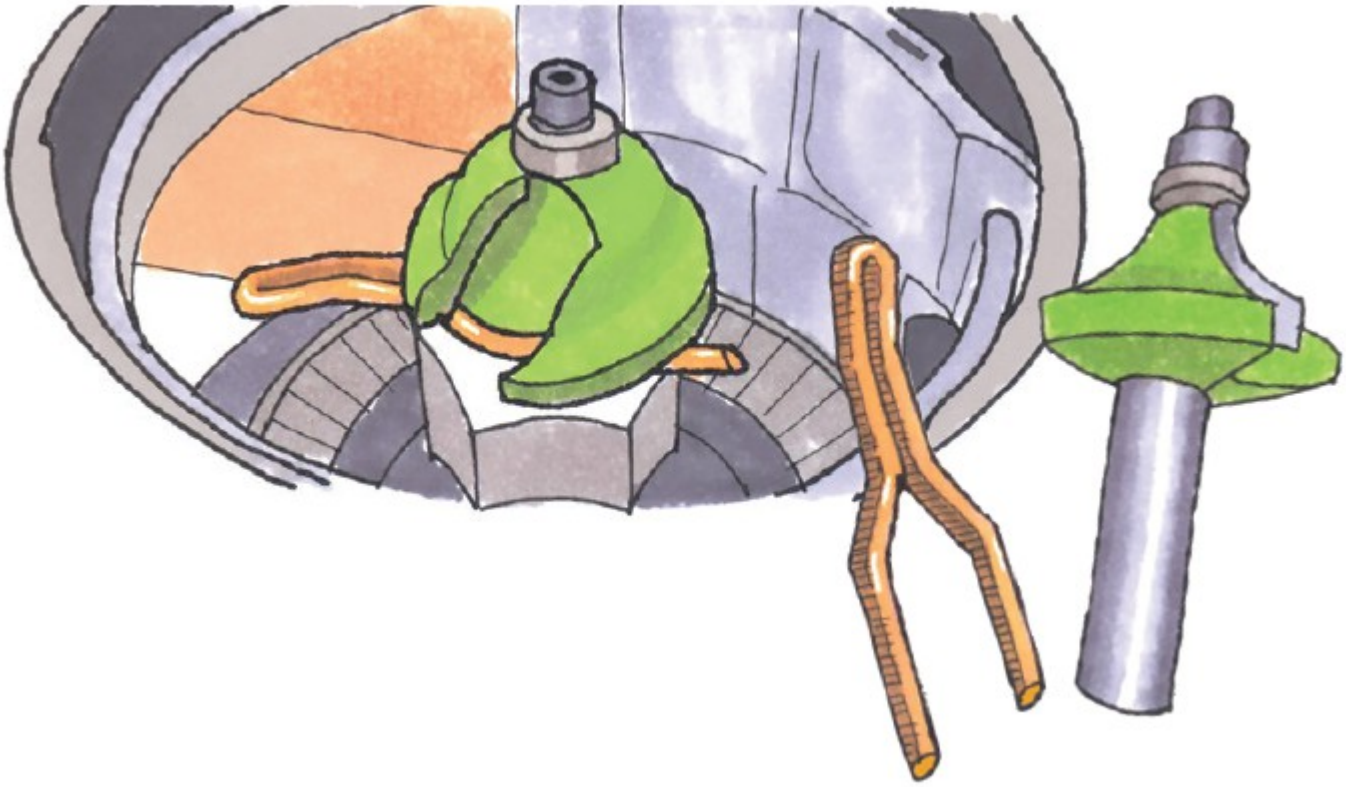
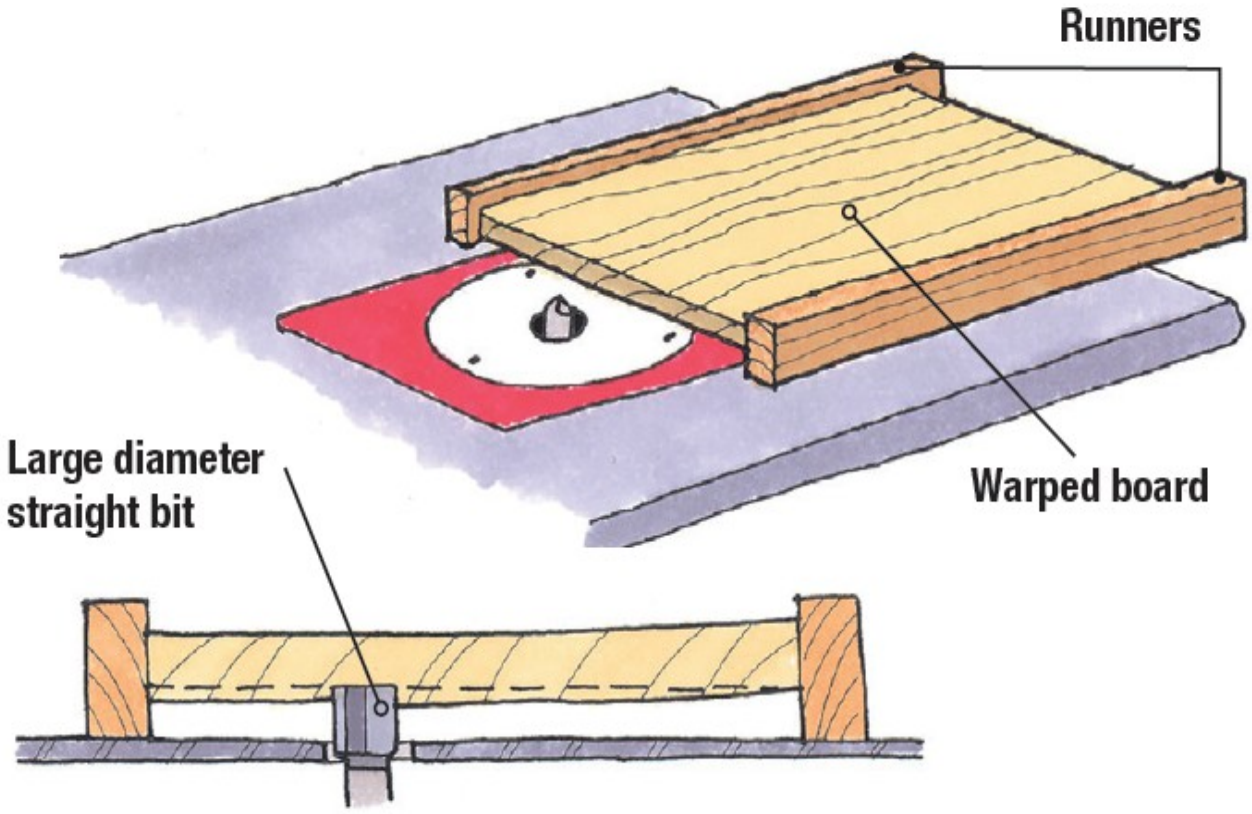
1. Simple Bit Spacer

