

# Speed Up Your Work with Spacer Blocks

Little blocks  
simplify all kinds  
of joinery

BY ALAN TURNER

The old saying “measure twice, cut once” is certainly sound advice, but if you need 10 parts of identical length for a project, your accuracy—and your speed—will go out the door. To make these repeat cuts quickly and accurately, most woodworkers rely on fences and stop blocks. But what if you could change the position of a stop block for other cuts on the same piece, without having to unclamp, remeasure, and reclamp? Enter spacer blocks. Used with fences and stop blocks, spacer blocks provide a quick way to move the workpiece exact distances for cutting, boring, mortising, and other tasks. You can use them to move your work closer to, or farther away from, the blade or bit. So you can lock in a final setting on the fence and then take multiple passes as you remove spacer blocks, rather than readjusting the fence.

I’ve developed lots of ways to use spacers to speed up my machine setups. Once you try a few, you’ll find even more great uses for these righteous rectangles.

*Alan Turner teaches at Philadelphia Furniture Workshop.*

Photos: staff; drawings: Christopher Mills

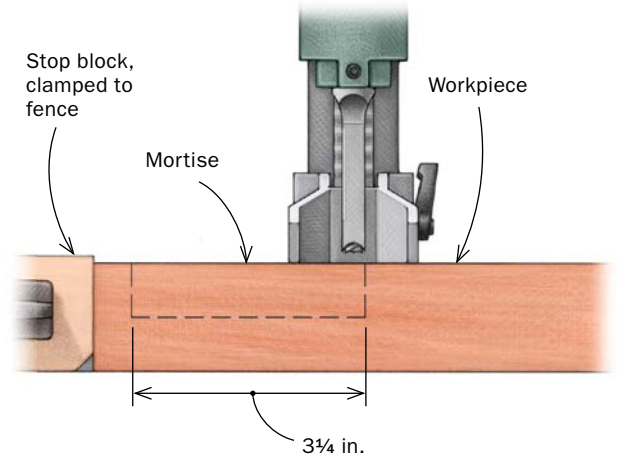


## ONE-STOP ACCURACY FOR MORTISES

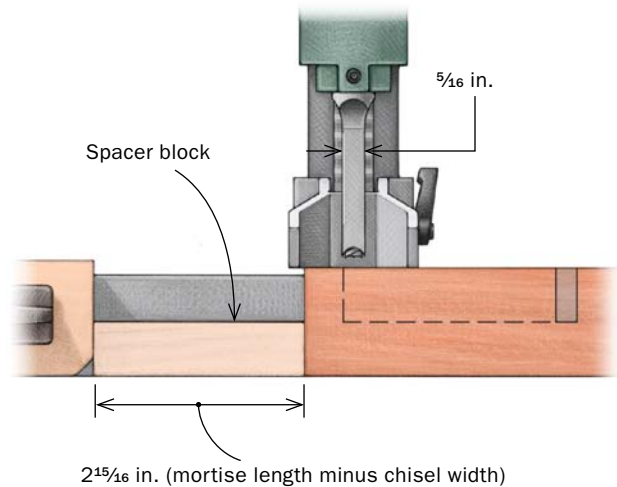


**M**ost woodworkers who own a hollow-chisel mortiser will lay out every mortise in pencil and cut to the line. This is not only tedious but also increases the chances for inaccuracy, especially at the ends of the mortise. However, it is easy to cut identical mortises using a spacer block and a stop block—and you'll only have to lay out the joint once. Clamp a stop block to the fence to position the chisel at one end of the mortise. Then cut a spacer block equal to the full length of the mortise, less the size of the mortise chisel. Now you can quickly make the end holes and then nibble out the middle. You will not have to cut to a pencil line again, and all of your mortises will be identical in length and position.

**Stop block sets the first end.** Set the stop block to cut the bottom of the mortise.



**Spacer lines up the other end.** Next, insert a spacer block that is the length of the mortise minus the width of the chisel.



