Photos: Anissa Kapsales

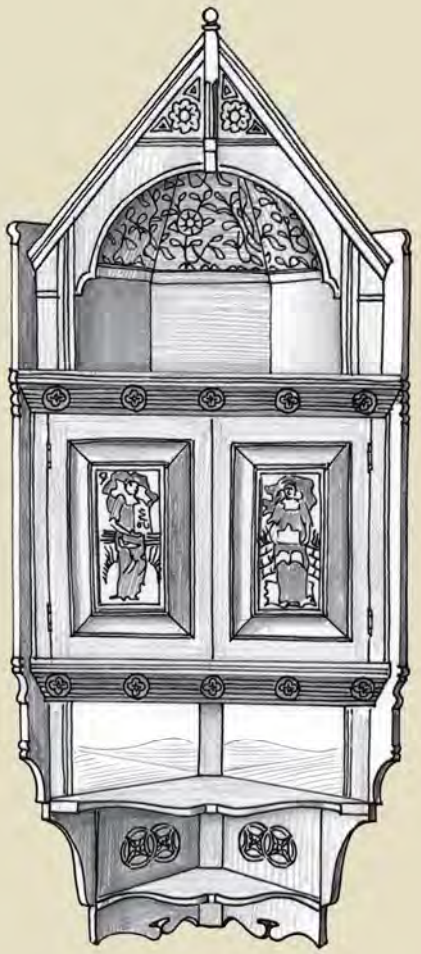
Architectural Wall Cabinet

Traditional joinery is the foundation for this fresh twist on a period design

BY NANCY R. HILLER

This simple hanging cabinet topped with a roof is inspired by the work of 19th-century Scottish architect Bruce Talbert (1838–1881). Talbert may not be widely known on our side of the Atlantic today, but in his own time and place, he was an acclaimed Victorian Gothic Revival architect and designer. I have long been intrigued by one of his architecture wall cabinets, a small piece of case furniture with an elaborate roof.

Talbert's cabinet is ornate, with inlay, fretwork, and gilding. I wanted to make a cabinet that drew on the architectural character of the roof and its Tudor-esque shoulders without being so ornate that it would look out of place in a simple contemporary room. Not to mention that I wanted something I could make in several days, rather than several weeks or months. Adding wallpaper to the back of the open upper section adds a decorative element to my version.



Dovetails are first

Construction begins with the main section of the case. The bottom-to-side joints are dovetailed. I cut the dovetails by hand, removing the waste with a coping saw and chisels. After transferring the tail markings onto each end of the bottom, I sawed the pins, then cut out most of the waste with a coping saw and cleaned up with chisels.

Add the joinery for the fixed shelf

The fixed shelf is joined to the sides with through-tenons. Although the shelf will be trimmed eventually to make way for the back, leave it full depth for now so that you can use the same gauge settings for the mortises and tenons.

Lay out the tenons on the shelf. Start by marking the thickness of the cabinet sides with the same cutting-gauge setting you used for the dovetails. Then use the gauge to mark out the tenons.

Cut the shoulders of the tenons on the tablesaw, staying just shy of the gauged line indicating the cabinet side thickness. Then remove the waste with a coping saw and clean up with a chisel.

Next, mark the top and bottom edges of the shelf position in pencil on one of the sides, then use a square to transfer these lines around all four faces. Lay the other side next to the first and transfer the lines. Mark the ends of the mortises with the same gauge settings you used for the tenons, then score the fibers between the end marks, knifing along the shelf thickness lines; these knife lines will guide your chisel. Drill out most of the waste, starting on one side and going about halfway through, then turning the piece over to drill out the remainder. Clean up the edges with a chisel.

Constructing a cornice

The cornices are joined to the cabinet sides with sliding dovetails cut on the router table. Start with cornice blanks a little oversize in width and length, and rout a stopped dovetail socket down the middle.

Now adjust the router table's fence to cut the dovetail keys at the top edge of each cabinet side; the dovetail should be centered in the side's thickness and run all the way from the front of the side to the back. Check the fit: It's better to leave it a little on the tight side and clean up with a chisel than to have it be loose.

