Strong and handsome: Half-blind mitered dovetails

ROUTER JIG SIMPLIFIES A CHALLENGING JOINT

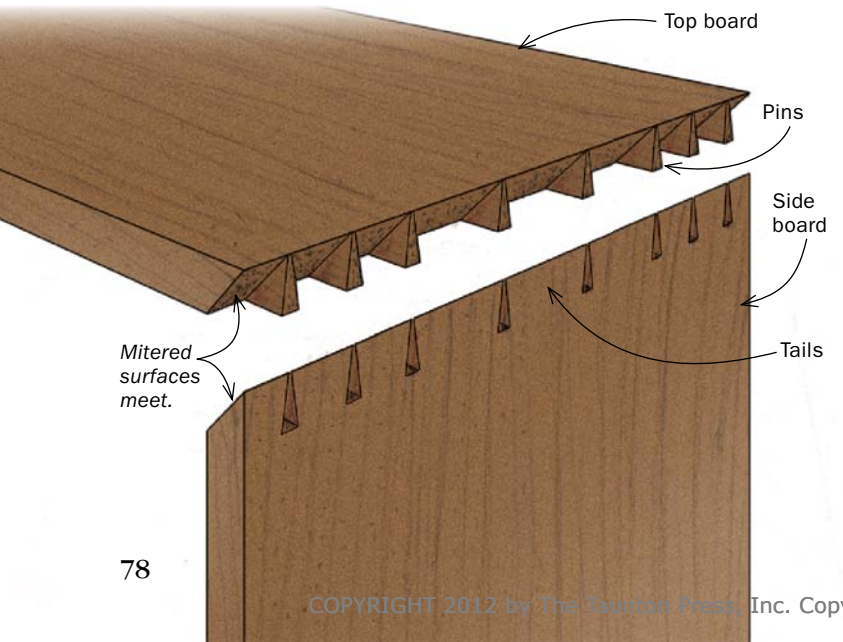
BY MICHAEL FORTUNE

When you use half-blind mitered dovetails to join a case piece or a table, you combine the visual effect of a miter joint—continuous grain wrapping around a corner—with the strength and classic appearance of dovetails. I used the joint on my sideboard (see the back cover), where I wanted a sleek, uninterrupted surface on top, but welcomed the visual punch of through-pins at the ends.

Typically, creating a perfectly true mitered shoulder surface between the pins is the most difficult aspect of making half-blind mitered dovetails. But I built a router jig that makes the process very straightforward. It holds the workpiece at a 45°

A LOOK INSIDE

The tails of a half-blind mitered dovetail are cut as normal tails and mitered afterward. The trick to the joint is mitering between the pins.



