

# Build a Collector's Case

Basic project is loaded with character

BY GARY ROGOWSKI





Is it really the devil that's in the details, or is it the angels? In this little collector's case, the details make it stand out. Protruding, shaped dovetail joints, side-hung drawers to keep a low profile, and inlaid pulls all help this piece create a great overall impression.

Even with all the careful touches, the case is simple to construct. Almost all the joints are cut with a router. I use a commercial jig to cut the dovetailed case corners, and I make them stand out with a little handwork.

I built the case and drawers from black walnut. If you need to glue up boards for the case, pay attention to grain and color when you match them up. The drawer fronts should be ripped at the bandsaw from a single board with attractive figure. For the back, I used reclaimed water-tank redwood, which I kept fairly thick. I rabbeted the edges to create a raised panel.

To avoid marring the proud joinery details later, plane, scrape, and lightly sand the case pieces inside and out before starting work on the dovetails.

### **A jig makes dovetails snug and quick**

Naturally, working with a router jig makes quick work of case dovetails, even when it comes to layout. For both tails and pins, you just mark the work and align the jig on the first piece to establish the setup for the remaining cuts.

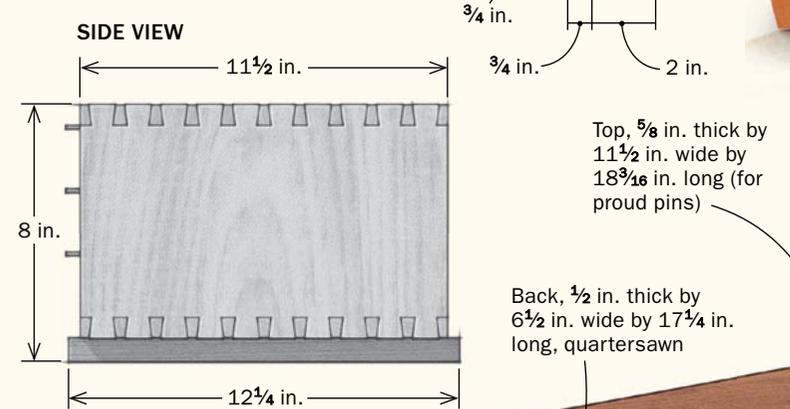
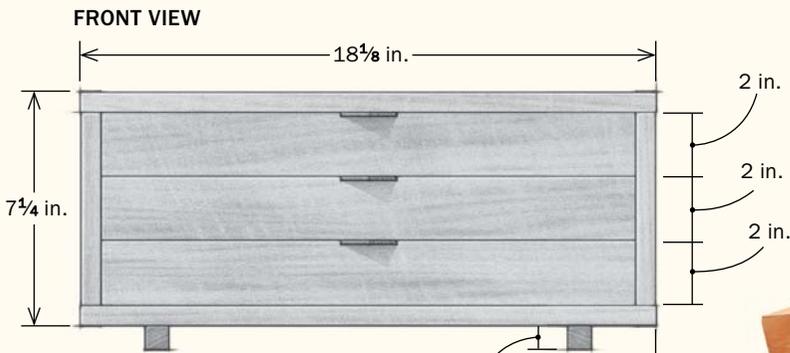
Begin with the tail boards. Set your router-bit depth to match the thickness of the stock plus the thickness of the template. To this, I added  $\frac{3}{32}$  in. for the amount I wanted the joints to protrude. Next, mount the piece in your vise, end grain up, and strike a centerline on the end of the board. Now clamp the straight-fingered jig to the workpiece, aligning its center with the mark. Last, snug a stop

# A case for details

This simple chest, proportioned to sit atop a desk or dresser, becomes a handsome display piece through smart details: Proud dovetails add depth and character, side-hung drawers show continuous grain across their fronts, and inlaid pulls hint that the drawers contain beautiful things.

## THE KELLER WAY OF DOVETAILING

The Keller jig is a sturdy, flat plate of composite material with two templates, one each for pins and tails. It comes with straight and dovetail bits that are guided by bearings. Attach a clamping cleat of long, square stock, making sure its reference faces are perpendicular to the jig's fingers.



Top, <sup>5</sup>/<sub>8</sub> in. thick by 11 <sup>1</sup>/<sub>2</sub> in. wide by 18 <sup>3</sup>/<sub>16</sub> in. long (for proud pins)

Back, <sup>1</sup>/<sub>2</sub> in. thick by 6 <sup>1</sup>/<sub>2</sub> in. wide by 17 <sup>1</sup>/<sub>4</sub> in. long, quartersawn

Groove for back, <sup>5</sup>/<sub>16</sub> in. deep by <sup>3</sup>/<sub>8</sub> in. wide, stops <sup>5</sup>/<sub>16</sub> in. from each end

Slotted screw hole allows for wood movement.

