



Woodsmith **PLANS**

MARKING KNIFE



SHOP-MADE MARKING KNIFE



Accurate layout is the key to a successful project. And using a quality marking knife is a much more accurate way to mark a line than with a pencil. This is especially so when laying out joints that require

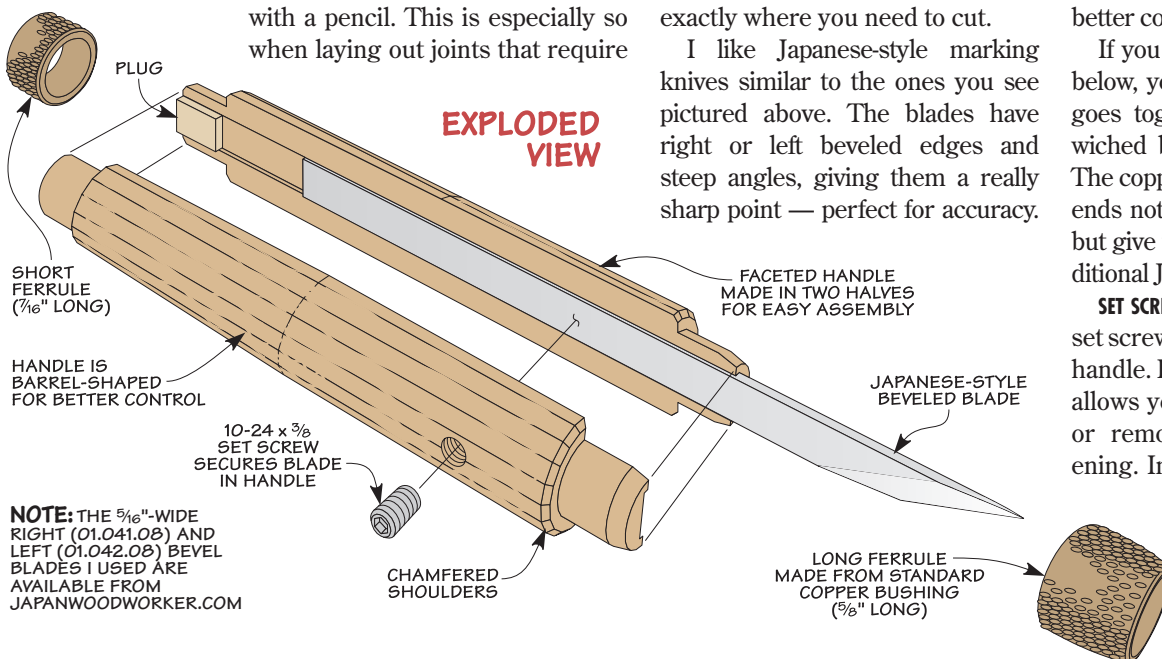
near-perfect precision, such as dovetails and tenons. The knife scores an extremely fine line, so unlike a thick pencil line, you know exactly where you need to cut.

I like Japanese-style marking knives similar to the ones you see pictured above. The blades have right or left beveled edges and steep angles, giving them a really sharp point — perfect for accuracy.

However, one drawback is that they don't come with handles, so they're awkward to hold onto. To solve this problem, I made handles to give me better control when I use them.

If you take a look at the drawing below, you can see how the handle goes together. The blade is sandwiched between two wood blanks. The copper rings, or ferrules, on the ends not only help hold it together, but give the project the look of a traditional Japanese woodworking tool.

SET SCREW. One nice feature is the set screw that holds the blade in the handle. It grips the blade firmly, yet allows you to easily change blades or remove the blade for sharpening. In addition, you can flip the blade around and slide the beveled end of the blade into the handle when you're not using the knife.