Manipulating two wrenches can be frustrating enough. Grab a piece of copper or something else bendable and make a bit spacer to avoid bottoming out your router bit in the collet. It’s as simple as it sounds. You can even make it long enough to rest on your router base if you align the height correctly.



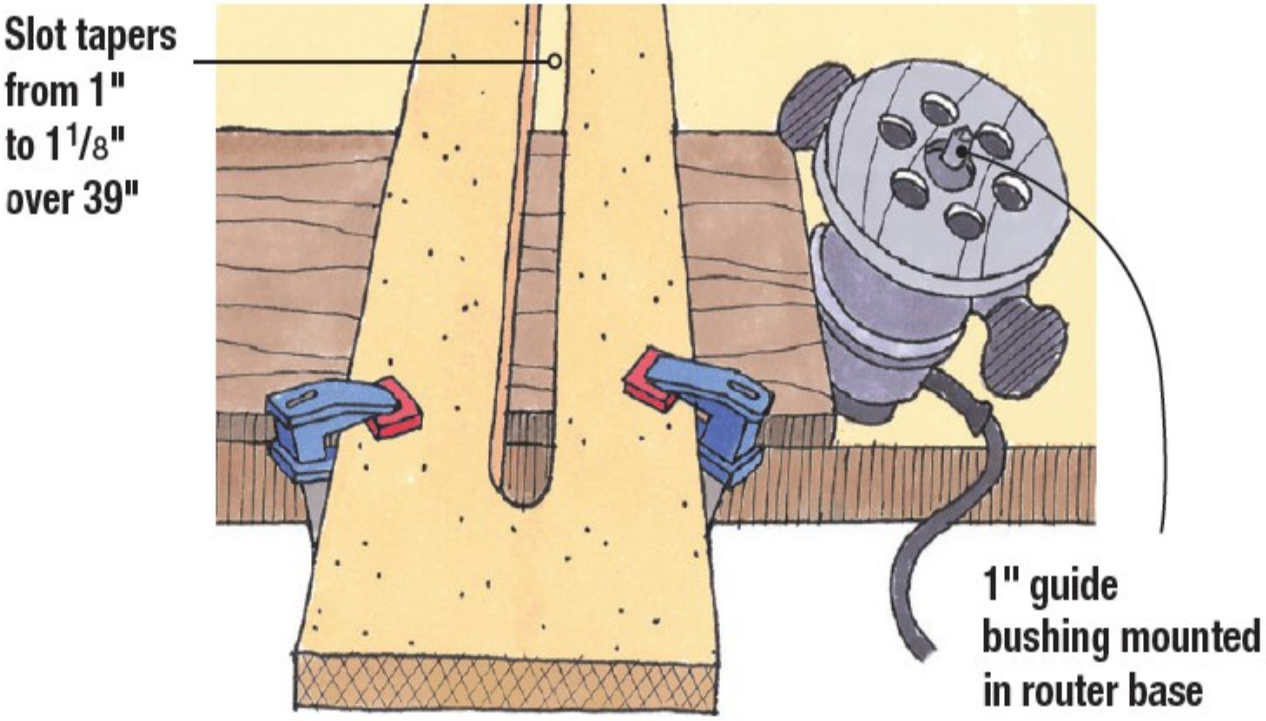
2. Flattening Wide Boards

If your jointer isn’t wide enough and your lumber isn’t cooperating under a handplane, try the router table. Attach runners to both sides of the board and run it across a straight bit. You’ll be shocked at how well this works, especially for smaller stock.