**Quick and easy.** After you've cut the top of the mortise (right), remove the spacer block and nibble out the rest freehand. Make a series of cuts leaving small webs of wood between them (the chisel cuts straighter that way), and then clean out the webs (far right).





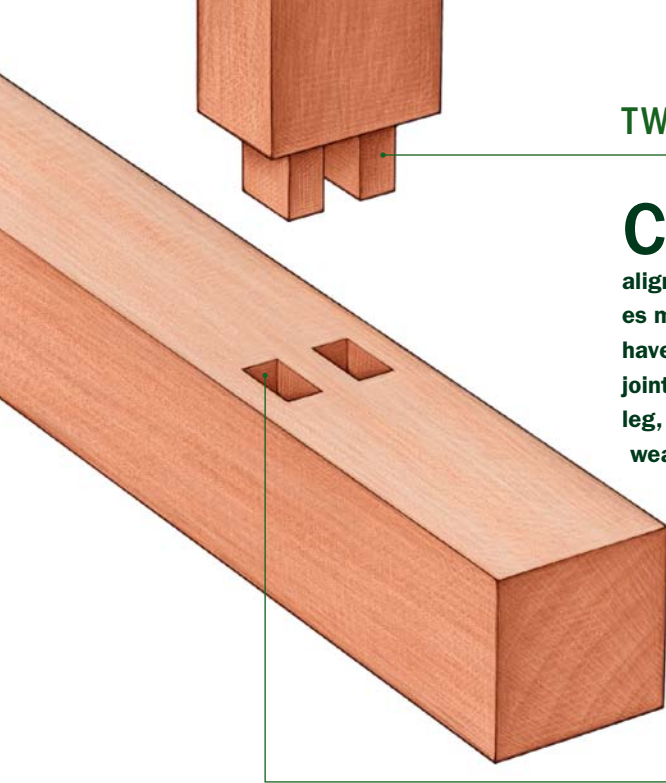
## TWIN MORTISE-AND-TENONS THAT FIT PERFECTLY

Cutting a twin mortise-and-tenon can be a tricky affair. The joint has to be aligned in different directions, the mortises must be spaced evenly, and the tenons have to fit them perfectly. When using this joint to join a drawer rail to a case side or leg, any slop in the fit will translate to a weak joint or a crooked rail. Laying out the mortises in pencil, as most woodworkers would, invites error. But

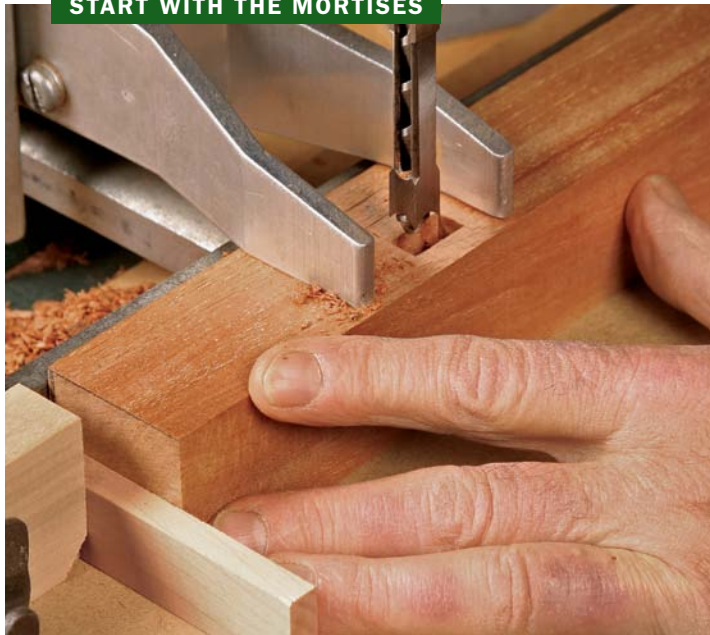
a couple of spacers add speed, accuracy, and repeatability.

