

Oak Chest on Stand



Design details evoke vintage
English Arts and Crafts

BY MARIO RODRIGUEZ

ROUTER-ASSISTED JOINERY

I've always been attracted to English Arts and Crafts furniture, in particular to the pieces designed by C.F.A. Voysey. Regarded as a major influence in early 20th-century design, Voysey designed pieces that embraced the ideas of the Arts and Crafts movement in England. His spare and timeless furniture is characterized by a wonderful sense of proportion, clean lines, and strong vertical elements that were often relieved by gentle horizontal curves.

To channel Voysey's spirit, I built an English-inspired piece of furniture: a chest on stand in white oak. The chest itself has half-blind dovetails, a single drawer, and a frame-and-panel lid where the panel sits proud of the frame. The base has tapered legs and a shop-made ogee molding that cradles the chest.

Start with the chest

The case is joined with half-blind dovetails and has two compartments—the box up top and a drawer pocket below—separated by a horizontal divider. There's also a rail below the drawer front. I cut the dovetails first, then I cut the grooves for the divider and chest bottom. Finally, I routed the mortises for the rail.

Dovetails first—I chose half-blinds instead of through-dovetails. Besides being aesthetically pleasing and strong, they allowed me to thicken the sides of the case to allow for the routed handholds.

I hand-cut the tail boards first, at 10°, and then laid them over the pin boards to transfer the dovetail outline. When the pins were marked out, I used a router to carefully remove the bulk of the waste. Once the pins were roughed out with the router, I then pared them back to the line with a chisel and tested the fit.

Grooves next—With the dovetails done and the case sides fitted, it's time to take care of the chest's internal parts. The grooves for the horizontal divider fall in the center of a tail, so they can be cut right



Transfer the tails. Rodríguez cuts the case tails by hand first, then transfers the layout to the sides with a marking knife.



Router work. Rodríguez removes most of the waste between pins using a plunge router.



Pare to perfection. Once the router is unplugged, he trims each pin, ensuring that all the corners of the joint are clean and free of debris.



Simple grip. Using a pattern cut out of ½-in. plywood and a router fitted with a bearing-guided ½-in. pattern bit, Rodríguez routes the handholds in the sides of the chest.

through using a dado set on the tablesaw. The grooves for the case bottom are stopped before reaching the front edge. I cut those with a router and clamped-on fence.

Mortises for the rail—The front rail has integral tenons on the ends. The mortises for them intersect at their top end with the groove for the case bottom. At the bottom end, the mortises carry through the bottom of the case side. The rail's top edge is rabbeted to receive the front edge of the case bottom. With this joinery cut, you can rout the handholds in the case sides.

Glue up the chest

Once the joinery has been cut and fitted, glue up the dovetailed sides and the front rail with both bottom panels in place. Glue the front edge of the case bottom to the front rail, but leave the rest of the panel unglued to move freely within the chest. The divider simply sits in the grooves without glue.

To start the glue-up, place the back and one side together and then tap the divider and bottom into their grooves, followed by the front rail. Then add the other side and the case front. Once the chest comes together, be sure to clamp the front edge of the case bottom to the rabbet on the front rail. After the clamps come off, you can build and fit the drawer.

