



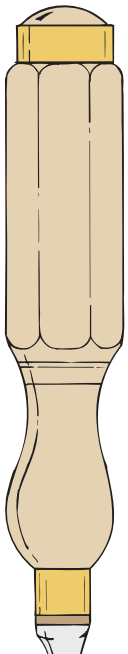
Woodsmith **PLANS**

# MAGNETIC CHISEL RACK



# MAGNETIC CHISEL RACK

**END VIEW  
(CROSS SECTION)**



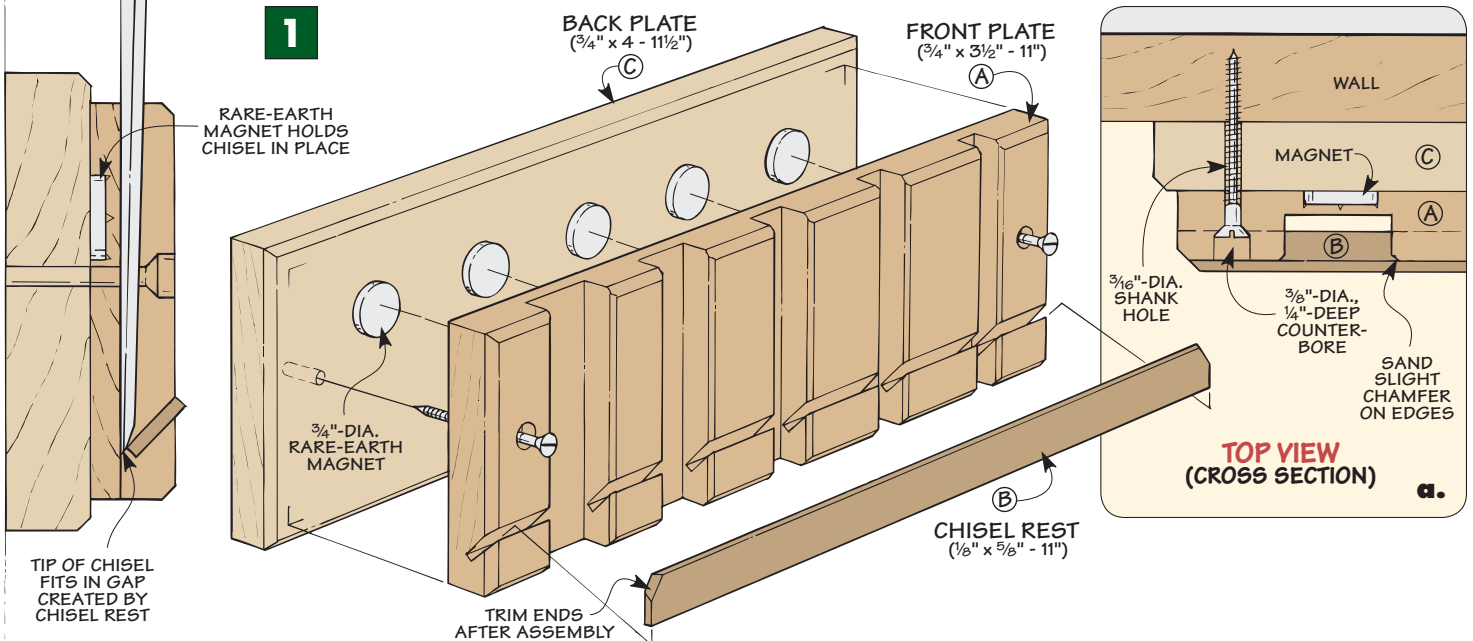
I've never been very happy with the chisel rack that has hung in my shop for years. The chisels simply dangle loosely in the rack, occasionally knocking against one another. And nothing protects the edges of the blades from damage.

