Woodsmith PLANS

LOCKING RABBET JOINTS

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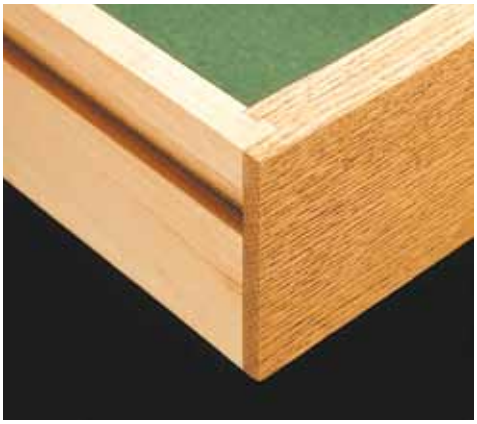
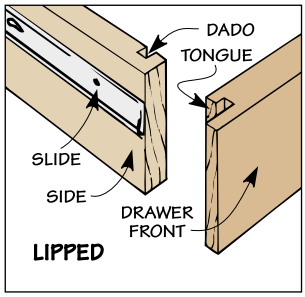
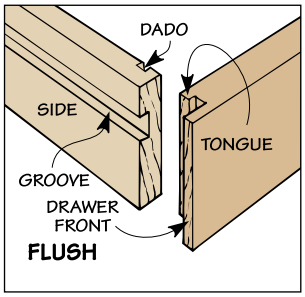
Lipped Joint. *To hide the metal slides, this locking rabbet has a lip on the drawer front that extends past the sides.*



Flush Joint. *Grooves in the sides of the drawer recess the guides that it runs on. So the front is flush with the sides.*

One thing I kept in mind when designing the drawers for the shop cart was that I wanted to use a strong, simple joint. I ended up going with locking rabbet joints.



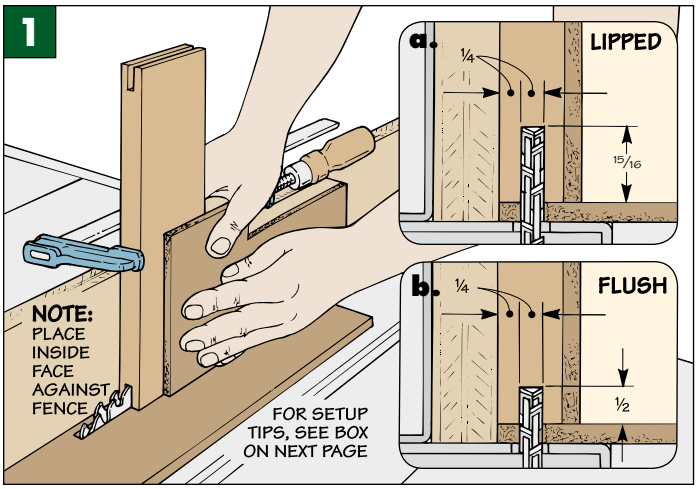


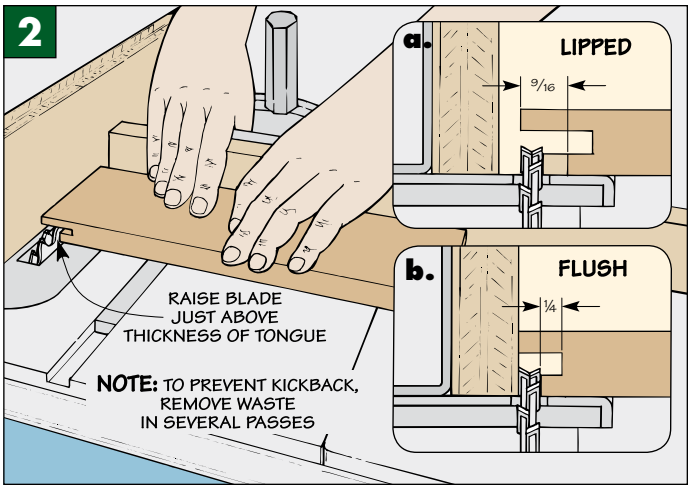
Depending on the guide system that supports a drawer, you have a choice between two different types of locking rabbet joints — lipped and flush.

LIPPED. The drawers on the shop cart use a lipped joint (left photo and illustration above). That's because they ride on full-extension slides that mount on the surface of the drawer sides and the cabinet. To cover the slides, there's a lip on the drawer front that sticks out past each side.

FLUSH. If the slides were recessed into the sides of the cabinet and drawers, you wouldn't have to hide them. In that case, the drawer front would be flush with the sides (right photo and illustration above).

TONGUE & DADO. Regardless of the type of locking rabbet, the idea is the same. There's a tongue on the drawer front that fits in a dado in the





side, as shown in the drawings on the previous page. Note: Both parts are cut with a ¼" dado blade.