Dadoes for runners, <sup>1</sup>/<sub>4</sub> in. deep by <sup>1</sup>/<sub>2</sub> in. wide, are stopped 1 in. from front of case

Rabbet around edge of back, <sup>1</sup>/<sub>8</sub> in. deep by <sup>5</sup>/<sub>16</sub> in. wide

Top and bottom dadoes are 1 <sup>3</sup>/<sub>4</sub> in. on center from the top and bottom; middle dado is centered between them.

Runners, <sup>1</sup>/<sub>2</sub> in. thick by <sup>1</sup>/<sub>2</sub> in. wide by 9 <sup>3</sup>/<sub>4</sub> in. long, glued only at front

Groove is set in <sup>1</sup>/<sub>4</sub> in. from rear of case.

Feet, <sup>3</sup>/<sub>4</sub> in. thick by <sup>3</sup>/<sub>4</sub> in. wide by 12 <sup>1</sup>/<sub>4</sub> in. long

Bottom, <sup>5</sup>/<sub>8</sub> in. thick by 11 <sup>1</sup>/<sub>2</sub> in. wide by 18 <sup>3</sup>/<sub>16</sub> in. long

Sides, <sup>5</sup>/<sub>8</sub> in. thick by 11 <sup>1</sup>/<sub>2</sub> in. wide by 7 <sup>7</sup>/<sub>16</sub> in. long (for proud pins), riftsawn



## TAILS FIRST

**Set up and cut the tails.** After marking a centerline (above) and aligning the template (right), clamp the jig in place and cut the tails (below). The stop block clamped to the cleat helps locate the jig for the remaining cuts.



## THEN PINS

**Transfer the layout.** Carefully scribe several tails onto the pin board to help locate the jig (above). Align the jig so that the edges of the fingers are tight against the scribe lines (left). Then rout the pins (below).



block against the end of the workpiece and clamp it to the jig's wooden cleat. After routing this first set of tails, the block will serve as a reference for locating the jig for all of the remaining tail cuts.

With the dovetail bit installed and set to the proper depth, set the router on top of the template to begin cutting. The bit's guide bearing is sized for an exact fit between the jig's fingers, so guiding the router is straightforward. Take care, though, not to lift the router or you risk damaging the jig.

After cutting the first set of tails, unclamp the jig, flip the board, and secure the jig to cut the tails on the opposite end. Finally, repeat the steps for the second tail board, using the stop block to



# Assemble the case



**Dadoes hold the drawer runners.** Each cut is stopped at both ends, so limit the travel of the workpiece with blocks on the infeed and outfeed fences. Start the cut with the piece against the infeed stop and slowly lower the work onto the spinning bit. Set the bit to the cut's full depth but use a hardboard shim on the tabletop to enable a shallow first pass.



**Square up.** Scribe a line to mark the front end of each dado, then use a chisel to chop the routed ends square.



**Install the runners.** To account for wood movement, Roĝowski glues only the first 2 in. of the runner and secures the rear with a screw in a slotted hole.



locate the jig for each set of cuts. After cutting the tails, transfer the locations of a few of them to the pin boards with a sharp pencil. When you clamp the pin template in place, it should be easy to align the jig with these layout lines. If you've attached the jig in the right spot, the fit should be perfect. Install the straight bit in the router and set its depth, remembering the extra  $\frac{3}{32}$  in. needed to make the pins stand proud. Take one practice pass before trying it out on your good stock.

## Outfit the interior before gluing up

The side-hung drawers slide on runners attached to the case sides. I seat these runners in stopped dadoes cut at the router table before gluing up the case. The front of the dado stops 1 in. from the front edge of the case and  $\frac{5}{8}$  in. from the rear, where it intersects with the groove for the back. Clamp a pair of stop blocks to the router table's fence, and make the  $\frac{1}{4}$ -in.-deep cuts using a  $\frac{1}{2}$ -in. straight bit (above). Afterward, use a marking gauge to scribe the end lines at the front, and then square them with a chisel.

Cut the stopped grooves for the back next. I make them  $\frac{5}{16}$  in. deep, and I make the rabbet cut into the back the same size.

Mill up the drawer runners slightly over-size, then plane each one for a snug fit in the dado. To allow for cross-grain movement with the sides, I glue only the front 2 in. of each runner, attaching the rear with a screw in a slotted hole.

