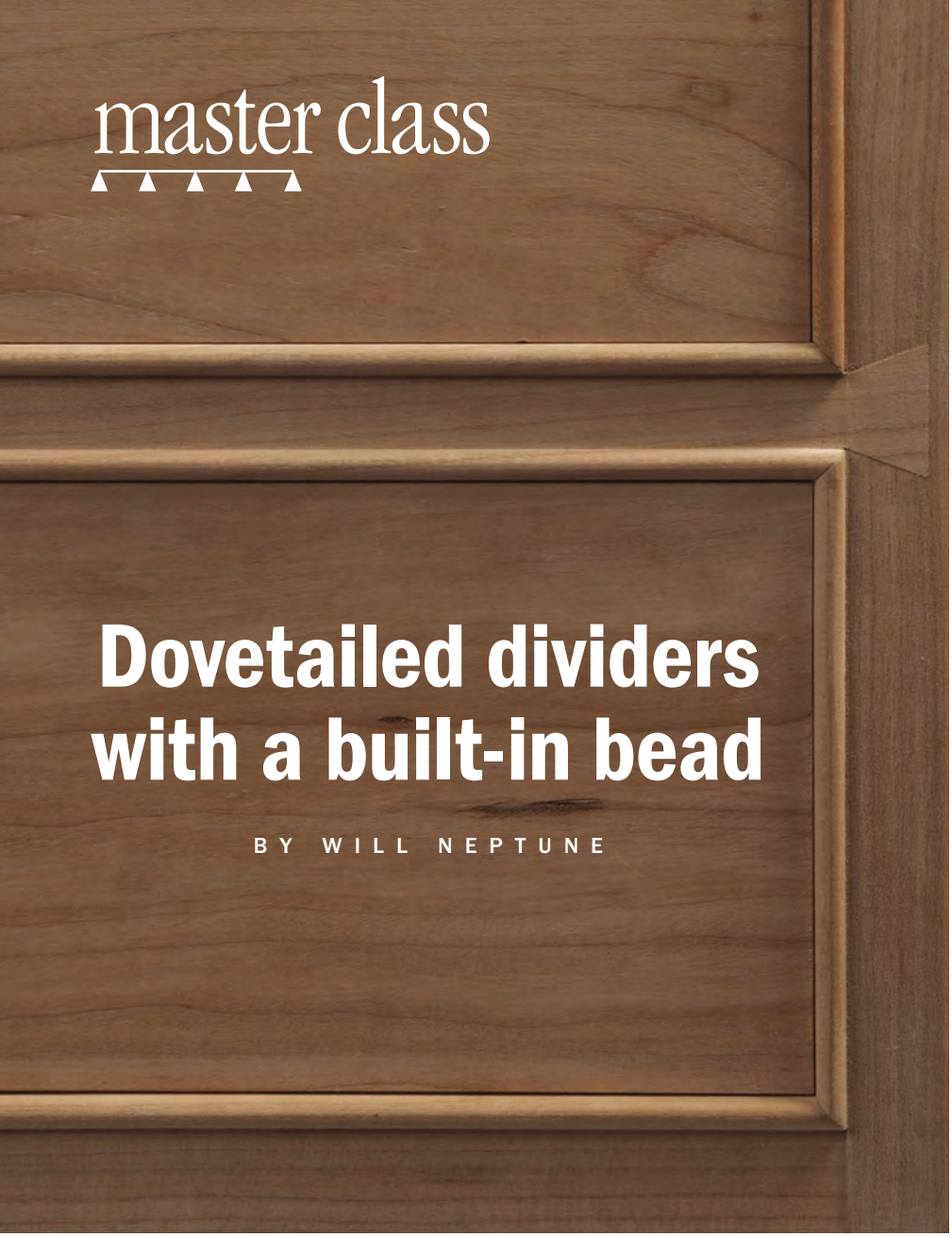


master class

Dovetailed dividers with a built-in bead

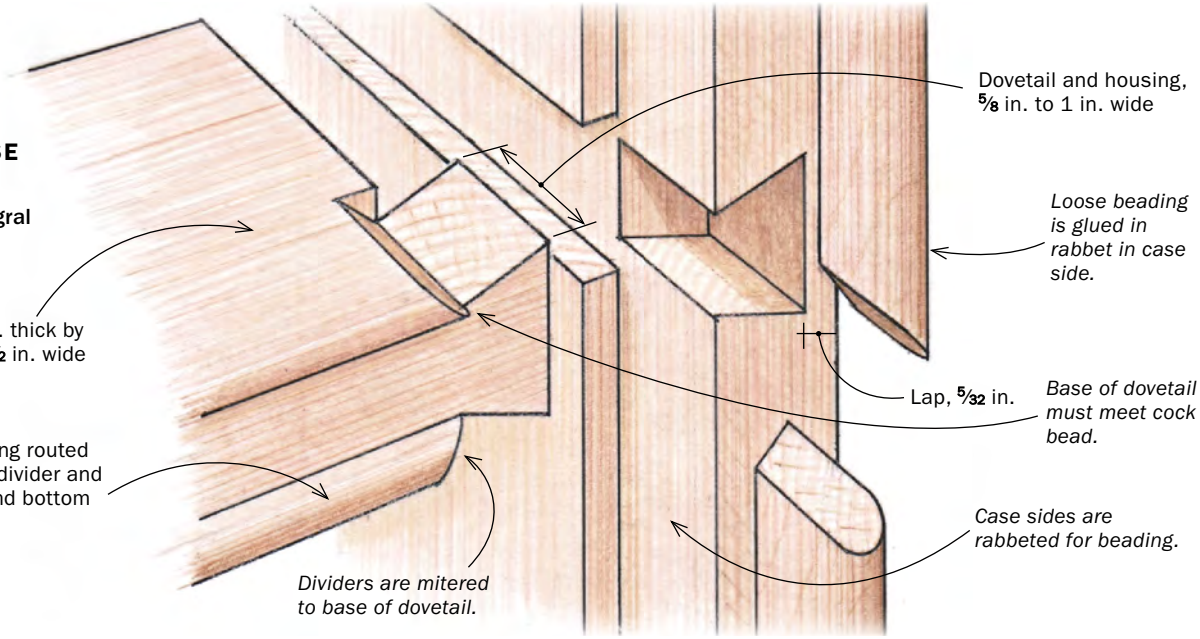
BY WILL NEPTUNE

My article in this issue, "Strong and Stylish Dovetailed Dividers" (pp. 66–73), covers three types of dovetails you can add to the ends of case dividers to keep drawer openings square, and all three options have something crucial in common: The dividers' front edges are flush to the case. But the same techniques are just as viable if you want to add some cock beading—the small, half-round bead proud of the case's surface that frames and highlights an inset drawer. You'll just need a few extra steps and more paring blocks.

The approach I use combines integral beading cut on the dividers (and on the case top and bottom) with loose beading that gets glued to the case sides. By fitting the loose cock beading strips into rabbets—an ingenious 18th-century solution—this apparently complex joint becomes much less difficult and risky, especially when you use 45° paring blocks, as I do.

Start with the cock beading

The first step is to make the bead stock and cut the rabbets in the case sides. (When dovetailing the case, be sure to account for the rabbet to avoid gaps there.) The depth of the rabbet is determined by the thickness of your stock, which is determined by the size of your bead cutter. So after selecting the router bit—I like a 5/32-in. to 3/16-in. bead—



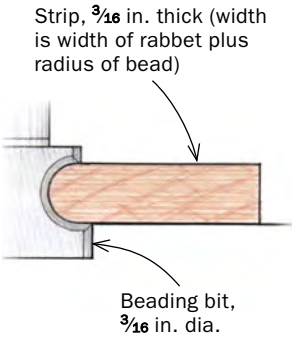
A COCK-BEADED CASE

This traditional method seamlessly combines integral and applied cock beading.

