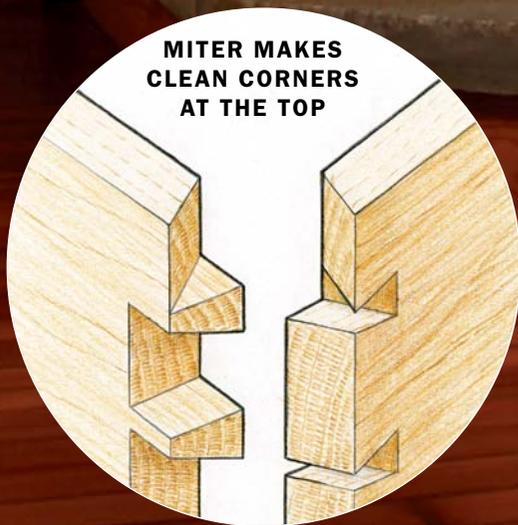


Mitered dovetails

A BIT OF CHISEL WORK ADDS SOPHISTICATION TO AN OLD-TIME JOINT

BY JOHN TETREULT

MITER MAKES
CLEAN CORNERS
AT THE TOP



My town's agricultural fair has a farm museum that includes a woodworking shop. When I was asked to demonstrate hand-tool techniques at the fair, I decided to make this kindling box as I did so. It's a traditional piece that's also useful in the modern home. Simple and sturdy, the box has through-dovetails at the corners; however, to give it a more refined look, I mitered the joint at the top edge. I also mitered a section of the joint so I could hide the through-grooves for the bottom panel.

You might think that mitering a dovetail joint is difficult, but it isn't very different from cutting a normal through-dovetail joint. In fact, it differs only in the two spots where there are miters: at the top edge and where the groove is. Because I cut tails first, nothing about the technique changes until I transfer the tails. Fortunately, it's not complicated.

MITER HIDES
PANEL GROOVES



Make an elegant corner

For all its strength and beauty, there is a little wart at both ends of a dovetail: a butt joint where the tail and pin boards meet. Replace the butt joint with a miter to raise the dovetail's refinement a notch.

MITER THE TAIL BOARD FIRST



An important note about laying out the tails. Use a half tail at the top edges instead of a half pin.



Now transfer the tails. You must do this before you miter the tail board, because afterward the mitered tail lacks a surface for registering the knife.



Saw and pare to the line. After laying out the miter with a pencil and a combination square, cut just proud of the line (left). Then use a wide chisel to finish the job (above). The slope of the miter should run from the shoulder down to the corner.

Lay out the miters after cutting the tails

I start this joint as I would any through-dovetail joint—by laying out and cutting the tails. There is one thing to keep in mind when laying out the tails: Make sure to use a half-tail at the top edge of the board, where it will be mitered.

After cutting the tails, I transfer them to the pin board with a marking knife. It's necessary to do this before you miter the tail board, because after mitering there will no longer be a surface to register the knife against. Now, pull the tail board out of the way and raise up the pin board in the vise so that

THEN THE PIN BOARD

Mark the inside face of the pin board. Aligned with the knife mark on the end grain, this pencil line identifies where to cut a 45° kerf to define the mitered area and the pin next to it.



you can wrap the marks you just made down the outside face of the board to the shoulder line. A pencil and square do that job well.

Next, flip the board around and mark three lines down the inside face of the pin board. These lines indicate where the joint will be mitered: one line for the miter at the top edge, and two for the miter at the groove.

Miters are tuned with a chisel

With that layout done, you can go back to the tail board and miter the top edge. After marking the miter on the top edge of the board, grab a backsaw and rough it out. Then clamp the board to the bench and pare to the line. I do this freehand, keeping an eye on the shoulder line and the bottom corner of the end grain. Pare to those points and you get a perfect 45° miter. If you're uncomfortable paring the miter freehand, clamp a guide block to the board to keep your chisel at the correct angle.

Move down to the groove and chop out most of the waste at the miter, then switch over to paring and trim the miter, again watching the shoulder line and the corner of the end grain.

Next up is the pin board. The first step is to cut 45° kerfs at the three lines you marked on the inside face of the board. Cut down to the shoulder line, but stop short of the outside corner of the end grain, leaving just a bit of waste for paring.