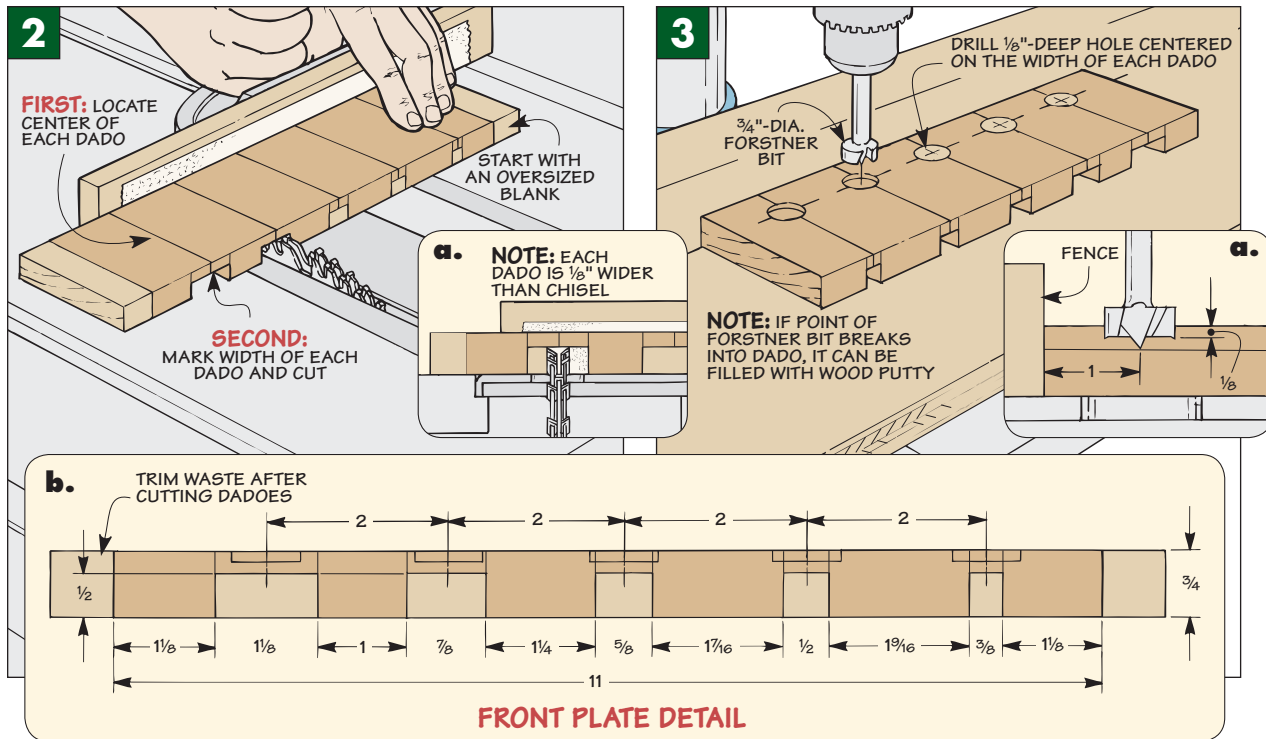
This chisel rack is remarkably different. For one thing, the chisels all stand straight up, like a row of soldiers at attention. And the edges of the chisels are protected by a shallow, V-shaped trough, where they are out of harm's way.

But the thing that's really amazing about this chisel rack is what you don't see. When you look closely at the rack, there doesn't appear to be anything holding the chisels up. The "secret" is magnets. Behind each chisel, sandwiched between the two plates of the rack, is a wafer-like, rare-earth magnet. These powerful magnets are strong enough to hold even the largest chisel in place. And yet, when you want to remove a chisel from the rack, all you have to do is pull it straight out.



**1**





There are only three pieces to this chisel rack. In fact, it's a great project to use up some of those scrap wood pieces that you have stashed away.

I started by making the front plate. The final length of this piece will depend on the number and widths of your chisels, as shown in Figure 2b. But I started with an extra-long blank. Then I cut the dados that will hold the chisels (Figure 2). Each dado is sized so it's  $\frac{1}{8}$ " wider than the chisel it will hold. And the dados are positioned two inches on center so that all the handles will be evenly spaced when the chisels are placed in the rack.

After cutting the dados, I sanded a small chamfer on the inside edges of each opening, just like you see in Figures 1 and 1a. Then the ends of the front plate can be trimmed off  $1\frac{1}{8}$ " from the edge of the nearest dado, as shown in Figure 2b.

The rare-earth magnets will be housed in shallow counterbores on the back of the front plate. These recesses are created with a Forstner bit on the drill press. Just drill a shallow hole centered over the back of each dado, as you see in Figure 3. The diameter and depth of the holes should match the diameter and thickness of the magnets.

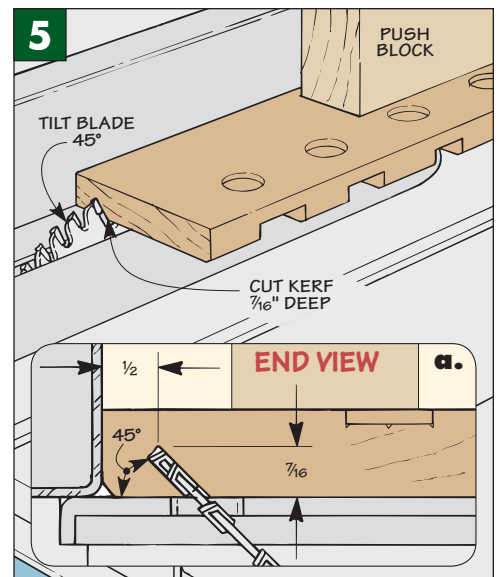
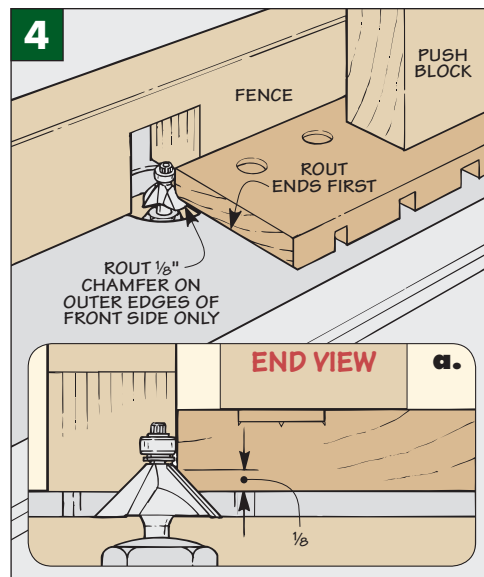
With all the holes drilled, the next step is to chamfer the edges of the front plate on a router table. You can see this being done in Figures 4 and 4a. Because of the dados cut in the plate, you can't rely on the bearing alone to guide the bit when making the chamfer. So you'll want to use a fence on your router table as well.

