

## Wrap IT UP

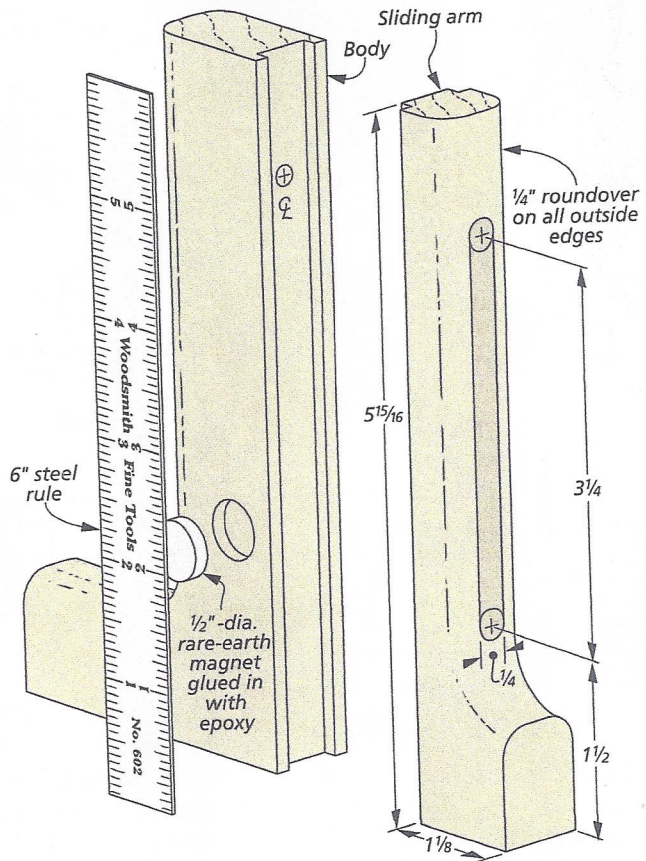
There's a little woodworking left to do on the setup gauge parts. The first step is to rout a roundover on the outside edges. You can see this in the right drawing and detailed in the box below.

While you're routing, take care to enter and exit the cut to avoid burning the ends or rounding the sides and ends that you'd like to leave crisp.

**ROUT A SLOT.** In order to lock the arm at a given setting, a slot is cut in the arm to accept a threaded stud and a knurled nut. Like the tongue and groove, I handled this at the router table — with a quick side trip to the drill press.

The fence and table on the drill press allow you to drill accurate end holes for the slot. The dimensions are in the right drawing.

Those holes come in handy for setting up the router table, too. Insert the bit into one of the holes and bring up the router table fence so it's against the arm. (Not too tight, here.) Then remove the arm and lower the router bit for a  $\frac{1}{4}$ "-deep first pass.

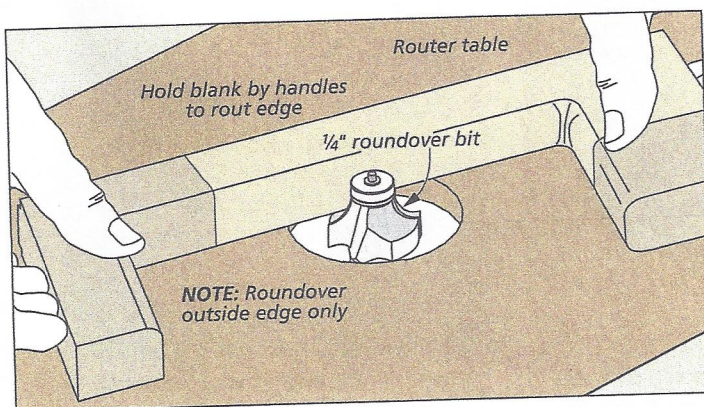


The routing requires you to turn on the router and lower the arm over the spinning bit — it's not as tricky as it sounds. The arm slides along the fence until you reach the end hole. Listen to hear the bit stop cutting to know