Cut the mortises before the tenons. As in the earlier mortising example, set a stop block to cut one end of the mortises, and then make a spacer that is equal to length of the mortise, minus the size of the square chisel.

That takes care of the length of the mortises; now space them out. Set the



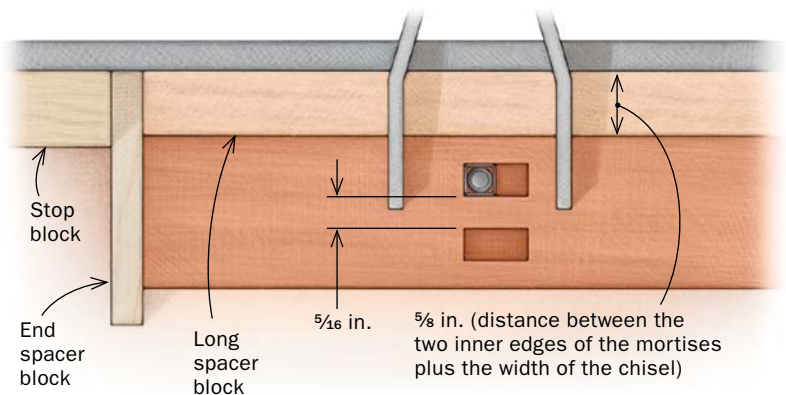
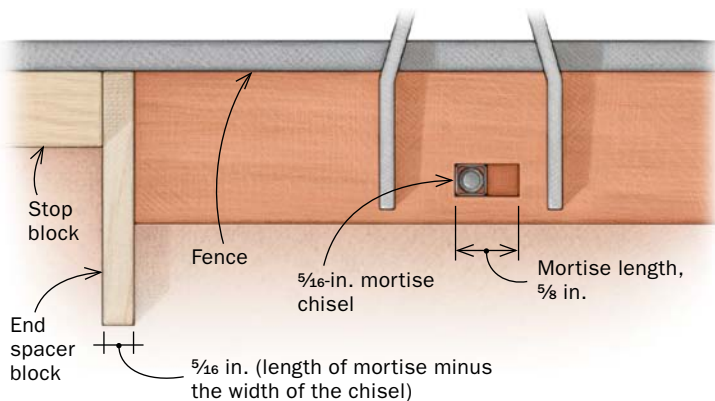
### START WITH THE MORTISES



**First mortise gets a single spacer.** As before, use a spacer and a stop block to determine the length of this first mortise.

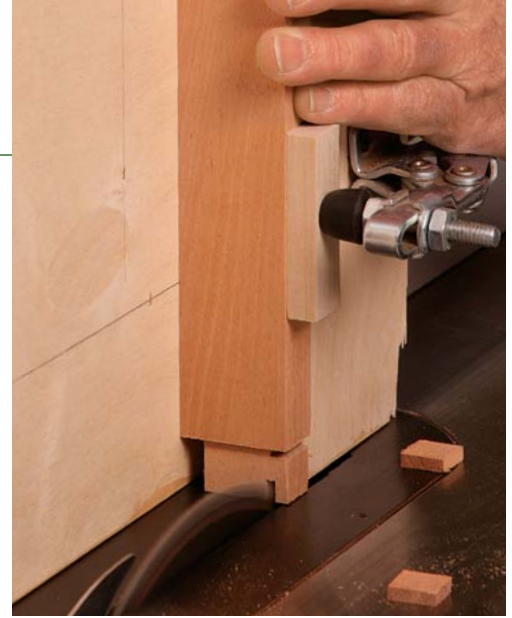


**Add a second spacer and repeat.** This spacer sets the distance between the mortises and is cut long to fully support the workpiece. Note that if the mortises are not precisely centered on the leg, you'll have to reverse the setup for the opposite leg.