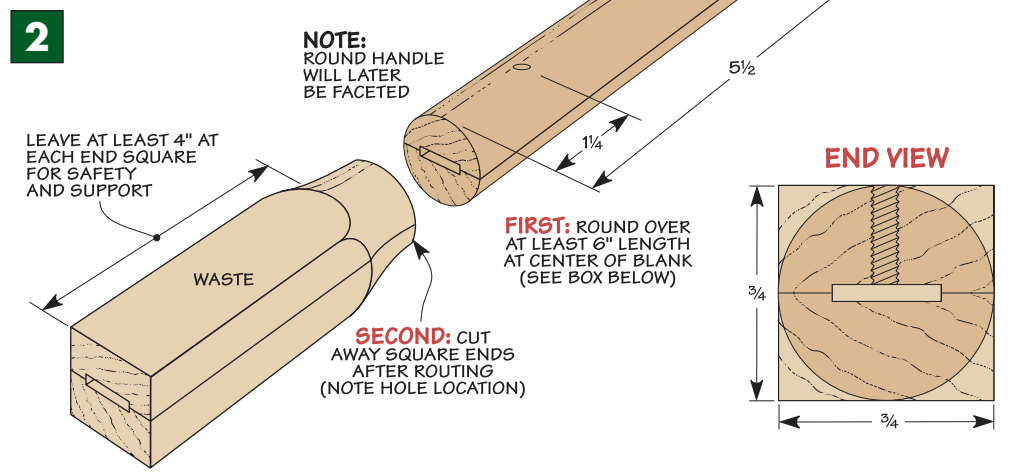
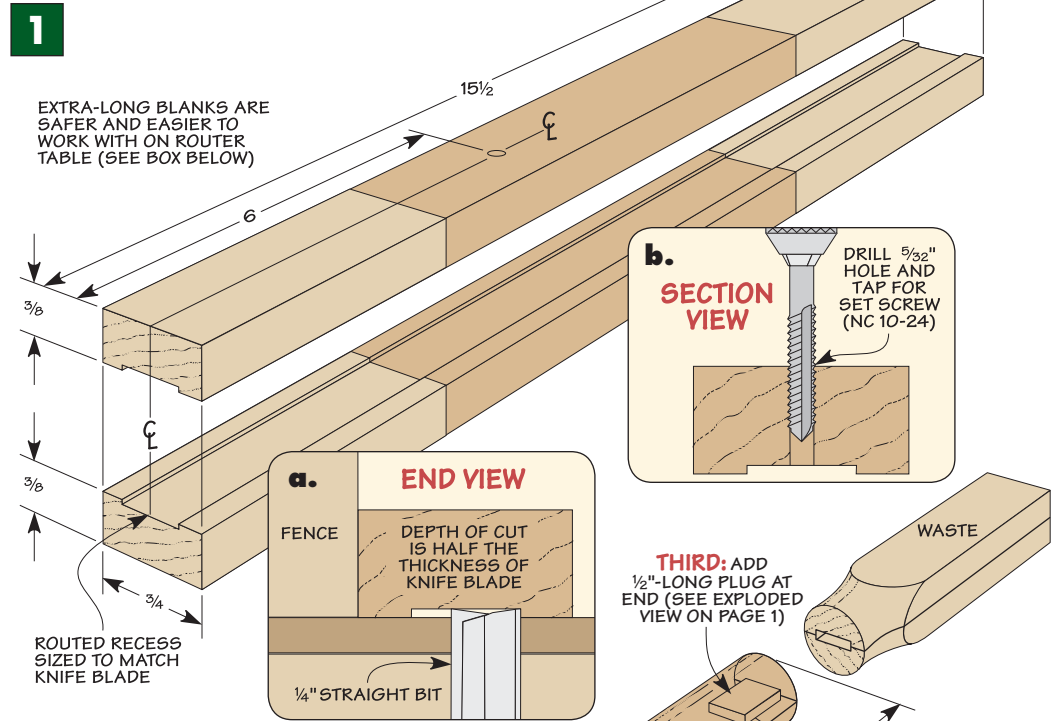
GETTING STARTED. It may seem strange to start off with square blanks when the handle is going to end up round — but that’s exactly how this project begins. You’ll start with two rectangular blanks — one for each half of the handle, as you can see illustrated in Figure 1.

After cutting the blanks to size, you’re ready to rout a groove into each half to create a pocket for the blade (Figure 1a). When the grooves are done, hold the pieces together and slide the blade into the slot for a test fit. You want it to fit snugly, but not so tightly that you have to force the blade into the slot.

Once you’re satisfied with the fit, it’s a good time to drill and tap a hole for the set screw in one of the rectangular blanks, as shown in Figure 1b. After the screw hole is drilled, you can glue the halves of the handle together, taking care not to get any glue in the groove.

ROUND THE EDGES. When the glue dried, I took the handle over to my router table and rounded the edges to create a circular body. The box at the bottom of the page shows how I did this. After that, I cut the square ends off the blank, as you can see in Figure 2, and plugged the hole in one end of the blank (End View).

That’s all there is to shaping the handle. On the next two pages, a few finishing touches are added to dress it up and make it easier to hold.