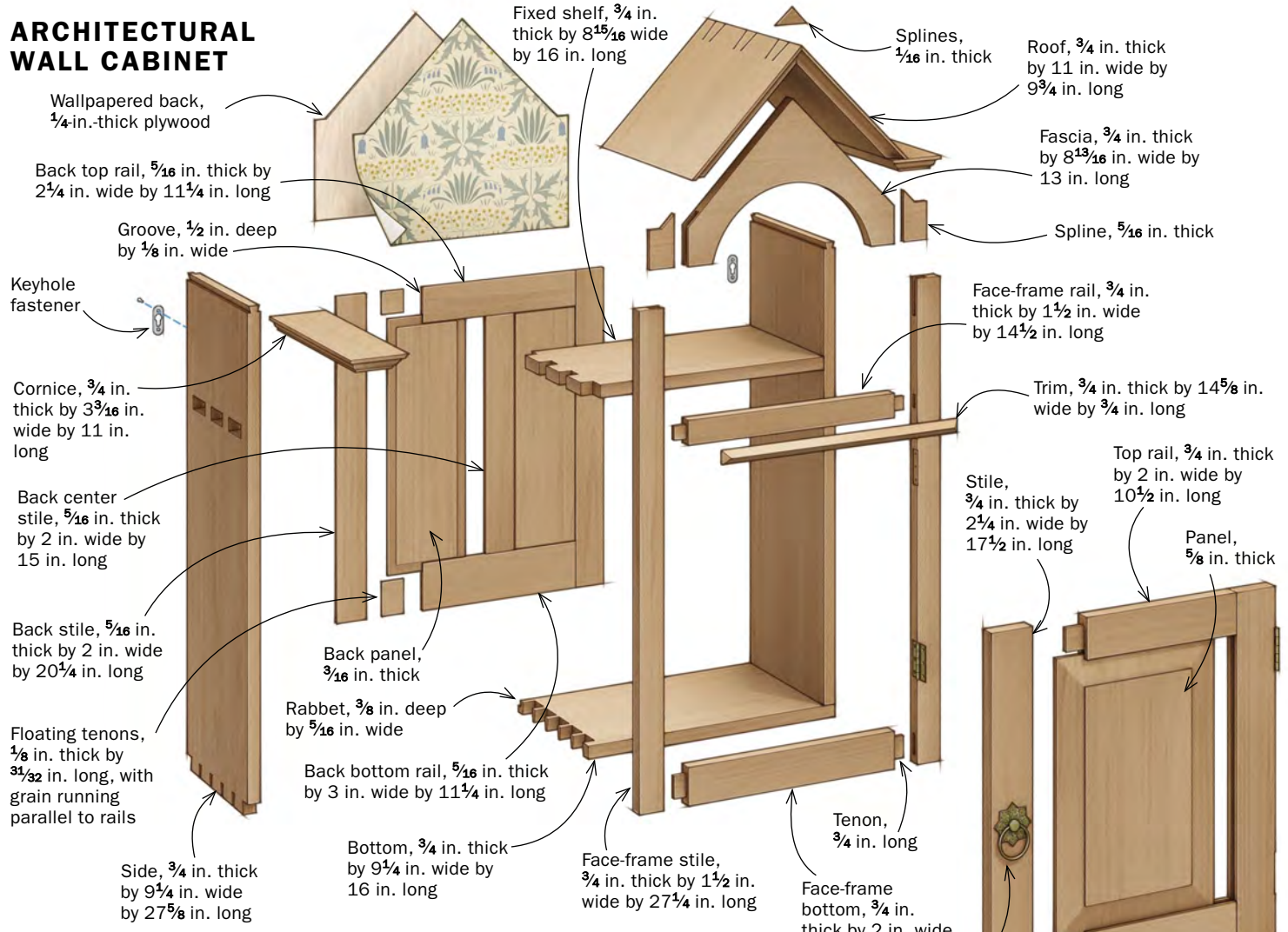
Now, rip the shelf so that its back edge will align with the rabbets in the case sides. The rabbets will be 5/16 in. deep. You can rout them after assembling the case. Glue the case together.

