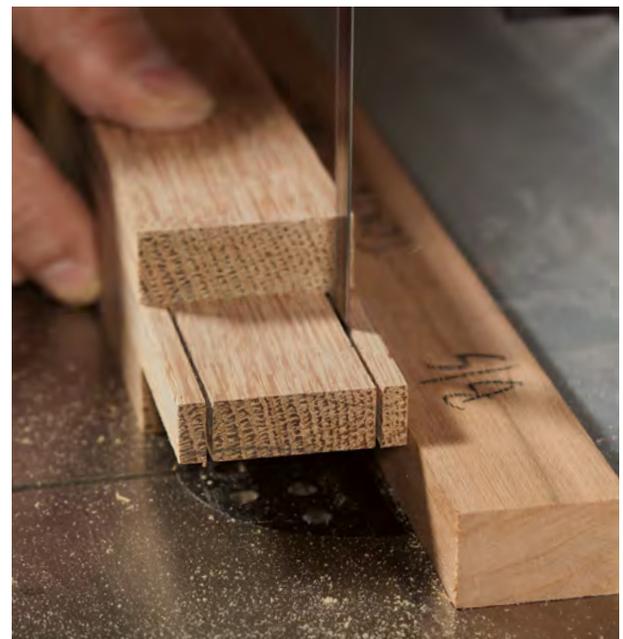


**A spacer ensures consistent-width tenons.** Use the bandsaw to cut the tenons to width and keep the corners from chipping out. Rather than flipping the stock over, Pekovich uses a spacer for the second cut, ensuring accurate results.



each face. The mortises in the feet are the only ones that don't go all the way through.

Next, turn to the tenons. The main challenge in cutting them is to keep the corners of the through-tenons from chipping out. To help with this, I cut the cheeks using a dado blade at the tablesaw and fine-tune the fit with a shoulder plane before cutting the tenons to width. Install a  $\frac{3}{4}$ -in.-wide dado set and cut the tenon in multiple passes. Set the rip fence as a stop for making the shoulder pass. Aim for a snug, but not overly tight, fit off the saw. Check each tenon in its respective mortise and fit it with a shoulder plane as necessary. The tenons will still be too wide, so you'll only be able to insert a corner of the tenon into the mortise. After the cheeks have been fitted, head to the bandsaw to



## MAKING THE ARCHED RAILS



**Cut the tenons before shaping the arches.** Use the same spacer at the bandsaw to trim the tenons to width. You'll need to adjust the fence to cut the second tenon.



**Saw out the waste below the arches.** Stay safely outside of your layout line; you'll trim the arches to their final shape later. Gluing the waste to the top of the blank will allow you to get the second arch from the same blank.



**Glue on the waste and cut the arches.** Align the offcut as best as you can for gluing, but don't worry about it too much. You'll plane quite a bit off each face while taking the arches to final thickness. Once the blank is planed, pencil the location of the tenons onto the face of the stock and use the marks to align the arch template with the tenons. Trace the curves, saw them out at the bandsaw, and smooth with a spokeshave.

# Make the legs and rails

## TAPERING AT THE JOINTER

The first step is to set the jointer to make a cut half the depth of the final taper (1), and take a single pass stopping halfway along the leg (2). A piece of tape on the fence marks the stopping point. Then, keeping the same face down, rotate the leg and take a full pass to complete the taper (3).