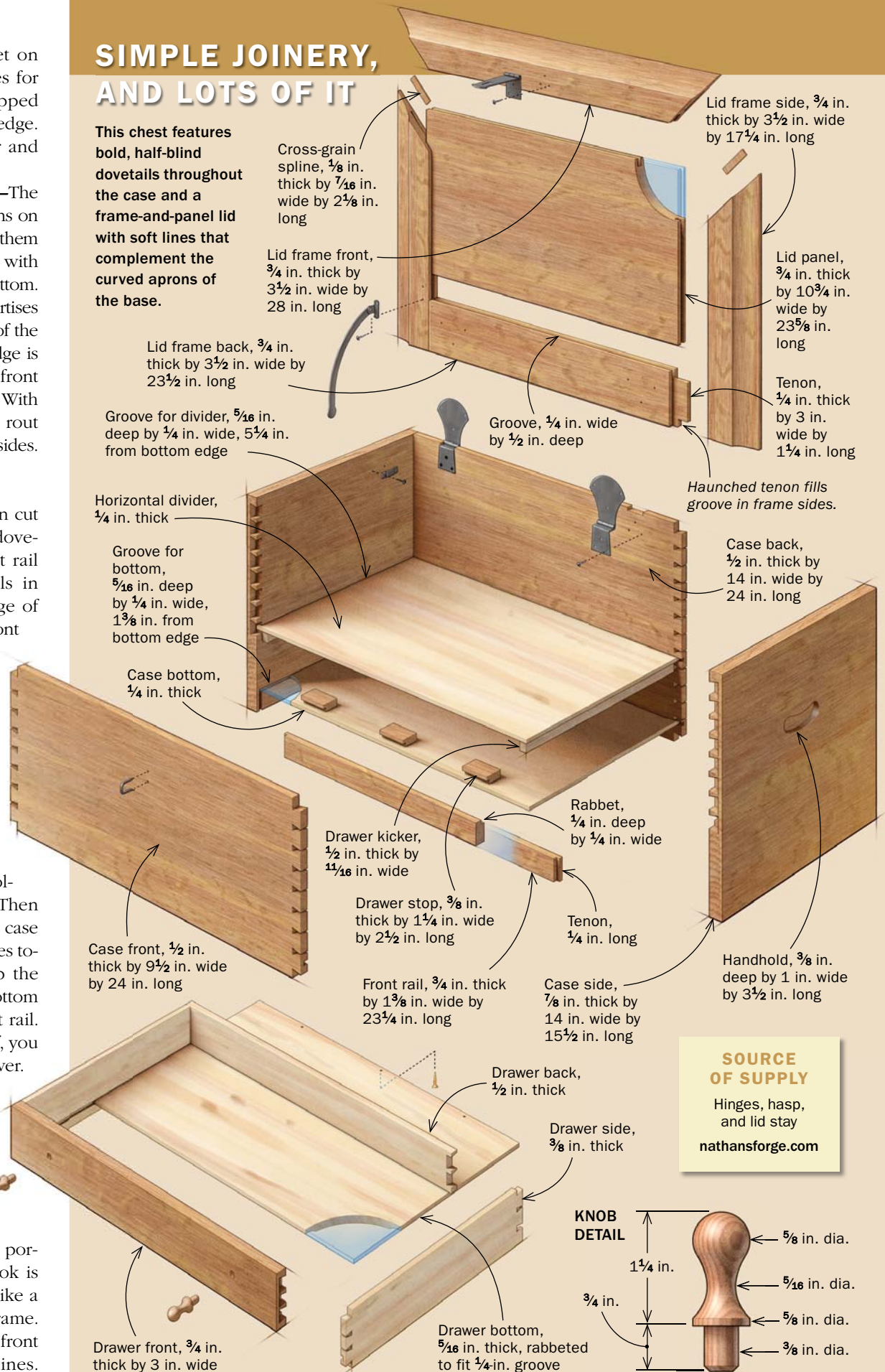
Build the lid

With the case finished, it's time to tackle the lid. It's a frame-and-panel assembly, but slightly unusual in that the panel fits over a portion of the frame. The look is plush, appearing almost like a pillow set on top of the frame.

The frame is mitered in front and reinforced with splines.

SIMPLE JOINERY, AND LOTS OF IT

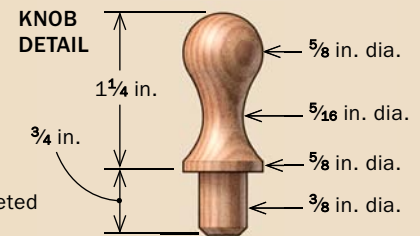
This chest features bold, half-blind dovetails throughout the case and a frame-and-panel lid with soft lines that complement the curved aprons of the base.