Photo, this page: Michael Pekovich; drawings: Vince Babak

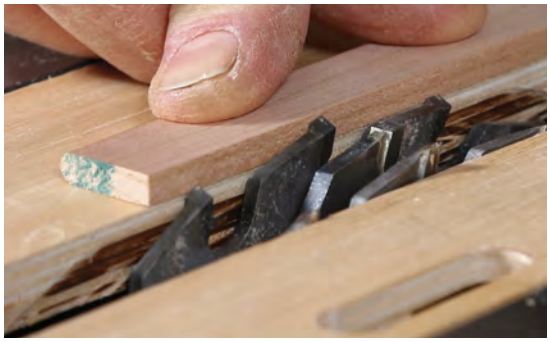
Rout the beads

Rout the profile on the loose bead. *Mill the bead stock so its thickness matches your cutter's radius.*



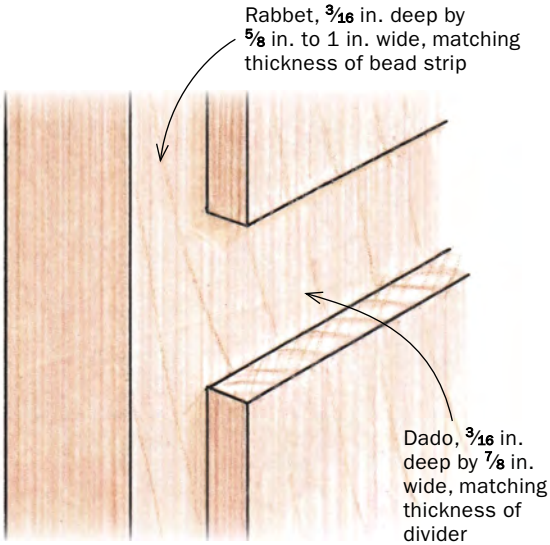
Bead the dividers. *Using the same setting as for the loose bead stock, rout two beads into the front edge of the divider (left). To remove the waste between beads on the divider, reset the fence and use a straight bit (right).*

Rabbet and dado the case sides



Set the blade height to match the bead. *If your dado stack leaves a less-than-perfect surface, lower the blade slightly and clean up the joint with a rabbet and router plane. Just make sure to plane the rabbet and dado to the same depth.*

Dadoes first. *Set the blade width to match the divider's thickness. When cutting the dadoes, register the end of the case side against the rip fence.*

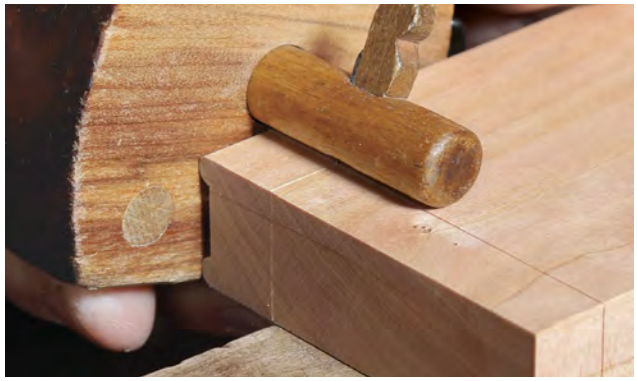


Rabbets second. *Using an L-fence that extends above the blade to set the width of the rabbet (above), Neptune cuts to the same depth as the dado. The bead stock should extend beyond the front edge of the case the width of the bead radius (right).*

Photos, except where noted: Barry NM Dima

Dovetail the dividers

Scribe the baseline. *Use a marking gauge to mark across both faces and the back edge of the divider (right). The marks on each end should align with the bottom of the rabbet and dado (far right).*