With the runners installed, chamfer the proud ends of the dovetails with a block plane and chisel, and dry-fit the case. As a last step prior to glue-up, I pre-finish



**Prepare for glue-up.** Lightly chamfer the ends of the pins and tails (far left), and apply finish to all surfaces that won't receive glue, including the end grain on the tails (left).

the case pieces, inside and out, with shellac. To avoid squeeze-out, I paint the glue carefully on each pin using a narrow piece of veneer. Start by gluing the top and bottom to one side, then drop the back into position and glue up the remaining side. Secure the whole assembly with two clamps each along the top and bottom of the case. Protect the case sides from dents with cauls set just inside the joinery.

### Assemble the drawers

The drawer boxes go together easily. Grooves cut into the drawer sides allow them to slide on the case-mounted runners. I make the bottoms from plywood and line them with velvet over a layer of acid-free mat board.

Start by cutting the drawer fronts to exact length. Adjust them to the case by hand-planing to fit with a low-angle plane. The fit should be tight. Size the height of each front so that all three drawers can fit into the opening at once, but just barely.

To join the drawer fronts and backs to the sides, I use an easy-to-assemble rabbeted dovetail joint that can be cut quickly on the router table (see photos, p. 60). I start with the fronts and backs, using the tablesaw first to cut away the bulk of the waste from the rabbet. Then, at the router table, I make a light cut with the dovetail bit to give the rabbet its angled cheek.

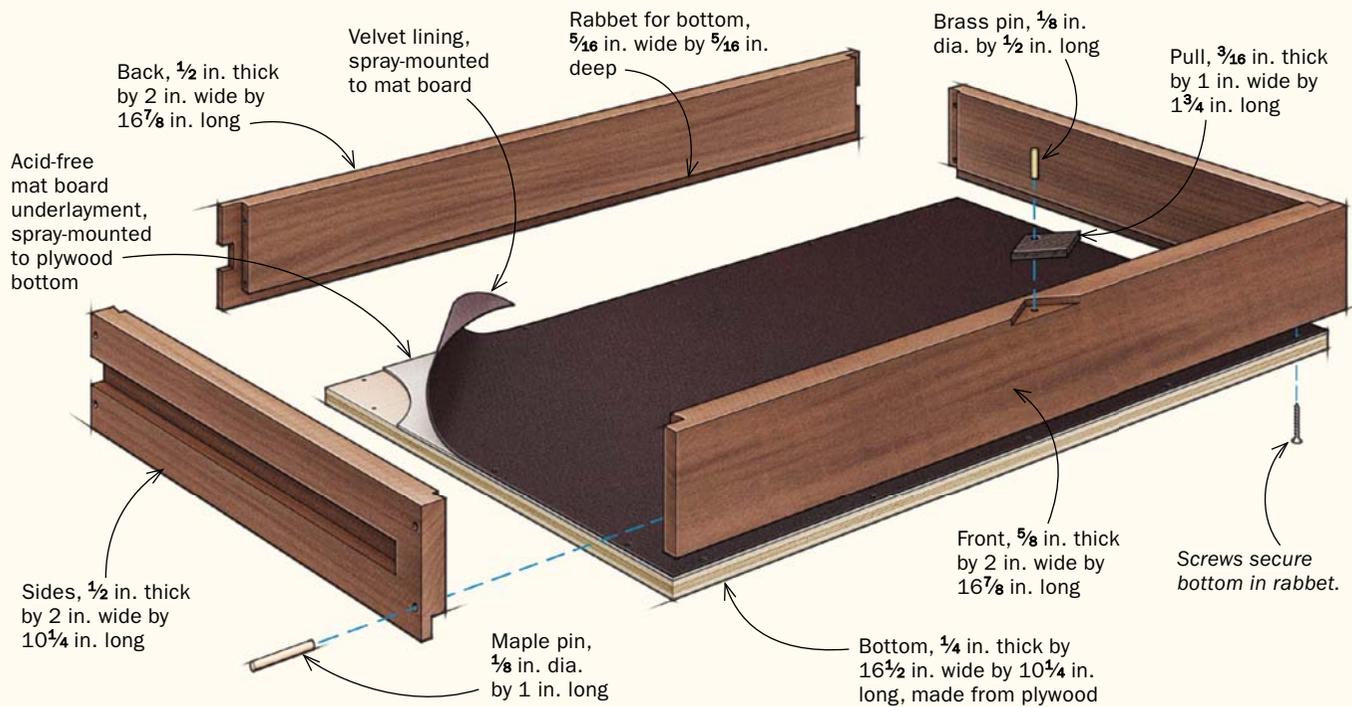
For the drawer sides, leave the bit depth unchanged and use test cuts to adjust the fence setting for a proper cut. You want the drawer side just proud of the front when the joint comes together (see photos, p. 60). You'll plane it flush later.