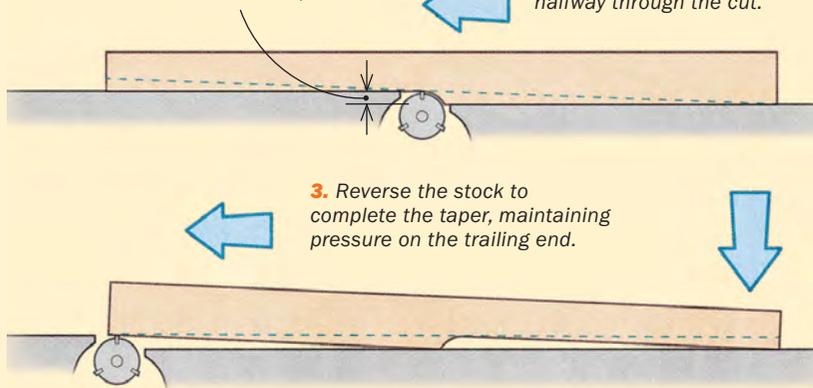


## TWO-PASS TAPER ON THE JOINTER

1. Set the cutter height to one half of the final taper.

2. Feed the stock, stopping halfway through the cut.

3. Reverse the stock to complete the taper, maintaining pressure on the trailing end.



trim the tenons to width. Remove the waste with a backsaw and pare to the shoulder with a chisel. Before sawing off the waste, be sure to knife a shoulder line across the edge of the stock so that your chisel will have a place to register when paring.

### Adding the arches

The arched rails are interesting in that you'll cut the tenons for both rails while they are still part of the same blank. Cut the cheeks with a dado blade and then make four bandsaw cuts on each end of the blank to trim the tenons to width. To begin shaping the arches, saw out the waste below the lower arch staying comfortably outside the line. Then glue the waste along the top edge of the blank. This will allow you to cut two arches from a single blank. Plane the blank to final thickness before sawing out the individual arches. There will be a glueline in the upper arch, so I will place that one at the rear of the table. (If you want to avoid a glueline altogether, you can cut each arch from a separate blank and use the waste to make the feet.) I make a template of the arch that I position on the blank and trace, making sure that

the tenons are centered on the arches. Bandsaw close to the lines and clean up the curves with a spokeshave.

### Shape and drill the base parts

The legs have a subtle taper on the two outer faces. It would be difficult to bandsaw the taper cleanly or cut it on the tablesaw without scoring or burn marks. So I head to the jointer, where I can make a quick taper in two passes. The overall taper is  $\frac{1}{8}$  in. from end to end, so start by setting the jointer to take a  $\frac{1}{16}$ -in.-deep cut, which is half of the total taper. Then make a pass starting at the top of the leg and stopping at the halfway point. I place tape on the jointer fence so I know exactly where to stop. Rotate the leg so that the bottom end is facing forward for the second pass. Put pressure on the trailing end of the leg so the front is pivoted above the jointer bed when making this pass. This should result in a continuous taper along the length of the leg. It's fast and kind of fun once you get the hang of it. Then finish tapering the outer faces of the remaining legs. Finally, to make the legs slightly narrower than the feet, creating an offset,

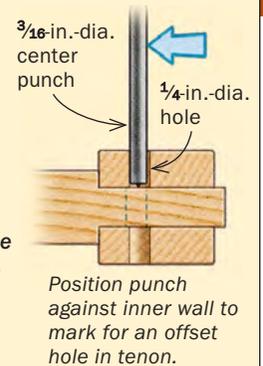


**Start by drilling through the mortise.** Afterward, dry-fit the joint to mark the tenon for drilling an offset hole.



## DRILLING FOR DRAWBORE PINS

**Mark the tenon for drilling.** Register an undersize center punch toward the shoulder of the joint to create an offset center point.



## CHAMFER THE TENONS AND SHAPE THE FEET



**Trim and chamfer the tenons.** Dry-fit the parts and use a  $\frac{3}{16}$ -in. spacer to mark the length of the tenon (left). Draw another line at the base of the tenon (center) to act as a guide when chamfering. After trimming the tenon to length, use a block plane to create a shallow pyramid, stopping  $\frac{1}{16}$  in. above the baseline (right).



take an additional full-length pass at the jointer on the left and right faces of each leg.