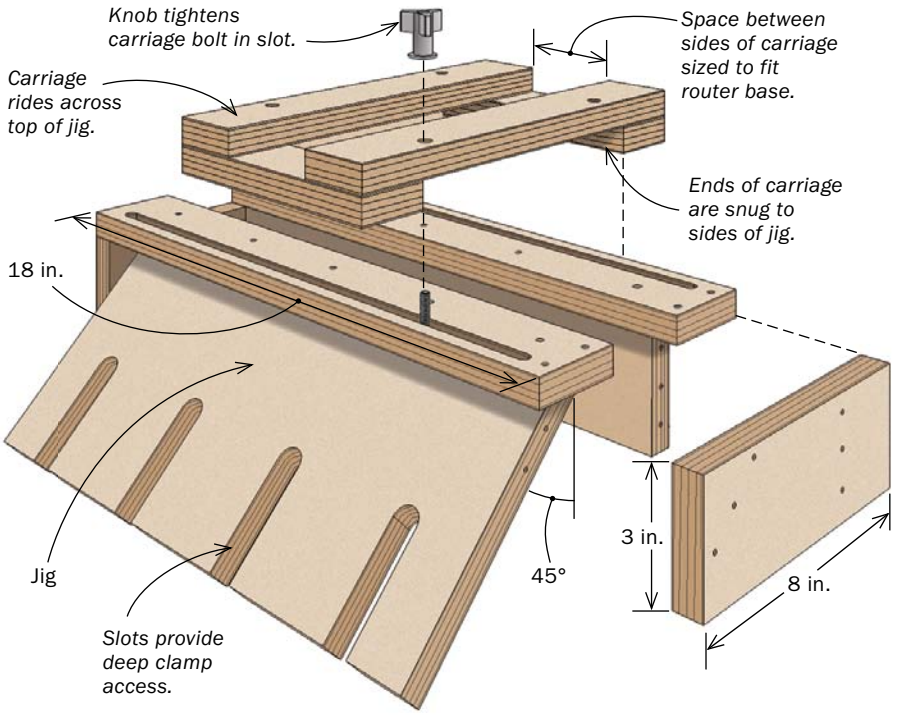
BEGIN WITH THE PINS

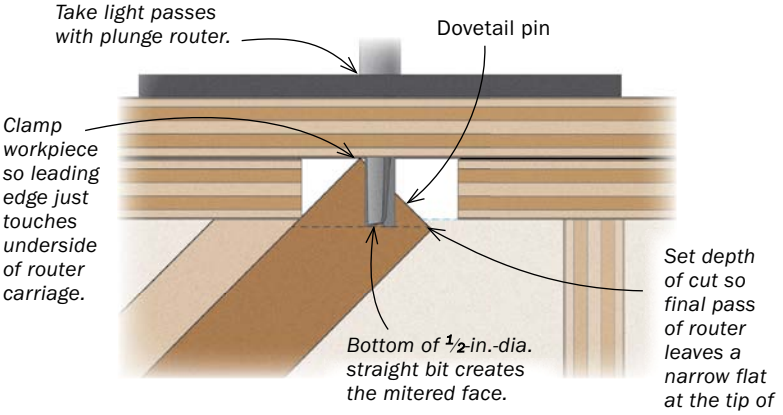
Mark the pins with a knife. *Deep layout lines are essential to guide the routing. Don't lay out the miter so it comes to a complete point—leave a* $\frac{1}{32}$ *in.-wide flat at the tip to allow for planing and sanding after assembly.*

Photos: Jonathan Binzen; drawings: Kelly J. Dunton

SHOPMADE JIG GUIDES THE ROUTING

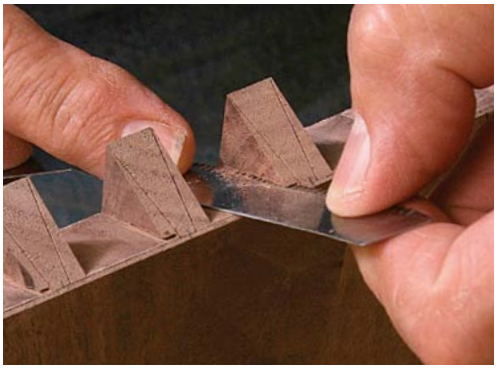
Hog out the waste. *Lock down the carriage for each pass, staying clear of the knife lines. Cut to full depth with a series of light passes. Then creep up on the lines.*





Straight bit leaves the cheeks square. *The router establishes the mitered face of the joint but leaves the pin cheeks vertical—as if they were finger joints. The rest is done by hand.*

FINISH WITH HANDWORK



New dovetail tool: tin snips. *To cut the angled shoulders of the pins, Fortune modifies a $17 flush-cutting trim saw so it can fit between closely set pairs of pins.*

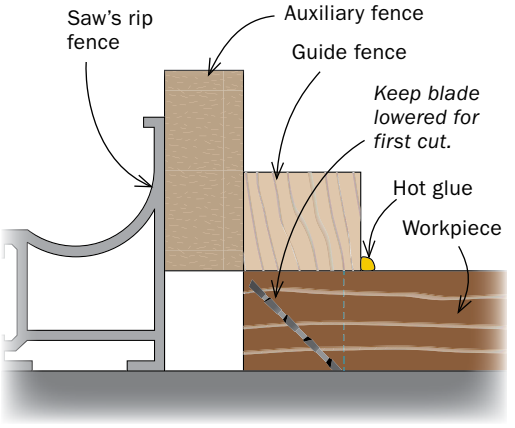
Pare the angled cheeks. *Follow the layout line down to the sawkerf to create the angled cheeks of the pins.*