Add the face frame

While the case is in clamps, make the face frame with mortise-and-tenon joints. First mark the positions of the mortises, then cut them. With the same fence setting, cut an open-ended mortise ½ in. deep at the top of each face frame side; this will hold the spline for the fascia. Now set up the tablesaw using a dado blade to cut the tenons to fit. Cut the shoulders back by hand. For me, it's quicker and easier to do it by hand than setting up the saw. Glue

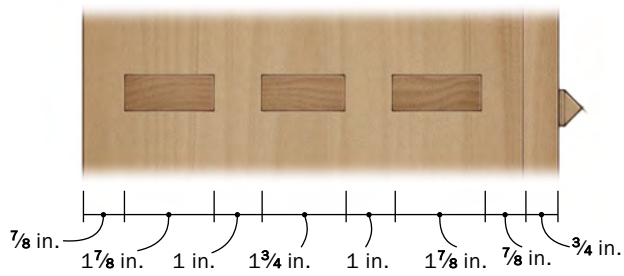
Drawing, this page: John Tetreault

ARCHITECTURAL WALL CABINET

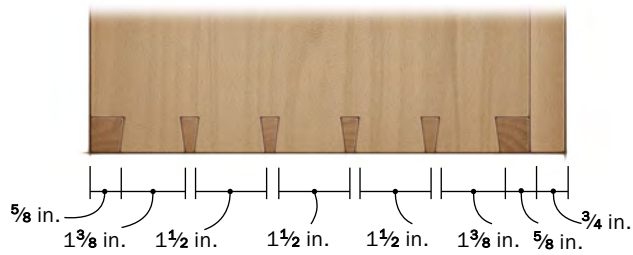


FRONT

SIDE



TENON LAYOUT



DOVETAIL LAYOUT

Drawings: Christopher Mills

A not-so-basic box

Sliding dovetail joins cornice to case. *Before gluing the case together, cut the dovetail on the top of the sides. Each cornice will get a mating slot.*

Glue the case. *The bottom corners are dovetailed, and the shelf has through-tenons. It's not typical case construction, but it's quite strong and not difficult to manage.*

Add the face frame. *Hiller first glues up the face frame, then glues and clamps the face frame to the case. The face frame is joined with mortise-and-tenon joints and slotted for splines that will link the fascia to it.*

up the face frame, and then glue the face frame to the case.

Lay the cabinet on its face and rout a rabbet in the back edge of the sides and bottom. This will accommodate the frame-and-panel back for the cabinet's lower section and the wallpapered plywood back for the upper part. Chop the bottom corners square with a chisel and remove the little portions that remain above and below the fixed shelf.

Return to the cornice

Set up the router table with an ogee cutter and rout the profile on the outside and front end of each cornice.

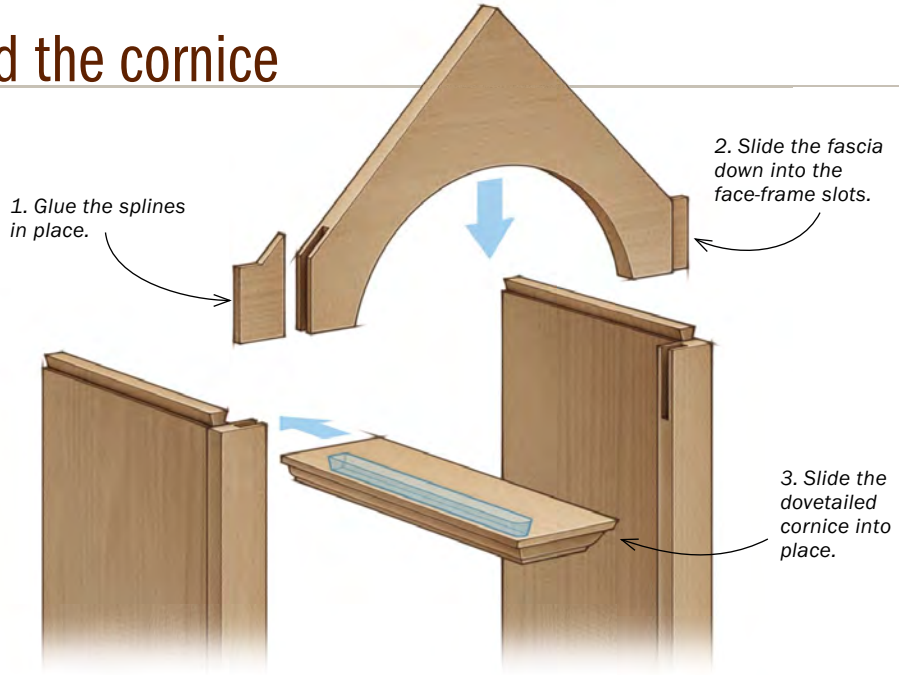
Slide each cornice into position and mark where it meets the inside top corner of the face-frame stile. Then miter the cornices on their long inside edges. With your tablesaw blade at 45°, set the fence so you rip the miter where your mark is.