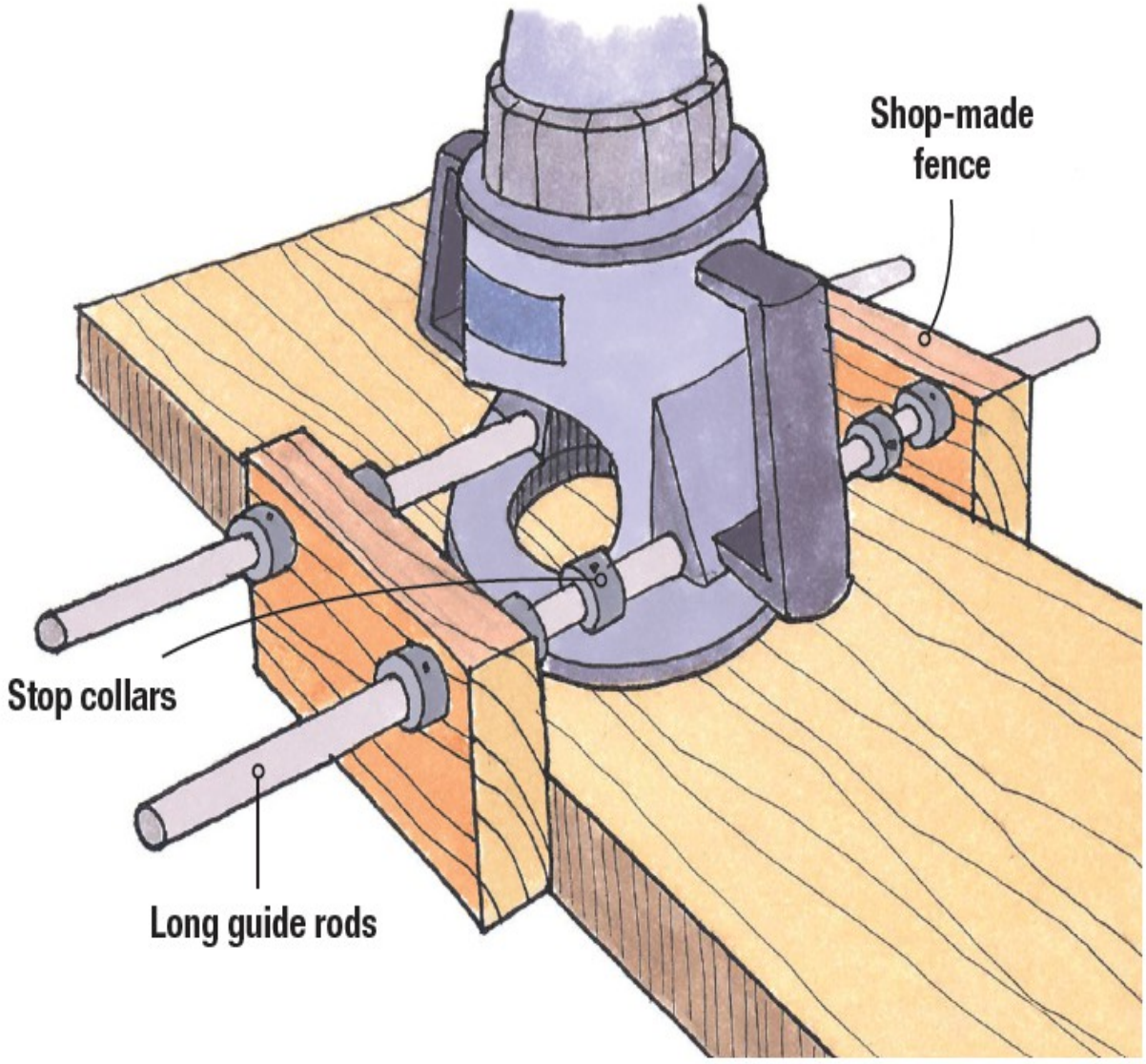
3. Sliding Dovetail Jig

With a single piece of MDF or Baltic birch, you can create a jig that'll guarantee a perfect sliding dovetail. It starts with two holes that determine the taper of the slot. At one end of your jig, drill a 1" hole and on the other end of the jig, drill a 11/8" hole. Place a straight edge between the tangents of each hole and use a flush trim bit to make a perfect line between them. Use a 1" guide bushing with the jig, and you'll be able to use any size dovetail bit.