Two cuts clear the waste. After cutting the 45° kerf (left), turn the board on edge and saw down the miter (above).



Clean up the miter. Work to the shoulder line and the bottom edge of the end grain. The miter will be exactly 45°.



Test the joint. Look for high spots that cause gaps. Pare them and retest the joint. Repeat until the joint closes tightly.

Conceal a groove

Mixing a through-dovetail with a panel groove normally requires a stopped groove; otherwise, it will be visible in the assembled joint. However, if you miter the joint over the groove, the groove disappears when the boards come together.



Here's the place for a guide block. It can be tough to pare this miter freehand, because there's no pencil line to help. Clamp the block right at the shoulder line and keep the chisel flat on it.

At the top edge, you can cut down the miter just like you did on the tail board, roughing out the miter as you go. Then, pare it clean. Down at the groove, rough out the miter with a mallet and chisel, then pare it to 45°.

With all of the miters done, test-fit the joint, paring as needed until everything closes up tightly. You're not far from having this kindling box next to your woodstove, where you can enjoy it every time you have a fire. Also, you might want to make a second. As I discovered after making the box, it is perfect for holding magazines and books. Placed next to your favorite chair, you'll always have some good reading nearby when enjoying the fire. □

John Tetreault is Fine Woodworking's deputy art director.

Online Extra

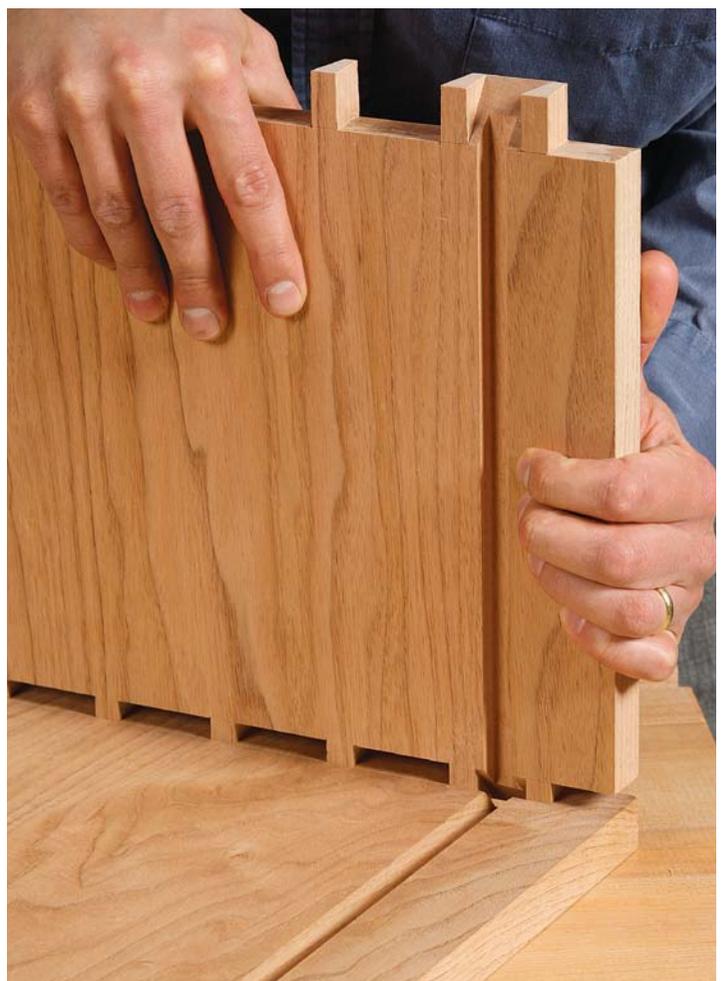
To download a free plan for this box, go to FineWoodworking.com/extras.



Make the cuts. Stop short of the end grain's outside corner, leaving just a bit of waste to pare. This produces a cleaner line on the outside corner when the joint is put together.



Pare between the pins. After removing the bulk of the waste with a chisel and mallet, work carefully to connect the shoulder to the edge of the end grain.



Hidden groove. When assembled, a mitered dovetail will hide the through-grooves for the box's bottom panel.