Fascia supports the roof

Cut the fascia blank to width. Now use a mortise gauge to transfer the position of the spline slot from each face-frame stile to the fascia blank. On the tablesaw, cut a groove for the splines coinciding with these lines.

Now mark and cut the top of the fascia to accept the roof. I made my first cut, a 45°

Add the cornice



Start with the dovetail socket. *Cut it on the router table, centered and running from the back of the cornice to about 2 in. from where the front edge will land. Here the blank is still overlong.*

Add an ogee profile. *Each cornice gets profiled on the outside edge (above) and on the front. Use a backer block when you rout the front to prevent blowout (right).*

Cut the long miter. *To mark the cornice for the miter, dry-fit the cornice on its dovetail without the fascia in place, and mark at the inside edge of the face-frame stile. Then rip the miter on the inside edge of the cornice.*

angle, on a sliding compound miter saw, then moved to the tablesaw and used the miter gauge to make the second cut 90° to the first. Next draw the arc below the peak and cut it out with a bandsaw.

Clamp the fascia in place dry-fitted with splines. Slide the cornices onto the sides. Mark the length of the cornices at the back of the cabinet, and cut them to length. Then glue the fascia and cornice pieces in place. I apply glue only to the first few inches at the front of the dovetail slot; this locks the front in place relative to the face frame while allowing the cabinet sides to move.

Raise the roof

The roof is made of two boards with their grain running in the same direction as that of the case sides. They will be joined at the top with a keyed miter and affixed to the cornice with brads; the front half will be glued to the cornice.

Rout the cove molding on the underside of the roof. Next, at the tablesaw, cut the 45° angle on the lower edge of each roof side. Set one side in place on its cornice and clamp it to the fascia. Mark the point at the peak of the fascia. Repeat with the other side. Cut the 45° angles for the miter at the peak of the roof on the tablesaw. Finally, rout a rabbet in the back edge of the roof pieces to accept the back. Glue the roof pieces to the top edge of the fascia, to the front half of the cornices, and to each other at the ridge. When the glue has dried, kerf the ridge with a handsaw and glue in keys.

Make the back

The lower section of the back is a frame-and-panel unit. At its top end it overlies

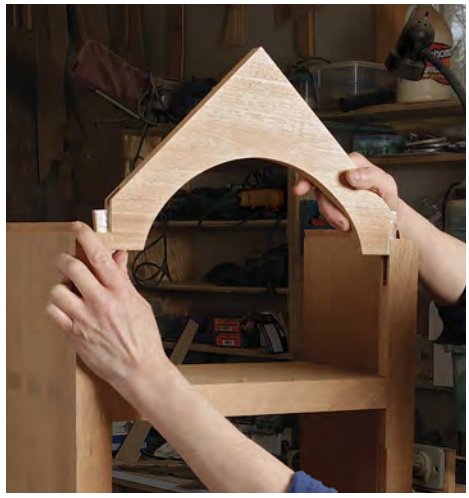
half the thickness of the fixed shelf. Cut the stiles and rails to length, leaving them about 1/16 in. over for fitting. Groove the length of the stiles and rails, and the ends of the rails on the tablesaw. Then mill floating tenons to fit. Cut rabbet around the inside face of each panel so that it will be flush with the face of the frame. Glue and clamp the back panel. Now attach it with wood screws.