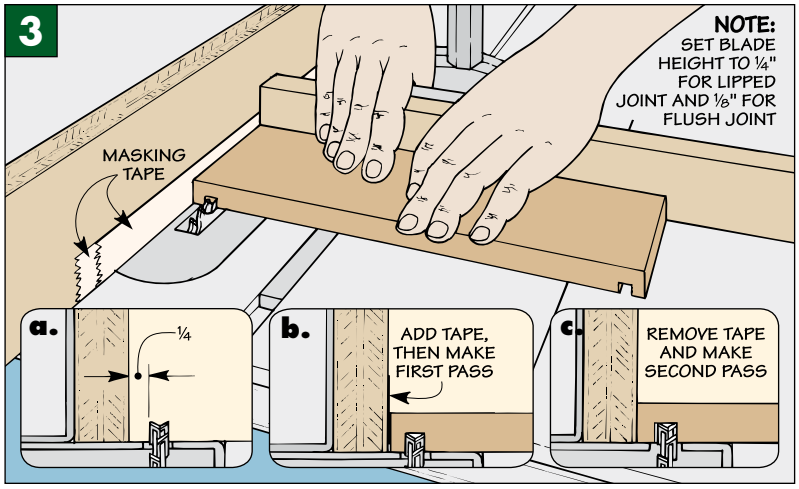
TONGUE. To form the tongue, the first step is to cut a groove in the end of the drawer front, as in Figure 1. This requires standing the piece on end. To do this safely, I use the simple setup shown in the box below.

When cutting the groove, the goal is to end up with a ¼"-thick tongue. This way, you won't have to adjust the width of the blade when you cut the dado later. So start by positioning the fence ¼" from the inside of the blade.

Then raise the blade to the correct height (for either a lipped or flush joint) and cut the groove, as you see in Figures 1a and 1b. Note: Place the inside of the drawer front against the fence.

The second part of making the tongue is to cut it to length, as illustrated in Figure 2. This is just a matter of using the fence as a stop to establish the final length of the tongue (Figures 2a and 2b).

When cutting the tongue, there's one thing to be aware of. If you remove the waste in a single pass, the cutoff can get pinched between the blade and the fence and come flying back. To prevent this, I make several passes until the workpiece "bottoms out" against the fence.



DADO. When you're done with the tongue, the next step is to cut the dado in the side of the drawer.

You're after two things here. The tongue on the drawer front needs to fit the dado in the side. And the narrow stub (the part that's left on the end after you cut the dado) must slip into the groove in the drawer front.

In theory, this should be easy. Just adjust the blade height and set the fence. But in practice, I've found this can produce such a tight fit that the stub breaks off. To prevent this, I use a simple, two-pass method. The goal is to make the dado a hair wider and the stub just a bit narrower.

Start by setting the fence and blade height "by the numbers" (Figures 3 and 3a). But don't cut the dado just yet. Instead, add a few strips of masking tape to the fence, as in Figure 3. (You may need to experiment with the number of layers).

This nudges the workpiece away from the fence when you make the first pass (Figure 3b). Removing the tape and making a second pass produces a perfect fit, as in Figure 3c.

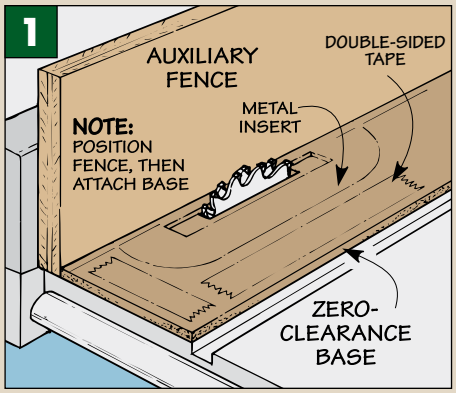
SETUP & SAFETY TIPS

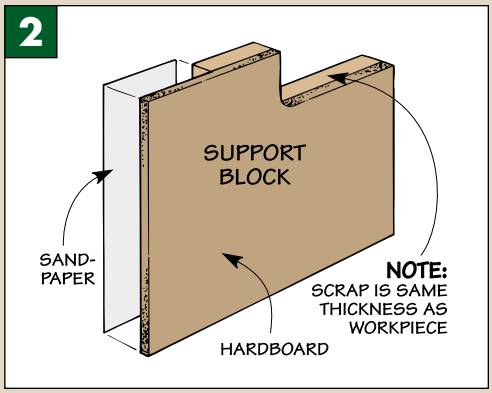
Standing a workpiece on end to make a cut on the table saw can be a challenge.

FENCE. To provide extra support for long workpieces, I attach a tall auxiliary fence made out of plywood to the rip fence (Figure 1).

BASE. Also, a zero-clearance base keeps the workpiece from dropping into the opening between the blade and the insert. Simply stick a piece of hardboard to the saw table with double-sided tape, and raise the blade through it.

SUPPORT BLOCK. Finally, to hold the workpiece tight against the fence (and avoid tipping it forward), I clamp it to a support block, as illustrated in Figure 2 above and Figure 1 on page 1.





It's just a scrap with a piece of hardboard that extends out in front so you can apply pressure to the side of the workpiece. Cutting a notch in the block creates a clamping surface. And gluing on a strip of sandpaper keeps the workpiece from slipping.