**THEN THE TENONS**



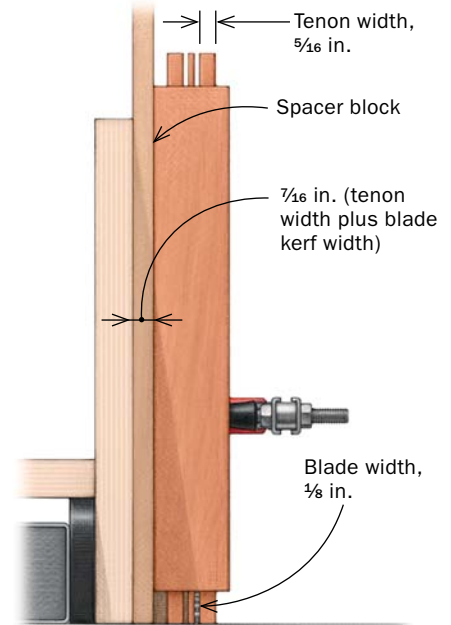
**Shoulders and ends.** Define the shoulders with the miter gauge (left). Now you can load the workpiece in your tenoning jig and make the cuts that will form the ends of these twin tenons (right), checking the fit by inserting the workpiece partway into one of the mortises.

**Cut the outer cheeks.** Use a single setting on your jig and just flip the workpiece. Tip: You can keep the toggle clamp at the same setting throughout if you use a caul the width of your future spacer (see below).

fence to cut the mortise farthest from it, and rip a second, long spacer equal to the distance between the two inner edges of the mortises plus the width of the chisel. Cut the outer mortise, and insert the long spacer against the fence to perfectly position the leg for the second mortise.

With the double mortises complete, another spacer setup ensures perfect-fitting double tenons. After cutting the shoulders at the tablesaw using the miter gauge, you normally might set your tenoning jig to cut the outer cheeks of the tenons, flipping the workpiece over in the process, and then readjusting the fence to cut the two internal cheeks. But the additional fence adjustment adds the risk of making your tenons too thick or too thin. Instead, you can simply set the jig once to cut the outside and inside cheeks.

After making the cuts that form the ends of the tenons, set your tenoning jig to cut the outside cheeks the normal way, and check to be sure they line up with the outsides of the double mortise. Then, without readjusting the jig, insert a spacer equal to the thickness of the tenon plus the blade's kerf, and cut the inner cheeks of the tenons, again just flipping the work over between cuts. You should end up with perfectly mating mortises and tenons.



**Spacer block sets up the inside cuts.** The blade will next cut the inside cheeks, so the spacer should be the width of the tenon plus the blade kerf width (left). As with the tenon cheeks, you just flip the workpiece to make the second cut (right).

## A COMPLETE BRIDLE JOINT WITH SPACERS

**F**or bridle joints, many woodworkers use a stacked dado head and careful layout to make a series of cuts in the rail, forming a tenon of sorts, and then moving to the bandsaw to cut the matching slot in the post. Getting a perfect fit this way is not only difficult, but tedious.

Again, a spacer block is the answer and by now, you probably can guess at the process. For the rail dados, set a single stop block just once so that the cut farthest from the end is defined by that distance. Then use a spacer block as wide as the dado you want (here the width of the post), minus the width of the stacked dado head. Make the inside cut, insert the

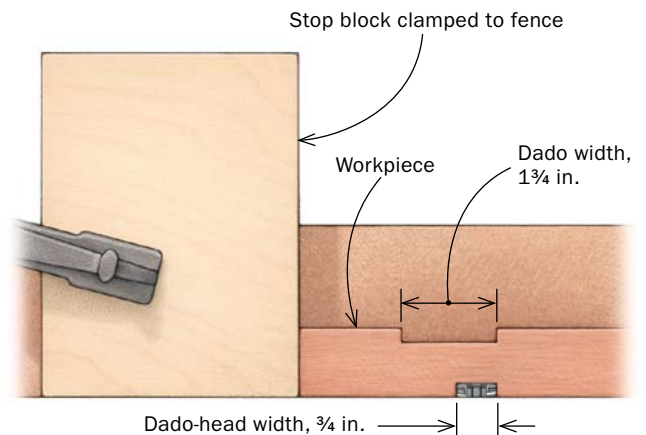
spacer and cut the outside, and nibble the remaining middle waste, if any. Flip the workpiece over and do the same on the other side to form a centered tenon.