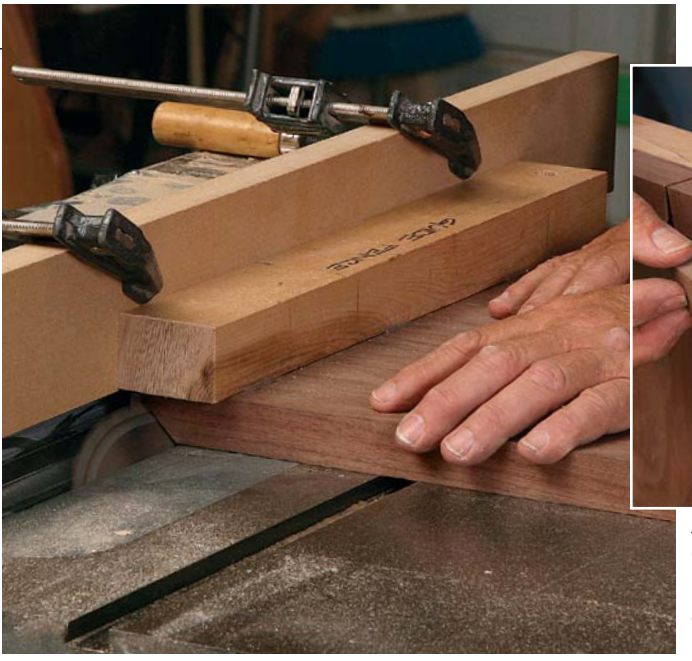
TAILS ARE SIMPLER

Tail boards start out square. *After marking the tails from the pins (right), cut them as you would for ordinary through-dovetails. Fortune saws the cheeks and then pares the shoulders (far right) with the aid of a guide block clamped to the workpiece. Sandpaper keeps the block from shifting.*

TWO CUTS MAKE THE MITER

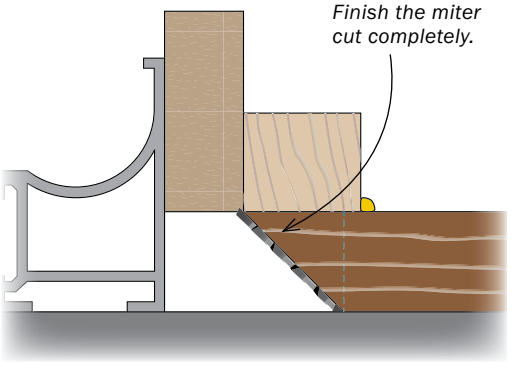
First cut goes nearly through. *A straight piece of scrap hot-glued to the workpiece rides against a raised auxiliary fence to guide the cut. To avoid trapping offcuts beneath the blade, make an initial pass with the blade slightly lowered.*





Snap off the waste. *After the first cut, remove the waste pieces, then raise the blade for the final pass.*

Second pass completes the miter. *With the majority of the waste removed, raise the blade and make the final trim cut.*



WHERE THE MITERS MEET

How to clamp a half-blind miter. *Triangular clamping blocks adhered with quick-setting cyanoacrylate glue provide the purchase for clamps on the tail board. On the pin board, where the joint is blind, a long triangular block glued to a scrap of plywood (with sandpaper adhered below) and clamped in place does the trick.*

angle, and you simply rout with a straight bit between your layout lines. To avoid the look of template-cut dovetails, I cluster the pins at either side of the joint and use wider spacing in the middle.

With the routing completed, the cheeks of the pins are parallel. I angle them by hand. First, using a flush-cutting trim saw with its blade held flat on the mitered surface, I cut the shoulder kerfs. Then I chisel away the waste to finish the cheeks. Mark and cut the tails just as for normal through-dovetails. I cut the cheeks with a bandsaw and finish the shoulders with a chisel. Only after the tails are cut does the tail board get mitered. I cut the miter on the tablesaw. To make the cut safe and accurate, I never run the mitered point against the fence. Instead, I guide the cut with a straightedge hot-glued to the workpiece and an auxiliary fence raised off the tablesaw bed.

Before assembly, I lightly chamfer the edges of the tails on the mitered face so the joint will go together more easily. And I apply glue only to the mitered faces and the pin sockets—the spaces between the tails—not to the pins themselves, which could swell and create a difficult glue-up. □

Michael Fortune is a contributing editor.

Clear the decks. *After assembly, knock off most of each clamping block with a few quick strokes of a chisel. Finish the job with a handplane, being very careful of the mitered edge. Use sandpaper to produce the finished surface.*