

Woodsmith **PLANS**

# THROUGH MORTISE



# Heavy-Duty Through Mortise

Making a number of small mortises quickly and easily is a great technique for the table saw. Using a slightly different method, you can create a through mortise in a leg to accept the tenon of a stretcher or rail, as in the photo at right.

In the past, I'd drill or chop out the mortise. But there are a few downsides to doing that. It takes a lot of time. And keeping the sides of the mortise perfectly flat and square can be a challenge. Using a table saw solves all these problems.

**START WITH TWO HALVES.** To create the mortise, you make the leg out of two separate pieces (drawing below). Then, instead of making



**Through Tenons.**  
A few cuts on the table saw are all that it takes to create an accurately sized mortise that will fit a through tenon.

the mortise after the leg is glued up, you cut dadoes on the inside face of both halves of the leg first (detail 'a'). This way, you end up with perfectly sized mortises once the two parts are glued together. And by carefully selecting the two parts of the leg, the joint line is almost invisible.

**MAKING THE CUTS.** When I make a leg

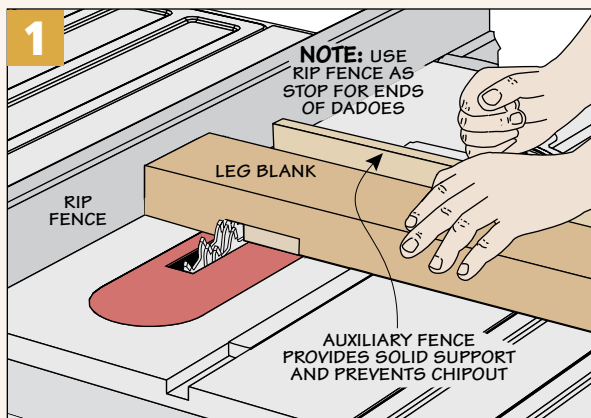
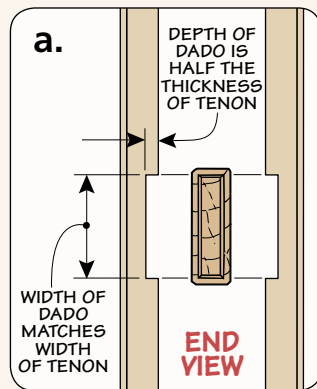
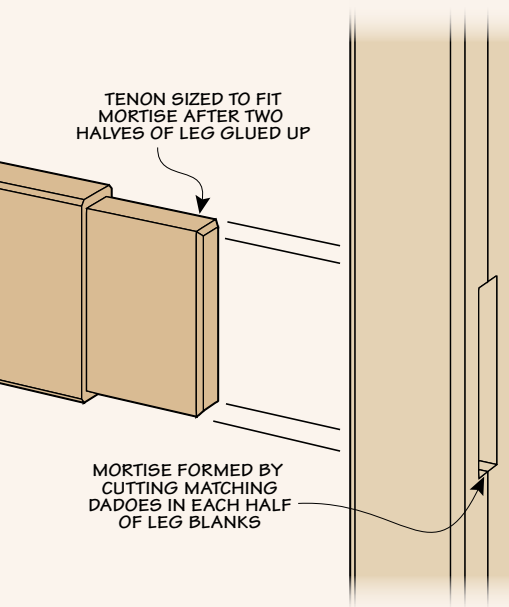
this way, I start by cutting two blanks to exact length and thickness, but I make them extra wide. This way, I can plane the legs down to finished width after they're glued up.

Once the blanks are sized, you can now cut the dadoes

that will form the mortises, as shown in Figure 1 below. I use the rip fence as a stop as I work to ensure that each pair of dadoes lines up once the blanks are glued together. And be sure to make all the cuts at one rip fence setting before moving on.

**KEEPING THE PARTS ALIGNED.** When it comes to gluing up the two halves of the leg, the trick is keeping the dadoes aligned as you clamp the pieces together. To do this, I use a simple "key," like the one you see in the photo below.

All you need to do is cut some scrap blocks (I like to use MDF) to fit snugly in the mortises in the leg. Once the glue dries, all that's left to do is plane each leg down to its final width. The end result is a perfect through mortise ready to accept a tenon.



**Perfect Alignment.** A waxed MDF block acts as a "key" to keep the two halves of the leg aligned during the glueup. Chamfer the edges of the key to make removing it easier once the glue dries.