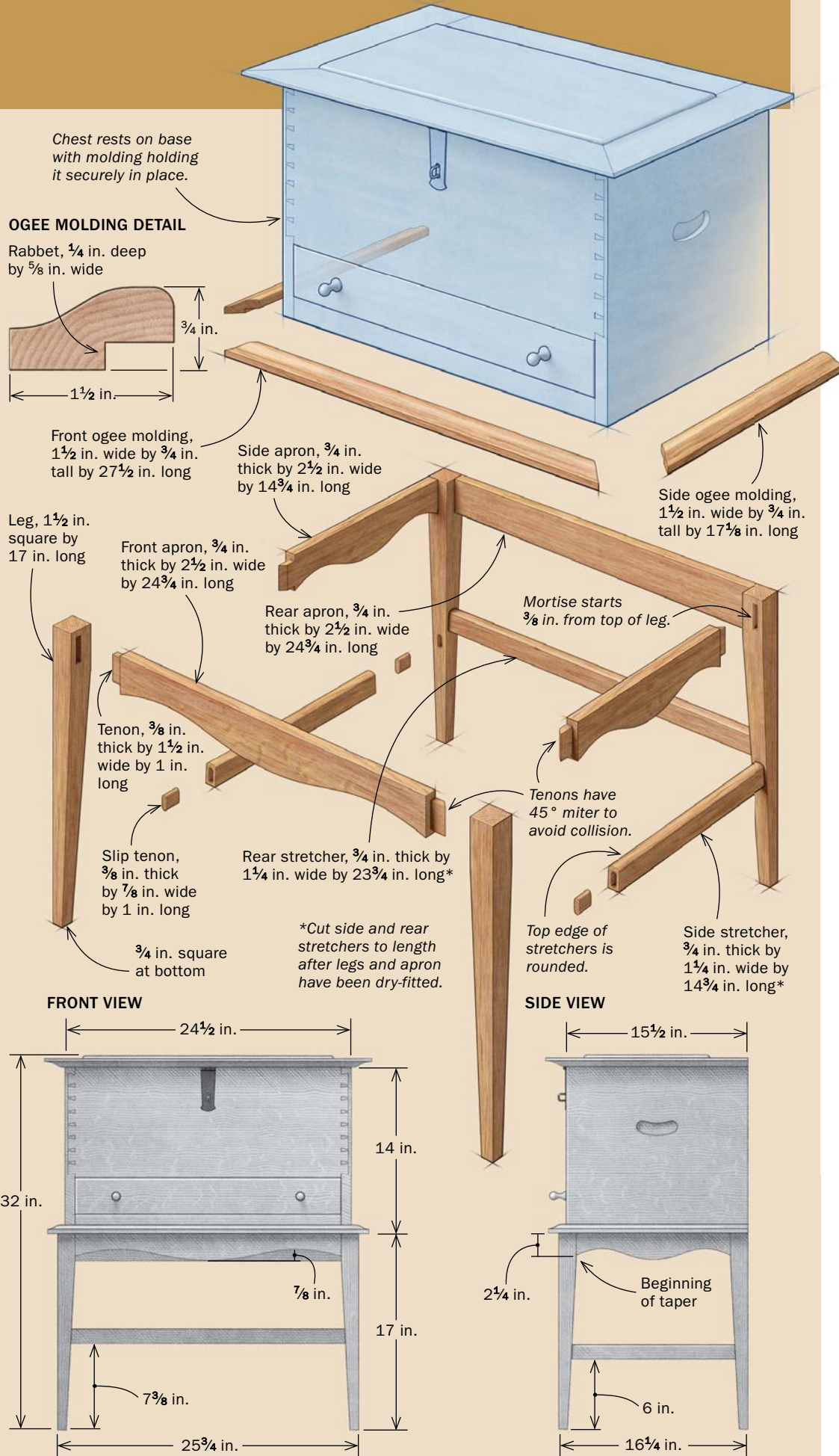


SOURCE OF SUPPLY

Hinges, hasp, and lid stay
nathansforge.com

KNOB DETAIL





The rear joint is a haunched mortise-and-tenon. Each frame piece gets a $\frac{1}{4}$ -in.-wide groove to house the panel.

After building the frame, cut the panel to size and use a $\frac{1}{4}$ -in. dado set to run a groove along all four edges. It's important to check the panel for fit in the frame and make sure there's room at the bottom of the groove for expansion. Once it fits, use a quarter-round bit to pillow the top edge of the panel.