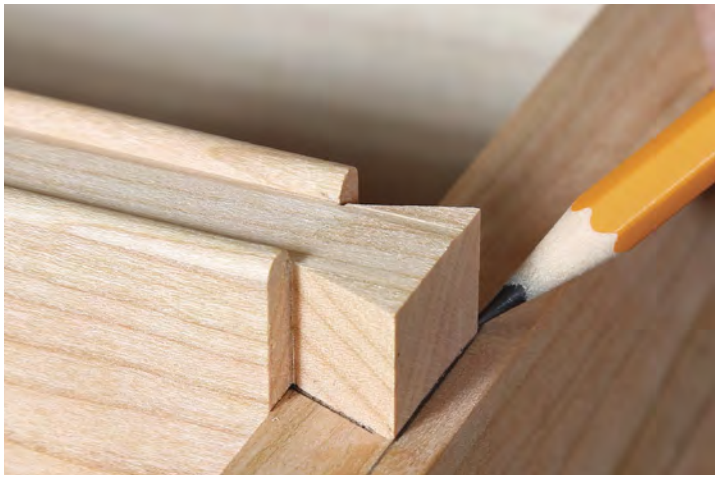
Trim the dovetail to width. *Keep the dovetail between ⅝ in. and 1 in. wide (right). Anything more begins to weaken the case side. Neptune cuts close to his lines at the bandsaw (far right) before paring to them with a sharp chisel.*

Angled block helps when paring dovetails. *The ramped face of the block is the same angle as the desired dovetail. To work correctly, the block's thinner edge needs to match the thickness of the divider stock (right). Clean, controlled cuts with a chisel take care of the bead remnants at the corners of the tail (far right). Be mindful of the board's grain direction here to avoid gouging the stock.*

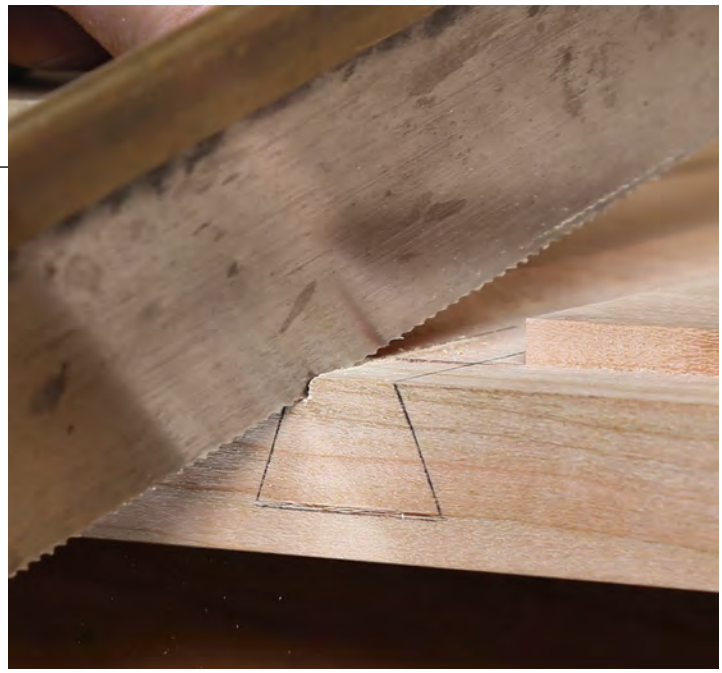
mill the loose cock bead stock. For the best grain and color match, cut wood for these pieces from the same board as the case sides, ripping off a 1-in. strip adjacent to the front of the case side, and resawing it. The resulting long strips will give you several shots at a good miter.

With the strips thicknessed, rout the beads on them, on both edges of the divider, and on the case's top and bottom. Last, use a straight bit to remove the waste left between the beads on the divider and outside the beads on the case top and bottom.