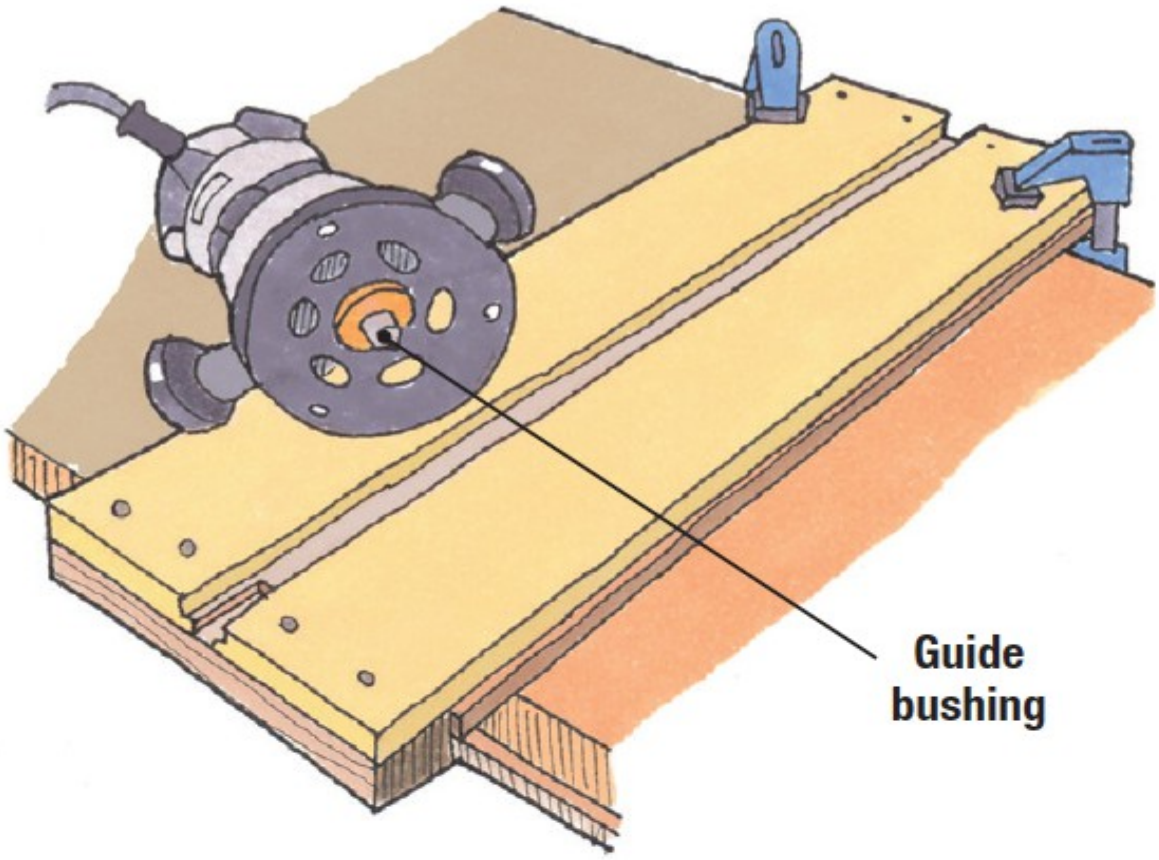
4. Adjustable Routed Mortises

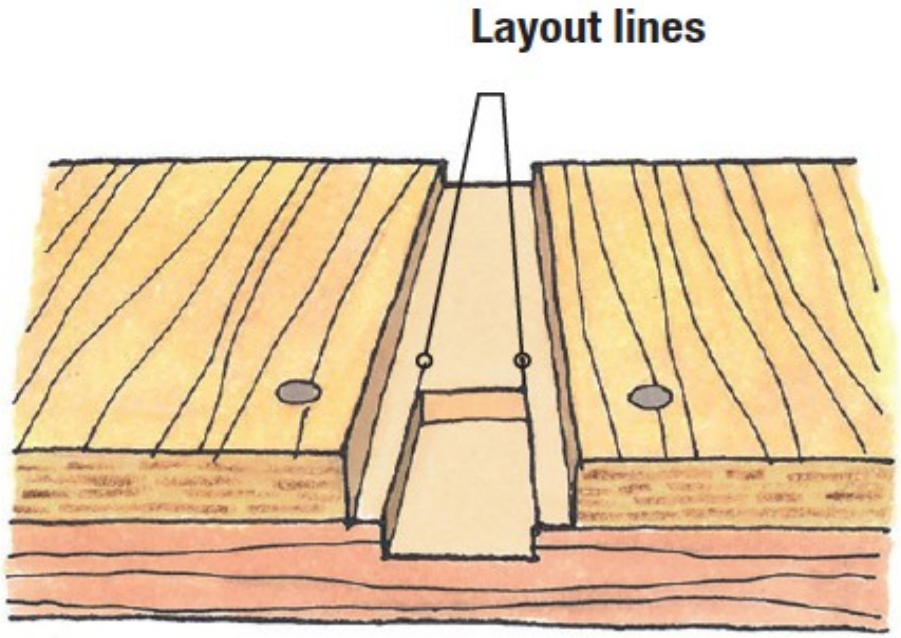
Huge mortises can be made with a clever adjustable fence. Use long guide rods that can span your workpiece and stop collars to control the travel. Most router bases accept these guide rods, so determine the spacing based on your router model. Accurate holes in the shop-made fence will prevent the assembly from racking as you slide it along the workpiece, and a bit of wax will keep things running smoothly.



5. Dado Jig