Cove makes a handy lid lift—The lid's refined look comes in part from the cove cut into its underside. I cut this wide, shallow cove on the tablesaw after gluing up the lid. I clamped a fence across the table at an angle and took light cuts, gradually raising the blade until I got a cove of perfect depth. Then I rounded over and softened the hard edge with a block plane followed by a sanding block.

Make the stand

The chest gets a sturdy and attractive stand, with tapered legs, shapely aprons on the front and sides with integral tenons, and lower stretchers that reinforce the structure. The ogee molding around the frame is a final attachment that creates an attractive border between the chest and the stand and also adds a richness typical of Voysey's work.

Mortises and tapers—Cut the leg mortises while the material is still square, including the mortises for the lower stretchers. For this job, I used a router and jig. Next, taper the two inside edges of each leg using a standard toggle-clamp jig on the bandsaw.

Aprons—Cut the aprons to length, and then cut and fit the tenons. I cut the tenon shoulders on the tablesaw and the cheeks on the bandsaw,

STRAIGHTFORWARD CASE ASSEMBLY

Make way for the divider. The grooves for the divider are hidden by the dovetail joinery, so you can cut them straight through. Rodríguez uses a 1/4-in. dado blade for the job.



Route for the case bottom. The case bottom groove goes through the back and stops 1/4 in. from the front. Rodríguez cuts it using a 1/4-in. straight bit and straightedge guide.



Fit the bottom. Both the interior divider and case bottom must be fit before glue-up to avoid any hang-ups. When a light mallet tap seats them, they're ready to go.



Case under pressure. Getting clamp pressure in the right places is the only way to get a tight final product. Rodríguez uses cauls and rotated clamps to avoid putting pressure on the case side pins.

rounding the edges of the tenons with a rasp and sandpaper to match the routed mortises.

Once the tenons are cut, trace the wave outline onto the front and side aprons. Cut just outside the line on the bandsaw, then clean it up using a spokeshave and scraper. The rear apron is left straight, as the back is meant to be against a wall.

Stretchers—The side and rear stretchers add stability and pleasing lines to the overall piece. Putting lower stretchers on a table with tapered legs can be tricky, but with slip tenons and careful measuring, you'll get great results.

Begin by dry-assembling the stand and marking the legs for the position of the stretchers. Crosscut one end of the stretcher at an angle to match the angle of the leg taper. Place the angled end along the inside face of the leg aligned with the pencil line and mark the opposite end. Cut just outside the pencil line and sneak up on the fit until the stretcher sits snugly between the legs at the stretcher location.

I used a simple jig to rout the mortises in the ends of the stretchers. The stretcher is clamped vertically to the fence of the jig. A top plate, slotted for a guide bushing, supports the router (for information on making the jig, see "Build a Vanity Cabinet," *FWW* #235, p. 40). Install a 3/8-in. straight bit and a 3/4-in. guide bushing in a plunge router and rout the mortise in multiple passes until you reach full depth.

Ogee frame

The final touch to the stand is the ogee frame that surrounds the chest on three sides. This molding is made in three steps, starting with the profile. I cut the ogee on the router table with an Eagle America #186-4015 router bit, then rounded over the back edge with a quarter-round bit. The last step is to rabbet the underside with a dado set at the tablesaw and a sacrificial fence. The rabbet fits over the edge of the base and holds the chest in place.

Since the chest sits against the wall, there's no need to frame the

■ FRAME-AND-PANEL LID



Spline the miters. A cross-grain spline will reinforce the joint and simplify glue-up. Mark the miter to avoid cutting into the panel groove.