Mark out the shape of the upper back section by holding a piece of plywood up to the opening and tracing it. Cut it out just a little larger than your marks, then trim to fit with enough margin around the edges so that the paper can be folded around and pasted to the reverse side. Apply the paper, and fit in place. You can leave the back as a press-fit or secure it with screws.

Fascia establishes the roofline

Cut grooves and arch. *Groove the sides of the fascia while the blank is square (left). Set the tablesaw fence to cut grooves that line up with mortises in the face frame. Then, after mitering the peak, bandsaw the arch (right), and use a spokeshave, files, and sandpaper to clean up the cut.*

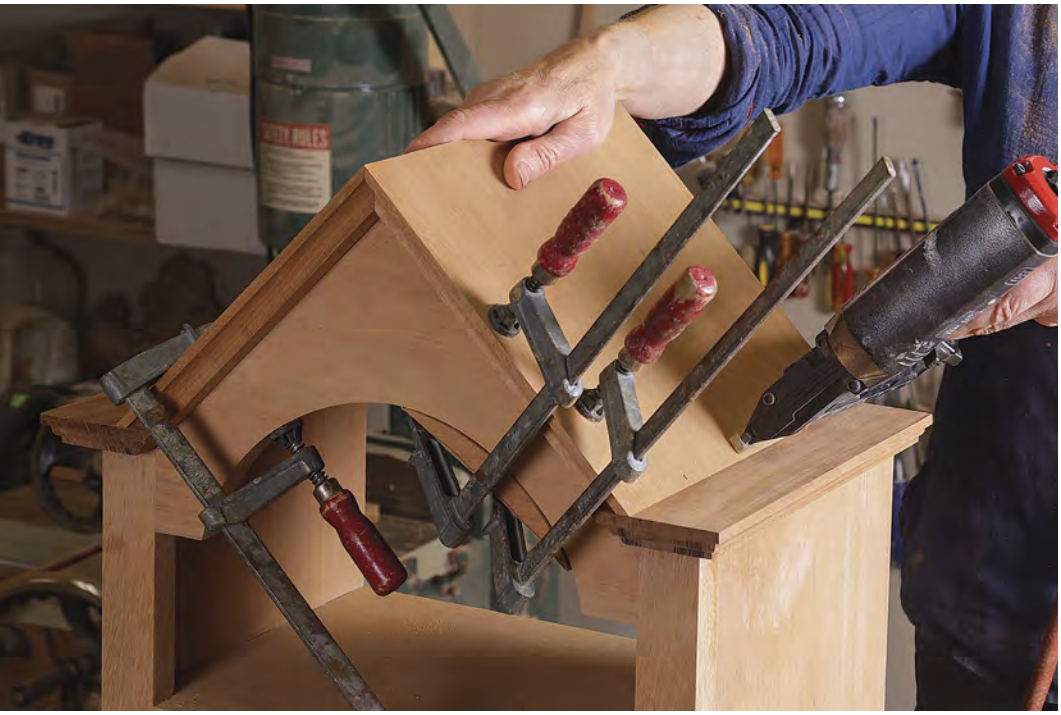
Glue the fascia in place. *First glue in the splines. They are notched and mitered to follow the roofline where it meets the inside edge of the cornice. Then slide the fascia down into the face-frame slots and clamp it.*



Glue in the cornices. *Once the fascia is glued in, add the cornices. To allow the side to move, apply glue to just the front half of the cornice's dovetail socket.*

Through the roof

Cut one side at a time. *After mitering the lower edge of one roof piece, set it in place against the cornice, and mark where the fascia peaks. Sneak up on this miter cut on the tablesaw. Repeat on the other roof piece with the first one dry-clamped in place.*



Glue down the roof. *Glue and clamp the roof in place. You can use arch cutoffs as clamping cauls. Hiller uses a pin nailer to secure the end-grain miter on the cornice (above) and Ulmia miter clamps to clamp the points of the roof together (right).*

A raised-panel door

The door, like the face frame, will be mortise-and-tenoned together. Groove the rails and stiles on the tablesaw, then chop the mortises. Cut the tenons using the dado set up as you did with the face frame, then haunch them. Dry-fit the door and measure for the panel.