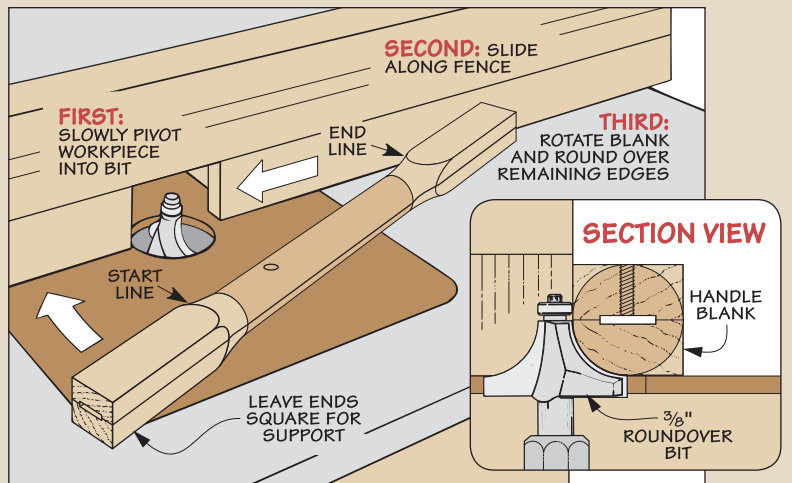


MAKE IT ROUND

Sharp corners and square edges don’t make a comfortable knife handle. But turning the square blank into a smooth, round handle isn’t difficult at all.

As you can see in the drawing on the right, the rounded handle is formed in the middle of the long rectangular blank. By doing it this way, the square ends make the blank easier and safer to work with.

First, mark the starting and ending points on the blank. Then, set up a 3/8"-radius roundover bit and the router fence according to the inset drawing on the right. To rout the blank, slowly pivot the blank into the bit at the first mark and slide it to the second mark. Repeat this three more times, rotating the blank each time. Once the sharp corners are gone, you simply cut off the square ends to complete the handle.



Crafting the Ferrules

Ferrules are used on many woodworking tools such as marking knives and chisels to prevent the handles from splitting near the blade. But there's no denying that they can add a nice look as well — just take a look at the photo at left.

The ferrules I used were simply $\frac{1}{2}$ " x $\frac{3}{8}$ " copper bushings that you can pick up at any hardware store, as shown in the inset

photo at right. But rather than have just plain copper fittings on the ends of my marking knife, I decided to "dimple" and then burn the ferrules with a finishing oil to match the look of traditional Japanese woodworking tools.

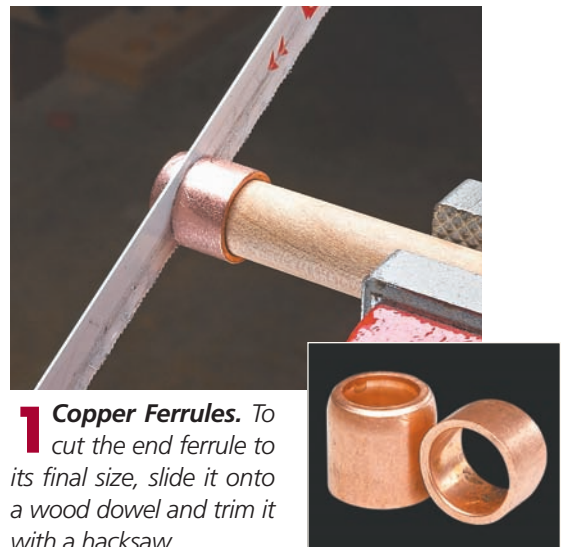
To start off, I cut the rear ferrule (Step 1). To do this, put the ferrule

over a wood dowel and cut it to size with a hacksaw.

DIMPLES. Next comes the dimpling process. For the right look, I wanted a relatively large dimple that wasn't perfectly round. A $\frac{5}{16}$ " x 2" carriage bolt with its tip rounded over provided the effect I was looking for.

As you can see in Step 2, I slid the ferrules over a steel rod to prevent them from becoming out-of-round while I was hammering the dimples in. You have to hit the bolt pretty hard to leave a dimple, so don't be shy. For a handcrafted look, punch the dimples randomly.

FIERY FINISH. To complete the ferrules, I brushed on an oil finish (Step 3) and then applied heat with a torch (Step 4). Different oils



1 Copper Ferrules. To cut the end ferrule to its final size, slide it onto a wood dowel and trim it with a hacksaw.

produce quite different looks, as you can see in the box at lower left.

While the ferrules cool down, you can start making the tenons for the ferrules on the handle. This is shown in the box at the bottom of the next page.

▲ **Dark Finish.** Burning tung oil onto the copper ferrules results in this black finish.