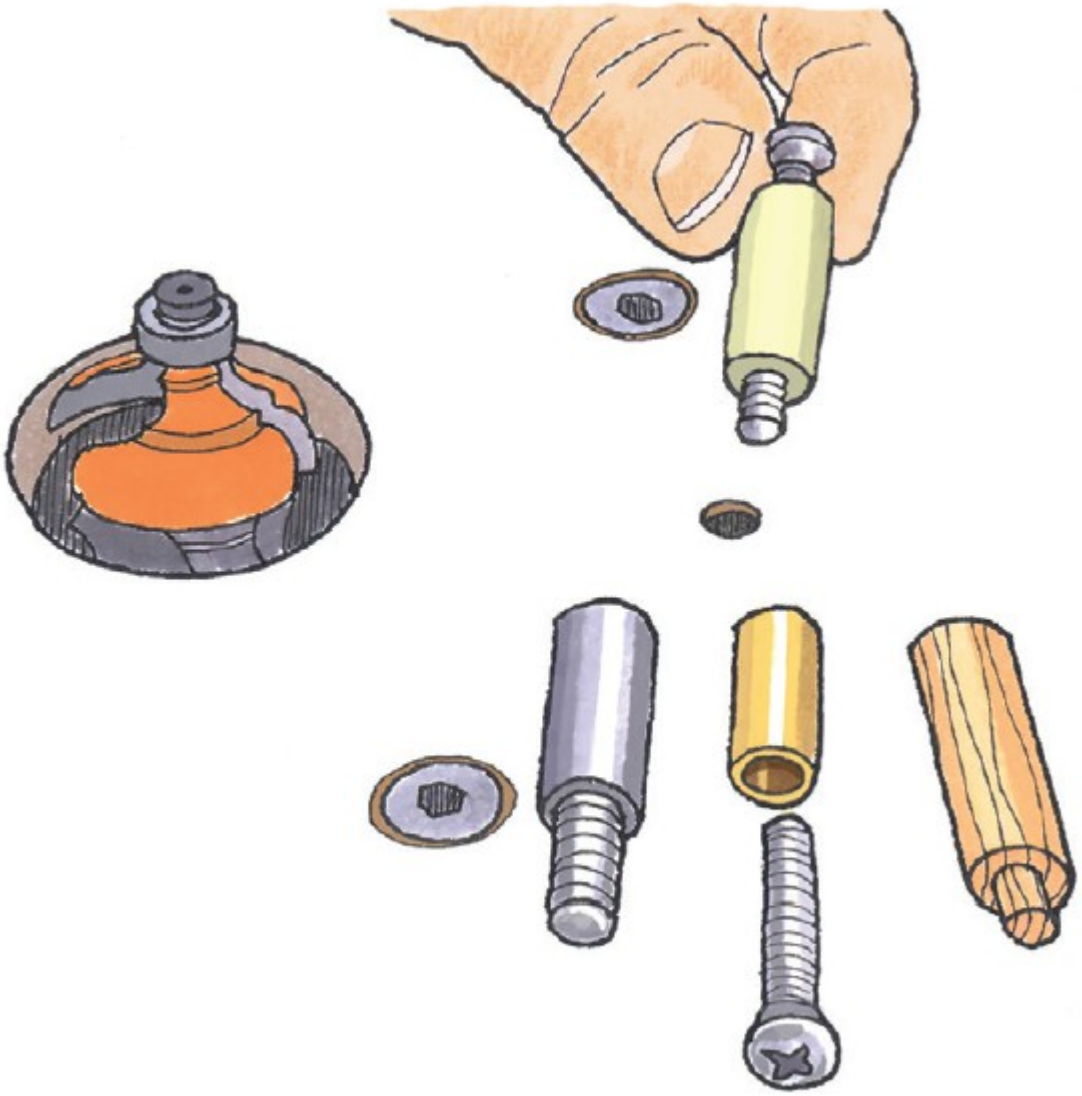
Straight and accurate dadoes are easy to make using this simple jig. It’s composed of two pieces of melamine shelving, cut 4” wide, and a couple of crossbars screwed underneath. The space between the melamine pieces is 1”—exactly fitting the 1” o.d. guide bushing in my router. The router can’t wobble as you cut the dado. To prepare the jig, precut a dado in one of the crossbars. Line up this dado with a pair of layout marks on the workpiece, clamp the jig in place, and have at it.