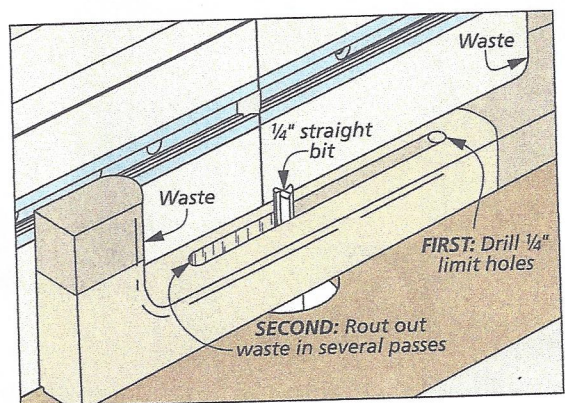
when to tilt the arm up and away from the bit. Alternatively, you could hold the arm in place, turn off the router, and wait for the bit to stop spinning.

You'll repeat the process three to four times, raising the bit

## SLIDING ARM MACHINING TIPS



**Routing Roundovers.** For a small roundover like this, you can shape the profile in a single pass. The extended length of the arm blank provides handles on the ends to make the routing safer.



**Smooth Slot.** Starting with drilled end holes eases setup on the router table. The holes also let you start and end each pass consistently.

slightly between each pass. After completing the slot, you can trim the arm to its final size.

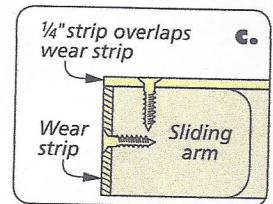
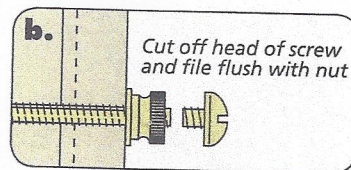
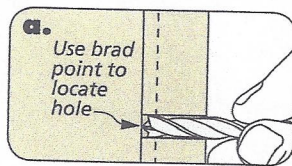
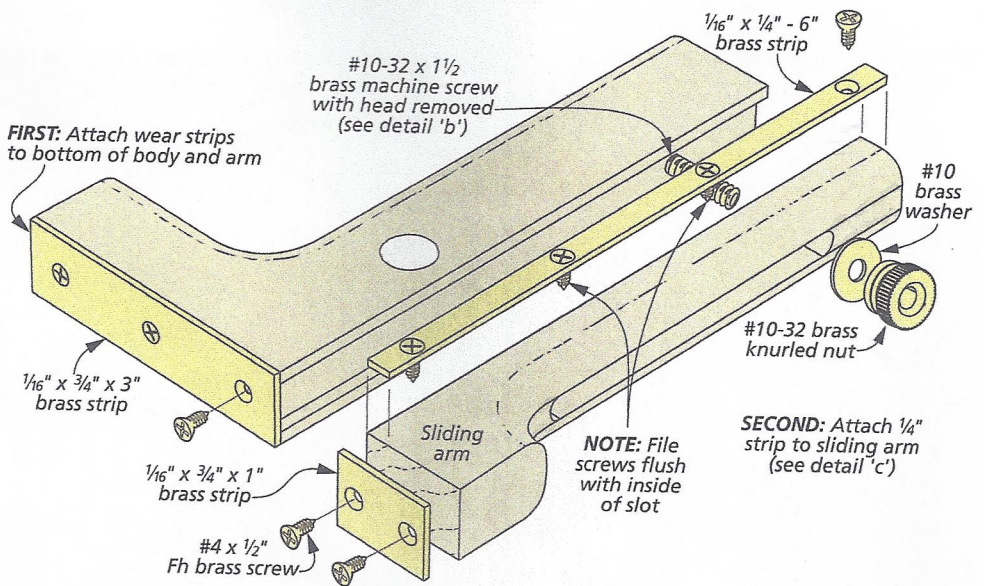
### HARDWARE

The woodworking is now complete. What remains is adding some metal fittings. The hardware that locks the arm in place comes next.

The drawing at right shows what's needed. First, a machine screw is epoxied into the body. Detail 'a' shows how to locate the pilot hole. Cut the head off the screw with a hacksaw and install a washer and knurled nut. Then file the stud flush with the nut, as in detail 'b.'