RECIPES FOR COLOR OPTIONS

If the black finish pictured above is not to your liking, you can experiment with other finishing oils to find something you do like. In addition to the tung oil finish, I used two other finishing oils (listed below), as well as no oil at all — I just scorched the plain copper bushing. And the longer you apply the heat, the darker and richer the final result becomes.

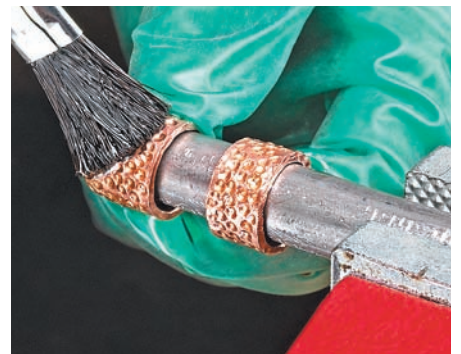
▲ **No Oil.** Heating the ferrules with no oil on them simply gives the copper an antique look.

▲ **Boiled Linseed Oil.** Firing this oil produces a medium-brown hue on the copper ferrule.

▲ **Peanut Oil.** Heating peanut oil gives the ferrules a golden-red appearance.



2 Dimples. Randomly tap the bolt to add "dimples" to the ferrules. I had to file the end of the steel rod a little to get the bushing on.



3 Apply Oil. Brushing an oil onto the ferrules is one step to get the look of traditional Japanese woodworking tools.



4 Fire it Up. Scorching the ferrules with a torch will discolor the finish and provide a hand-crafted finish.

Planing the Facets

A perfectly round knife handle didn't feel quite right, so I added facets and a barrel shape to the handle. This gives you a better grip, plus the knife isn't as likely to roll off your workbench. And, best of all, because these facets are randomly planed into the handle, you can't really mess them up.

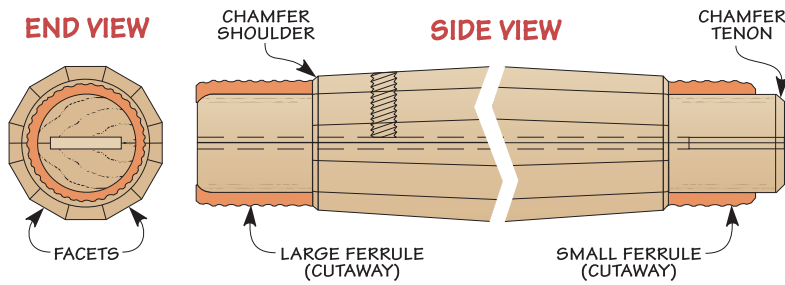
The photo on the right shows how the facets are made. First, draw a line around the center of the handle — this will be your reference point for both directions. Then, using a block plane, work from the centerline and shave the handle.

Start with light pressure and increase it as you near the end. What you're looking for is a tapered effect. After a couple of strokes, roll the handle and shave some more off. When you've finished one end, flip the handle over and taper the opposite end of the handle. Be sure, however, not to cut into the tenons on the ends of the handle.

Once that's done, take a chisel and create a chamfered shoulder around the tenons. And finally, install the ferrules on the tenons and spray the handle with several coats of lacquer.



▲ **The Final Touch.** Starting from the center, taper the handle toward both ends using a block plane to create a faceted, barrel shape.



SHOP TIP: ROUTING ROUND TENONS

Cutting round tenons is easy on a router table, especially with the simple jig illustrated here.

To make the jig, all you need is a scrap of 2x4 and a piece of $\frac{1}{8}$ " hardboard. Start by ripping a 6"-long piece of 2x4 down to $1\frac{3}{4}$ " wide. Turn it on edge, and then drill a $\frac{3}{4}$ " hole near one end of the block, centered on its width. After the hole is drilled, glue the hardboard onto the block as a base for the jig.

Next, install a $\frac{3}{8}$ " straight bit in the router table. Place the block against the router table fence and adjust the fence so the bit is centered on the end of the block.

Raise the bit to $\frac{1}{8}$ " above the table and push the block from right to left until the bit cuts halfway into the side of the $\frac{3}{4}$ " hole. Repeat this process, raising your router bit $\frac{1}{8}$ " each

time, until the height of the groove equals the length of the tenon you want, plus the $\frac{1}{8}$ " hardboard.

When the jig is ready, clamp it onto the fence. Leave enough of the bit showing in the hole to make a tenon sized to fit the ferrules.

Turn the router on and slowly insert the knife handle into the hole until it comes to rest on the hardboard. Rotate the handle to complete the tenon. The bit will not only cut the tenon, but it will leave a clean shoulder as well.