Cut the housing



Transfer the dovetail to the case. *With the divider in the dado, trace around the tail with a sharp pencil. Also, mark its width inside the case.*



Saw the housing's walls. *Saw close to the lines, but not up to them. Neptune still likes to keep the joint neat, but slight oversawing on the inside face is fine because the kerfs will be hidden in the dado.*

Divider sits in a dado and dovetail housing

Only the front of the divider is dovetailed. The rest of its width sits in a dado, just like the stepped dovetail in the article on p. 66. The depth of the rabbets and dadoes equals the thickness of the bead stock. Plane the dividers to fit the dadoes and cut them to length.

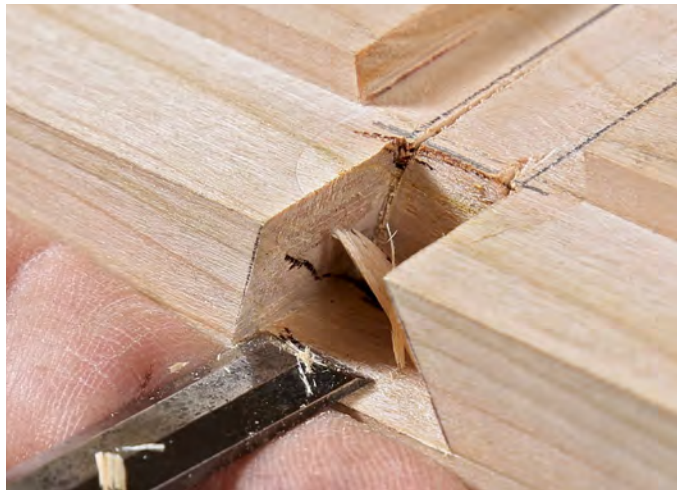
When laying out the dovetails on the dividers, I want their shoulders to hit the bottoms of the rabbets. I use a router plane to clean up the bottoms of the housings, a big time-saver. Mark the width of the tail and cut away the inner waste.

To cut the dovetails, I rely on a paring block beveled to the same angle as the dovetails. There will be little rounded tabs at the corners from the bead. Pare these away.

When the dovetails are done, tap the divider into the case dadoes and trace the tail onto the case. Saw, chop, and pare away the waste until the front of the dovetail lies flush with the front edge of the case side and the beads project from the case.

Miter the cock beading

Miter joints are simple things, but they can be awfully fussy. To help get my cock bead miters tight, I rely on 45° paring blocks, which, with careful layout, make this joint invisible. Start with the miters on the divider. To lay them out, dry-fit the divider in the case and lay a straightedge on the divider and against the inside of the case. Pencil across here. Don't use



Refine the housing with a chisel. *Use a paring chisel to nail the perfect fit. A router plane can help level the bottom of the joint. Just add spare cock bead stock in the rabbet to stabilize the base of the router plane.*

Miter the dividers and case

Pencil the inside edge. *With the divider dry-fitted in the case, push a straightedge against the case interior to locate the inside edge of the miter.*

Pare the miters. *This miter should end at the base of the dovetail. Using a 45° paring block, take light cuts. Score the front edge before mitering it to ensure a clean cut.*

The case top and bottom get miters, too. *Clamp an angled block to the case to guide the chisel. The miter should end at the inside corner of the case.*

Miter the bead strips

Pare the first miter on the end. *This paring block has a rabbet that fits the stock, allowing for easy and consistent registration.*

Mark and cut to length. *Hold the loose cock bead so the tip of the first miter aligns with the tip of the case's miter. Pencil a line. This will be the outside edge of the loose bead's second miter. Cut the piece to length, then use the same rabbeted paring block. Work carefully for a gap-free fit (below).*

a marking knife, as this will crumble the fibers at the miter, creating a gap. Set up a paring block to miter to this line with a sharp chisel. Use the same straightedge technique to lay out the miters for the cock beading on the case top and bottom.

Now turn to the applied cock beading. Miter one end. Then, with the dividers back in the case, mark the final length of each strip. Cut them a bit long so you can sneak up on a tight fit.

When these strips are properly cut and glued into place, the joint disappears. □

Will Neptune is a teacher and woodworker near Boston.