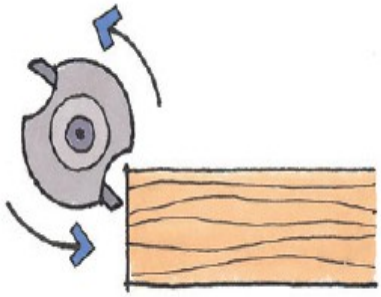


6. Use a Starting Pin

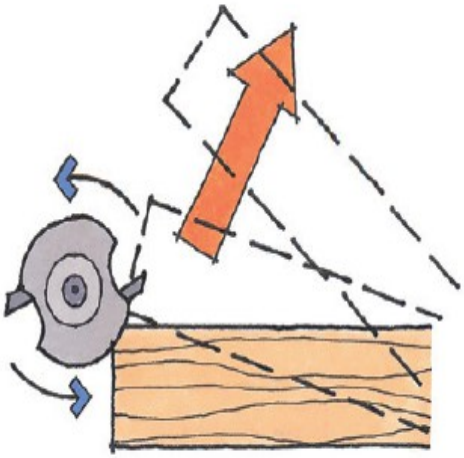
It seems that few people take advantage of the starting pin on their router table. The pin acts as a fulcrum so that you can enter a fenceless, pilot-bearing led cut without risking the workpiece kicking away as it catches the endgrain.



WITHOUT A STARTING PIN

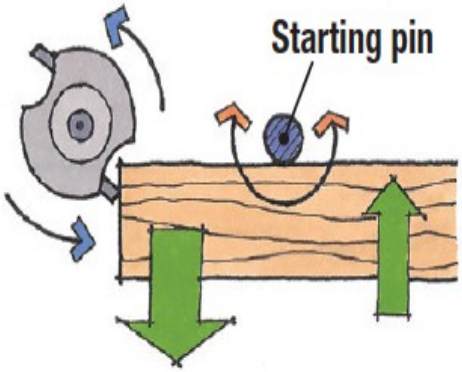


Workpiece is caught by the cutting tip of the spinning bit before it reaches the pilot bearing.

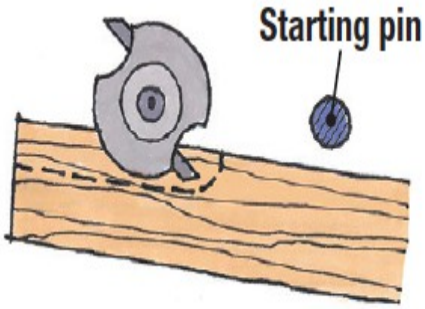


In a nanosecond, the bit's rotation throws the work aside!