**CHISEL REST.** Although the magnets will hold the chisels in the rack, I added a narrow strip of wood to the front plate to serve as a stop or rest for the chisels. When you place a chisel in the rack, the rest contacts

the bevel of the chisel and pins it to the front plate of the rack.

The chisel rest is just a narrow strip of stock. It fits into an angled saw kerf cut into the front plate. To make this kerf, simply tilt your saw blade  $45^\circ$  (Figure 5).

After making the kerf, the rest can be glued in place. Before you move on to making the back plate, however, there is just one more detail to take care of. Using a sharp chisel, trim the ends of the rest flush with the chamfer on the ends of the front plate, refer to Figure 1.





## Back & Assembly

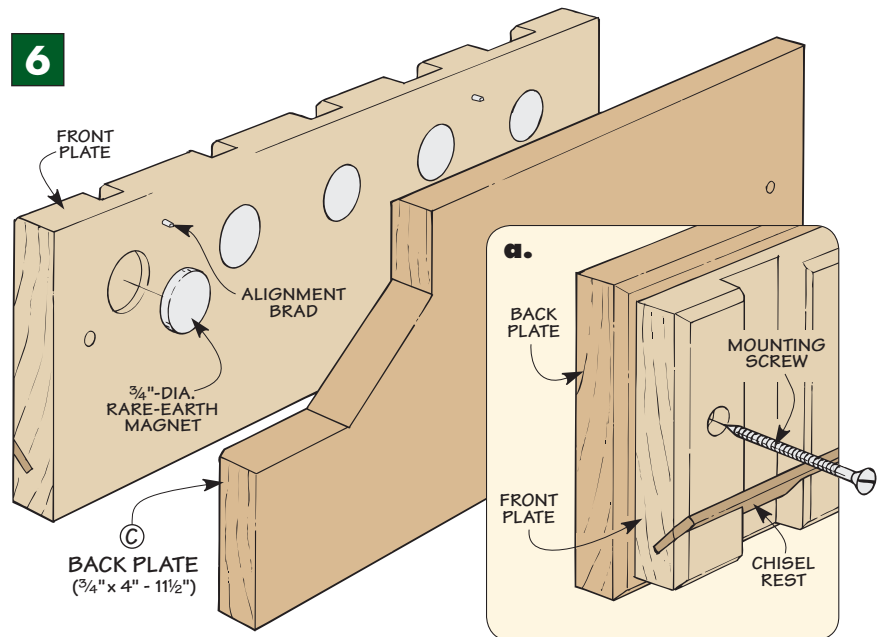
At this point, you have the most difficult part of making the chisel rack out of the way. All that's left now is to add a back and the magnets, and then hang the rack up.

The back plate is made from a piece of  $\frac{3}{4}$ "-thick stock, as shown in Figure 6. (I used a different species of wood to contrast with the front plate.) After cutting the back plate to size, a chamfer is routed all around the front. This chamfer is the same size as the one you routed earlier on the front plate ( $\frac{1}{8}$ ").

**ASSEMBLY.** Before gluing the two plates together, insert a rare-earth magnet into each recess on the back of the front plate. The magnets will be trapped between the two plates, so you don't have to worry about gluing them in place.

Gluing the two plates together can be tricky. If you try to clamp them together, the glue will make them slip around like they're on ice. So before I applied the glue,

6



▲ **Rare-Earth Magnets.** Roughly the size of a nickel, these rare-earth magnets have incredible holding power. You can look for them at your local hardware store or order them from [LeeValley.com](http://LeeValley.com).

I drove some brads into the front plate, leaving about  $\frac{1}{8}$ " of each brad sticking out. Then I snipped off the heads of the brads (Figure 6). When you clamp the plates together, the brads will bite into the back plate and prevent the two pieces from slipping.

**MOUNTING THE RACK.** The easiest way to mount the chisel rack is to screw it directly to the wall. Just drill a mounting hole at each end, as shown in Figures 1a and 6a. Once the rack is attached to the wall, you can set your chisels in place.

## NON-MAGNETIC CHISEL RACK

You don't have to buy magnets to be able to build this chisel rack. Here's an alternate version that is identical to the rack above, except this one uses a retaining strip instead of magnets to hold the chisels in place, as you can see in the photo at right.

All you have to do is cut a  $\frac{1}{4}$ " x  $\frac{1}{8}$ " groove across the front plate, as shown below. Then glue a retaining strip into the groove. Use a chisel to trim the ends of the retaining strip flush with the chamfer on the ends of the front plate.