I use the same  $\frac{1}{16}$ -in. jointer setting to take the other base parts to final thickness. The upper rails have  $\frac{3}{16}$  in. removed from the outer faces and  $\frac{1}{8}$  in. from the inside faces. The arched rails are thinner than the upper rails for a slightly lighter look. I remove  $\frac{1}{4}$  in. from the outer faces and  $\frac{3}{16}$  in. from the inner faces. The feet remain full width; their ends are tapered at the bandsaw and chamfered with a block plane.

The tenons will be too long once all of the shaping is complete, so I dry-fit the base and use a  $\frac{3}{16}$ -in. spacer to mark the tenon lengths. I use a handsaw to cut them to length and add a heavy chamfer with a block plane.

To create the drawbore joinery, start by drilling holes through the mortise locations. Assemble the joints and mark each tenon for drilling. Use a center-finder punch with a smaller diameter than the hole and register it against the inside wall. Drilling at the new mark will yield a slightly offset hole in the tenon. Chamfer the leading edge of the pin so that it clears the offset holes. When the



**The feet start with a flat bevel.** Cut the bevel at the bandsaw and plane it smooth. Then trace a slight curve onto the end of the foot and plane to the line.

# Build the dovetailed drawer box



**A rabbet makes alignment easier.** Securing the dovetailed sides while marking the case top and bottom for the pins can be a little tricky. A good solution is to run a shallow rabbet along the inside face of the tails. This creates a lip that makes it easier to register the parts.



**Use a spacer when mortising for the case dividers.** Make a spacer the width of the center drawer and add a cleat to one edge. Mark centerlines on the back edge of the spacer and the case parts for alignment. Hold the Domino vertically with its base against the spacer to cut the mortises.

pin is driven into the joint, the parts will pull together tightly with no need to clamp them for glue-up. The drawbore also makes it easy to dry-fit the parts to measure or check the progress of your shaping as you build.

## Boxy but good

The drawer box is a simple dovetailed case, but it adds a lot to the look of the table. The long top and bottom and short ends make it tricky to hold the parts while you scribe the pins. To make it a little easier, after you cut the tails run a shallow rabbet along them on the inside face. This will help to register the parts securely when scribing. The rabbet also creates the proud pins on the ends of the case.



## FITTING THE BOX TO THE BASE



**Notch the legs for the case.** Center the drawer box on the dry-fitted base and scribe for the notch. Cut the shoulder of the notch at the tablesaw and cut the cheek with a handsaw or at the bandsaw. Sneak up on the fit to avoid gaps.



**Breadboards cap the top.** Long tenons with stub tenons between them secure the breadboards to the top. The breadboards are glued and pinned through the center tenon, and the outer mortises are elongated to allow for seasonal movement.

The dividers are attached with Dominos. I've used a biscuit joiner in the past as well. To ensure that the top and bottom Domino mortises are aligned, I use a spacer sized to the center drawer opening to register the joiner. The spacer has a centerline that I line up with a center mark on each case part. Mark the spacer where you want each Domino and align the joiner to it. Transfer the marks to each divider for mortising. Finally, groove the back edge of the top and bottom for the back panel. The panel is rabbeted to fit the groove and butts against the ends of the case.

Before gluing up the drawer box, clamp the top of the box to the underside of the tabletop and pre-drill the screw holes for attaching the top. The pre-drilled holes make it easier to attach the top once the case is assembled.

### Fit the case to the base

The legs are notched to receive the drawer box. To determine where to cut the notches, dry-assemble the base and center the drawer box side-to-side on top of the legs. Knife a line on the top of the legs along the ends of the case. Disassemble the base and cut the shoulder of the notch using a crosscut sled at the tablesaw. Finish the cheeks at the bandsaw.

To secure the case to the base, add glue to the notches and clamp the case in place. Once the glue is dry, I also pin through each leg into the case sides with a dowel. □

*Michael Pekovich is a furniture maker, woodworking teacher, and Fine Woodworking's creative director.*