WITH A STARTING PIN



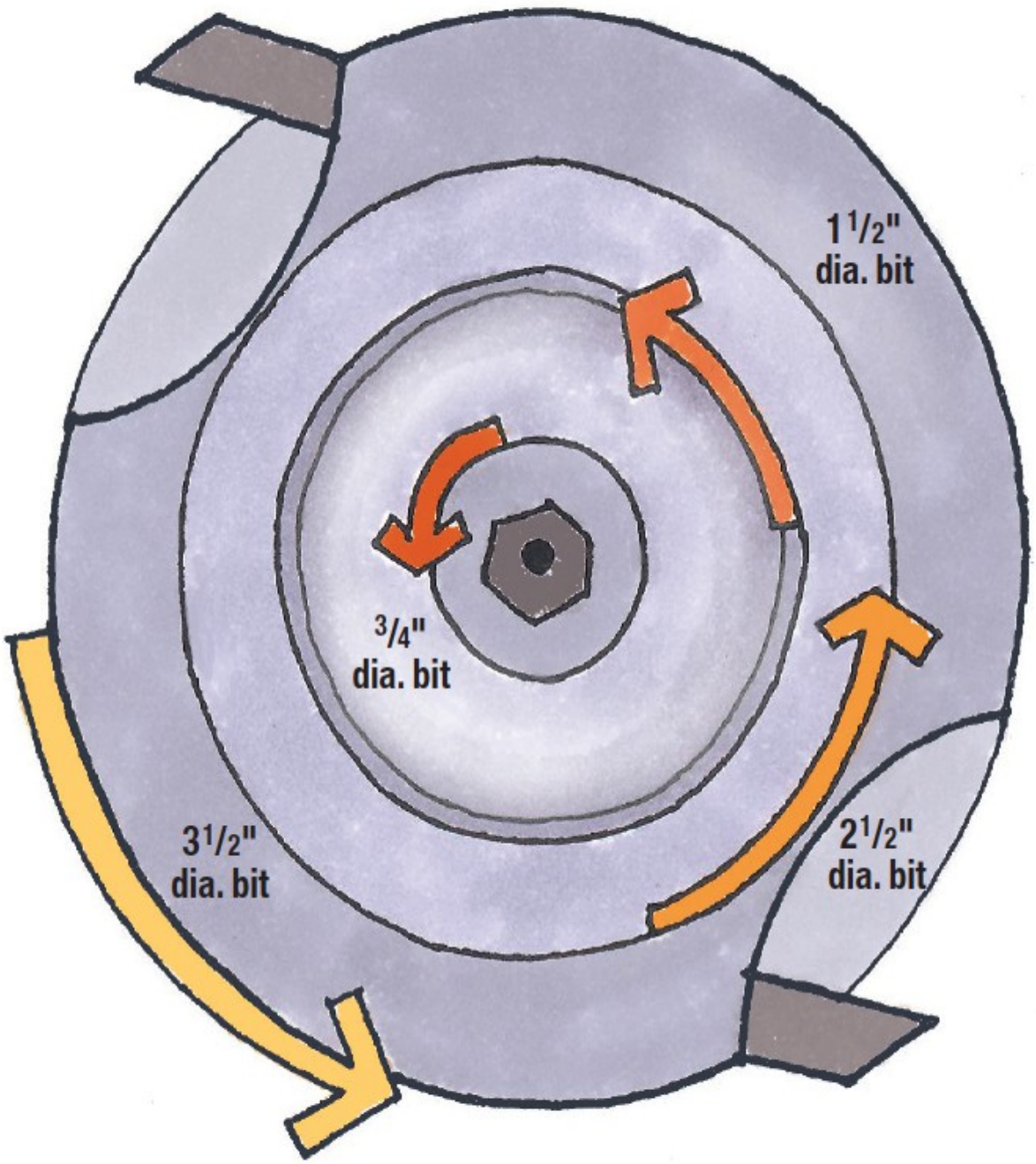
The starting pin gives leverage to counter the rotational force of the bit's bearing.



Maintaining contact with the starting pin isn't necessarry once the work contacts the pilot bearing.

7. Pace the Cut

It can be tempting to set your router speed and forget it. But there are very tangible consequences to using router bits of different diameters. At 22,000rpm, 3/4" bit has a tip speed of 49mph. A 11/2" bit at the same rpm has a tip speed of 98mpg. That's twice the speed! So, you'll need to feed slower or turn your speed down (proper cutting is always a relationship between speed and feed). Bits will come with recommended speeds, and you should always use those speeds as a starting point. Listen to the router as it cuts. You'll hear if you need to make adjustments.