The door panel will be raised on the tablesaw. Set your tablesaw blade at 7° and raise it to 1¼ in. above the table, adjusting the fence until your test piece slides easily into the groove. Raise the four edges, then clean up by hand. Glue up the door and check for square and twist.

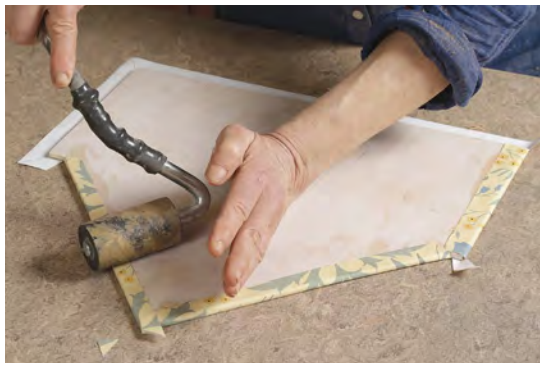
To fit the door, rest it in the cabinet against the hinge side of the face frame. If it does not fit squarely, plane it so. Set the door on a pair of dimes or pennies, depending on how large a gap you want, and mark the position of the top face-frame rail on both stiles. Plane or saw until it just fits inside the opening.

Now mortise the door for the hinges and screw them in place with two screws in each hinge. Set the door back on the coins and hold it in place against the face frame, then transfer the top and bottom mark of each hinge. Mortise the face frame for the hinges.

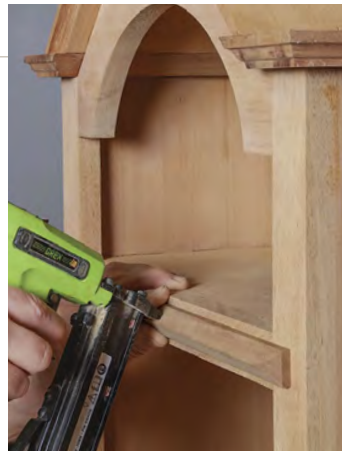
Place the door in its opening and eyeball how much material needs to be removed from the opening stile. Plane the opening stile, beveling it. When the back corner will just go in, hang the door with one screw in each hinge, and gently plane the rest of the opening stile with the door hanging. Glue and pin a small door stop, ⅝ in. thick by

Kerf the ridge. *For added strength, Hiller uses a handsaw to cut angled kerfs in the roof ridge and then glues in thin splines.*

Add the details



Papering the upper back. *Hiller takes the extra time to wrap the paper around the edges of the plywood back. First, though, she traces the outline using a spacer between the back and pencil to give extra room for wrapping. After applying wallpaper adhesive, she presses everything smooth with a J-roller.*



Add double mitered trim. *Glue and pin the trim to the front of the fixed shelf.*

Online Extra

Head over to **FineWoodworking.com/270** to see David Berman re-creating antique Voysey wallpaper.

1¼ in. wide by 1½ in. long, to the floor of the cabinet at the opening stile.

The final details

To add dimension to the front of the fixed shelf, I make a piece of double-beveled trim and glue and pin it to the front of the shelf.

Next, if you want to add adjustable shelves, mill them and drill holes in the cabinet sides for supports. There could be one or two shelves, depending on how the cabinet will be used. I would make them ⅝ in. thick by 8¾ in. deep by 14⁷⁄₁₆ in. long. I would support them on ¼-in. metal shelf supports with hole positions determined with respect to the objects I intended to keep in the cabinet.

The cabinet is designed to be hung with keyhole fasteners. Mark the position of the fasteners on each side of the cabinet's back and rout for them.

I wanted a pull that was true to the period, available, and affordable, so after much research I fitted my cabinet with an Eastlake-style pull (houseofantique hardware.com; $12, item no. R-08BM-1259-ABH). For the finish, I followed the mahogany formula in Tim Puro's article, "Four Great Finishes with Hardware-Store Supplies" (*FWW* #267). □

Nancy Hiller builds custom furniture (nrhillerdesign.com) in Bloomington, Ind.

Hang the door. *Mortise the door for the hinges, transfer the marks to the face frame, mortise the face frame, and then finish fitting the door.*