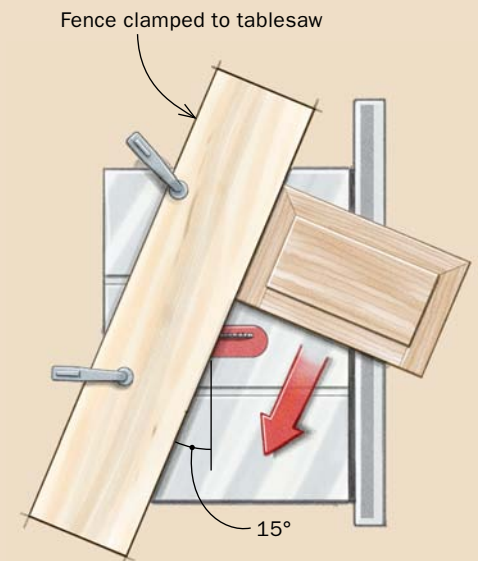
Unbreakable. The oak splines are cut crossgrain, so they won't break along the grain.



Gluing the lid. Before applying any glue, make sure all the grooves and miters fit properly. Once the glue is on, Rodriguez uses clamps to carefully align and square the mitered corners.



Tablesaw mill. To get a wide, shallow cove on the lid, clamp an angled fence across the blade. Keep the lid flat and pressed against the fence while making each pass (left). Raise the blade $\frac{1}{16}$ in. after each pass until you reach the right depth (inset), leaving a sweeping cove undercut. Don't cut too deep or the miter splines will be exposed.



STAND WITH TAPERED LEGS AND CURVED APRONS



Taper the legs. Once the mortises for the aprons and lower stretchers are cut, Rodríguez uses a simple jig with a single toggle to cut the tapers on the two inner sides of the legs.



Cut the stretchers to length. Dry-fit the apron and mark the stretcher location on the faces of the legs. At the chopsaw, angle one end of the stretcher to 87° and set it in place to mark the opposite end. Start outside the line and take multiple cuts until the stretcher fits precisely between the legs.



Mortises on the narrow. To mortise the ends of the stretchers, Rodríguez uses a jig and a plunge router with a rub collar. Clamp the stretcher in place (above), and rout the mortise, taking multiple passes to reach full depth (right).



Stretchers assembled. Now that the ends are angled and the mortises are cut, make and fit the slip tenons.

stand all the way around; the front and sides are sufficient. That means there are only two miters to cut. I cut them on the miter saw and refined the fit with a block plane.

Installing the hardware

Hardware can add character and authenticity to a piece like this, so I chose hand-forged pieces from Nathan's Forge (nathansforge.com). The hinges fit in a shallow mortise in the top edge of the back panel that allows the lid to lie flush with the edge of the chest. They are attached with screws that resemble antique rose-head fasteners.

The lid stay is carefully positioned so that the lid closes completely and tilts back to 85° when open. The hasp is attached to the underside of the lid and placed so that its screws don't interfere with the flush fit. A horseshoe nail passes through the hasp for a secure closure. Pre-drill for the nail and then gently drive it in with a hammer.

A true finish

Since original Voysey pieces have a low-luster finish, I kept it simple. I ragged on several coats of 1½-lb.-cut shellac, rubbing out each coat and applying another until I achieved a light film and a soft sheen. Then I applied a little wax, rubbed it out, and burnished

it to bring out the highlights. I finished the inside of the chest and drawer with a single coat of shellac, rubbed out when dry, and waxed.

After a few days, I applied an antiquing glaze tinted with raw umber, brushing it into the corners and recessed areas. Before it dries, wipe off the excess glaze, leaving just enough to mimic the accumulation of dust and dirt over time. Some of the glaze will migrate onto the flat surfaces, muting the oak slightly and giving it a nice patina. Once you're satisfied with the chest's faux antique appearance, buff it out from top to bottom with a soft, clean cloth. □

Mario Rodriguez, a 24-year contributor to FWW, teaches at the Philadelphia Furniture Workshop (philadelphiafurnitureworkshop.com).



Mitered molding finishes the base. After using an ogee profile bit and a quarter-round bit in the router table to shape the molding, Rodriguez uses a dado set at the tablesaw to cut the rabbet in back (above). Miter the front corners, then glue the molding to the base. Leave the back of the frame without molding; the piece is meant to be stored against the wall.



Low-luster finish. In keeping with Voysey's typical natural, low-luster finish, Rodriguez applied a few coats of 1½-lb. cut shellac with a rag. He then added wax and antiquing glaze to mimic the passing of years.