To maximize storage space in the shallow drawers, I screw the plywood bottoms into rabbets rather than setting them into a

**Glue up the case.** Slide the rabbeted back into place after attaching the top and bottom to the first side.

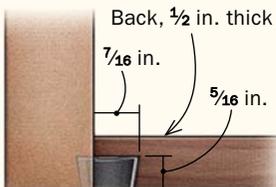


# Build and fit the drawers

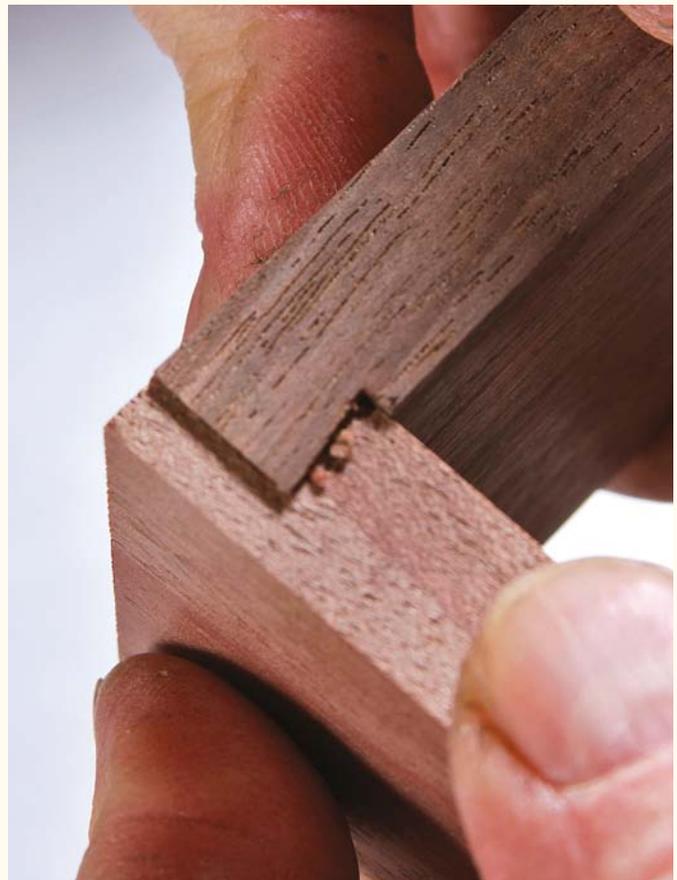
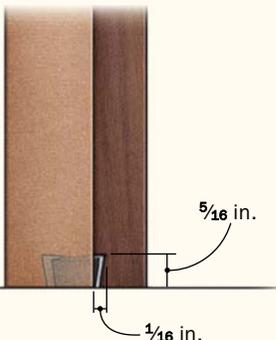


## Rabbet the front and back.

With most of the waste removed at the tablesaw, Rogowski shapes the rabbet at the router table using a dovetail bit.



Cut a half tail on the drawer side. Adjust the fence for a light cut and run the stock vertically past the bit. Leave the bit height unchanged to match the depth of the rabbet.



**Test the fit.** Your half-tail should be shallower than the one on this test cut, so the drawer side stands just proud of the end grain of the front.



**Glue up the drawers.** Use cauls, apply even clamping pressure, and check for square.



**Reinforce the joinery.** To add strength and a decorative touch, Rogowski seats two pins made from maple through the drawer side at each corner.



**Rout the runner grooves.** Make them in two passes, shimming the fence for the first pass. Aim for a tight fit.



**Fit the drawers.** Plane the faces of each drawer side until the drawer slides smoothly into its opening. Then plane the bottom edges of the drawer sides, and the top and bottom edges of the drawer fronts, to adjust the gaps between the drawers.

groove. Cut the rabbets at the router table and then glue up each drawer. I reinforce and decorate each corner joint with maple pins.

To rout the stopped grooves for the drawer runners, use a setup piece milled to the same width as a drawer side. Position the scrap inside the case and mark it with the location of the runner. Make test cuts until you cut a groove that fits the runner with just a touch of up-and-down play. Now you're ready to groove the real drawers. Set the stop on the fence to cut each groove a little short at the front end. Also, leave the bit depth shallow at first and adjust using multiple cuts until the drawer just slides in. Use a chisel to square the stopped ends of the grooves. Handplane the faces of the drawer sides until they slide sweetly on their runners. Then plane the top and bottom edges of the drawer to adjust the gaps

between drawers. Finally, plane the drawer fronts as needed to bring them flush with one another.

### Make and attach the pulls

The final touch is to inlay the pulls. I cut the diamond shape on the tablesaw using an angled stop block and a hold-down stick. I cut all the pulls, sand or plane them to shape, and then scribe the shape on each drawer front. I rout the insets and clean up the corners with a sharp chisel. Glue and clamp the pulls in place. After they've dried, add a small brass pin to each pull. □

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