Spacer blocks simplify the deep slot in the post, too. First, make a test cut on the bandsaw and measure the width of the kerf. Set the bandsaw fence to cut one side of the slot, and then make a spacer the width of the tenon you already cut, minus the kerf thickness. Place the spacer between the work and the bandsaw fence, and make the second cut. With just two quick cuts, you have outlined a slot that will fit the tenon perfectly. All that's left is removing the waste.

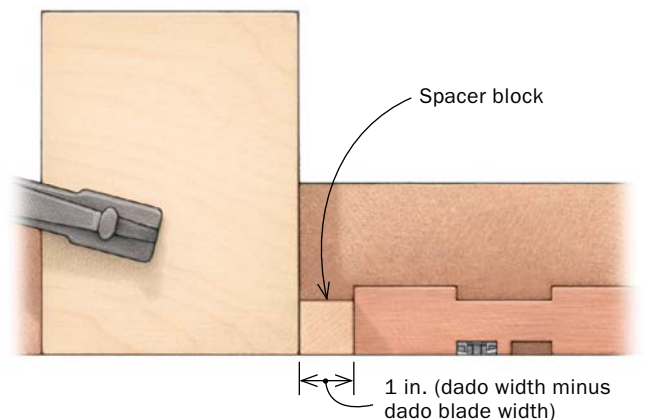
### START WITH THE TENON



**Stop block for one side.** Cutting against the stop block defines the first wall of the two opposite dados.



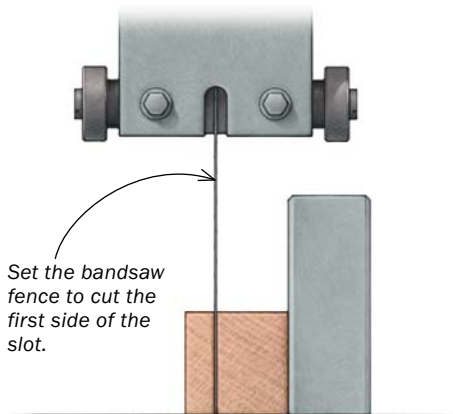
**Spacer block for the other side.** After you've made the first cuts on both sides of the rail, add the spacer to make the cuts at the other end of the dados. Then just nibble away the wood between them.





## MAKE A MATCHING SLOT

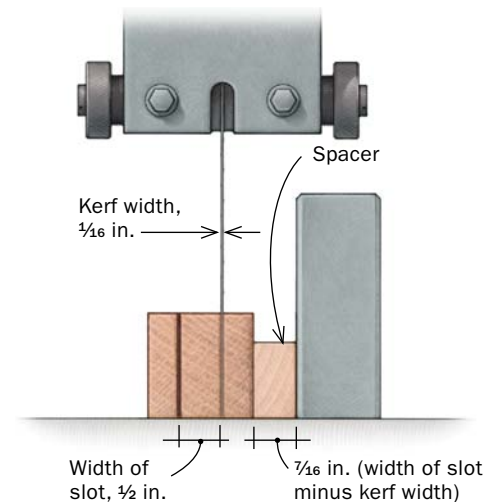
**Cut the first side.** At the bandsaw, the stop block sets the depth. The fence setting determines the location of the slot.



**Measure the kerf carefully.** Measure the kerf width of your bandsaw blade and use that measurement to calculate the spacer width.



**Add the spacer for the second cut.** Sized correctly, it guarantees a perfect fit between tenon and slot.



**Keep going until you hit the block.** Make sure your stop block is thicker than your spacer, or it won't stop the workpiece during this second cut.