**BRASS STRIPS.** The remaining hardware on the gauge are three strips of brass. Two wear strips are attached to the bottom of the body and arm. Lining up and drilling these strips can be frustrating. I attach the strips with instant glue first. That holds the pieces in place while you drill the pilot hole and countersink. Take note that the strip on the arm is flush with the shoulders of the tongue.

Once you have the strips in place, file and sand the screw heads flush with the strips. I found that 400-grit paper left a nice-looking satin finish.

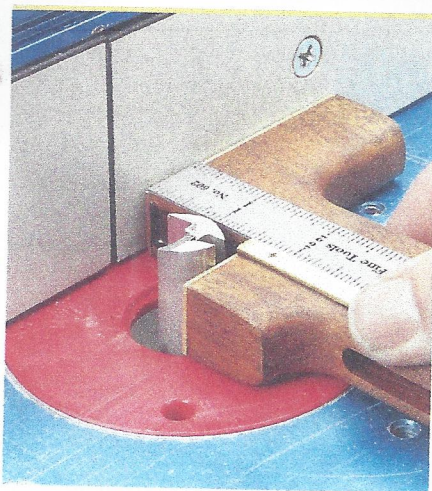


The final strip acts as a guide for the rule. This strip is attached on the arm, even with the edge of the tongue (drawing above). Attach it just like the others with instant glue and screws. A couple coats of oil give the gauge a rich look and offer good protection.

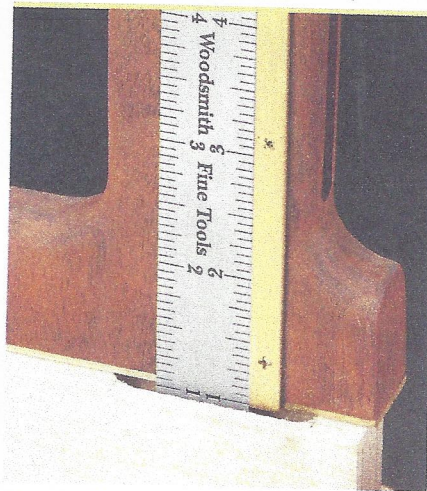
The photos below show a couple uses for the gauge — though you'll likely find more. The lower right photo shows the gauge I made for myself. **W**

### Materials & Supplies

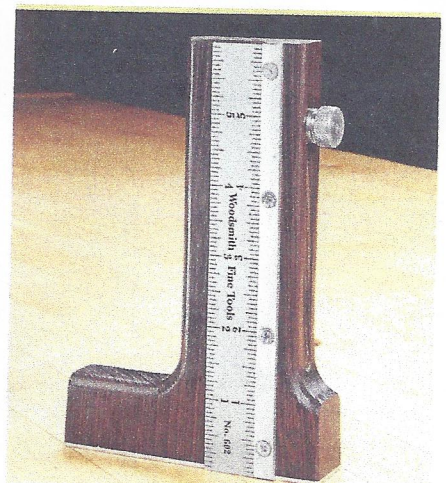
- |          |          |   |
|----------|----------|---|
| <b>A</b> | Body (1) | 3/4 x 3 - 5 15/16                       |
| <b>B</b> | Arm (1)  | 3/4 x 2 - 8 rgh.                        |
|          | •        | (1) 1/2"-dia. Rare-Earth Magnet         |
|          | •        | (1) #10-32 x 1 1/2" Brass Machine Screw |
|          | •        | (1) #10 Brass Washer                    |
|          | •        | (1) #10-32 Brass Knurled Nut            |
|          | •        | (1) 1/16" x 3/4" - 6" Brass Strip       |
|          | •        | (1) 1/16" x 1/4" - 6" Brass Strip       |
|          | •        | (9) #4 x 1/2" Fh Brass Screws           |
|          | •        | (1) 6" Steel Rule                       |



▲ The setup gauge helps to position the router table fence in addition to setting up the bit height.



▲ Since the rule is held by a magnet, you can slide it down to measure the depth of mortises and other recesses.



▲ The body and arm of this gauge is made from wenge; the strips are aluminum. Stainless steel hardware secures the arm.