1 1/2" dia. bit
3/4" dia. bit
3 1/2" dia. bit
2 1/2" dia. bit

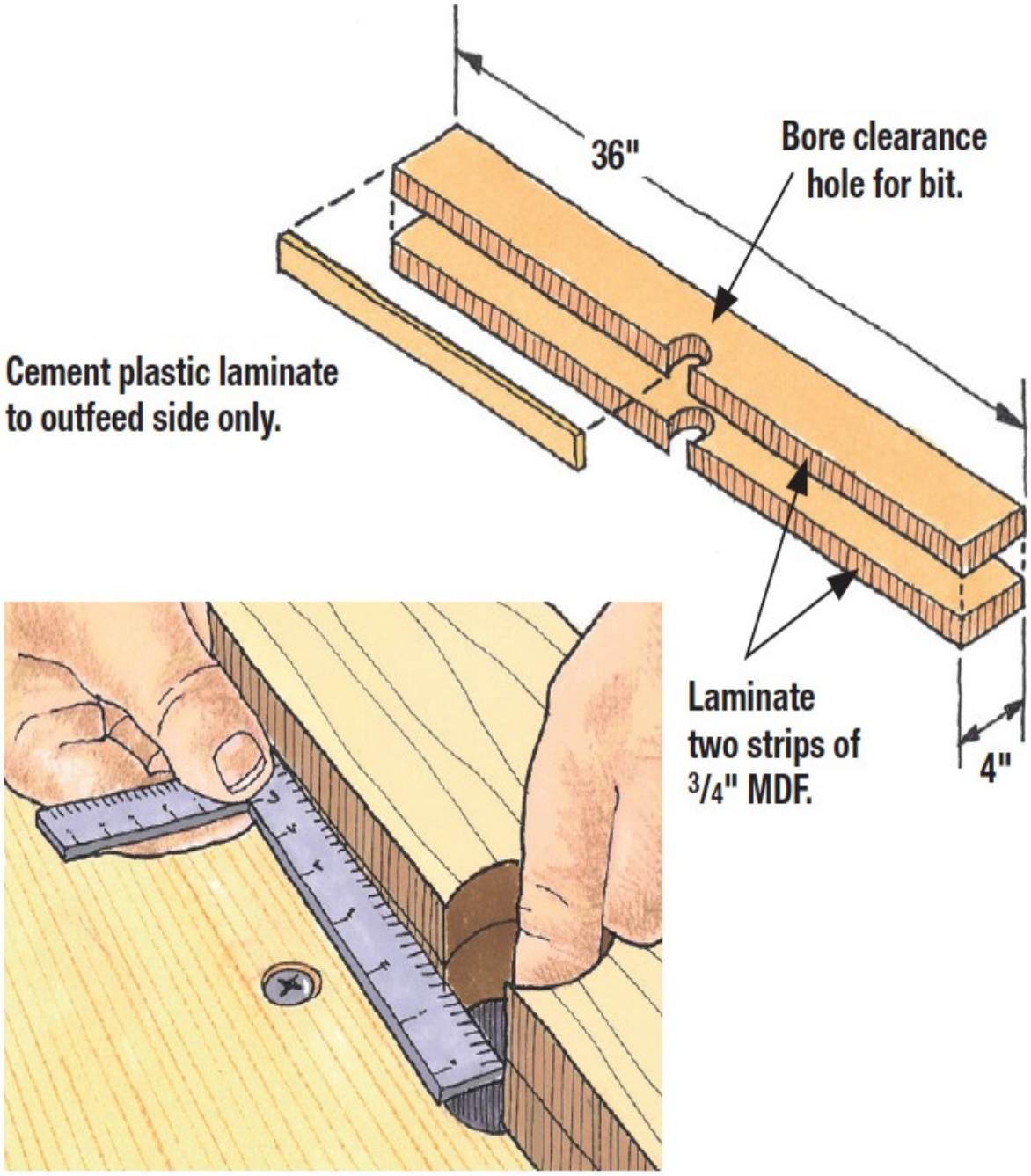
Bit Dia.	RPM	MPH
3/4"	22,000	49
1 1/2"	22,000	98
2 1/2"	22,000	164*
2 1/2"	12,500	130
2 1/2"	10,000	104

Bit Dia.	RPM	MPH
3 1/2"	22,000	228*
3 1/2"	12,500	130
3 1/2"	10,000	104

Maximum safe speed = 130mph

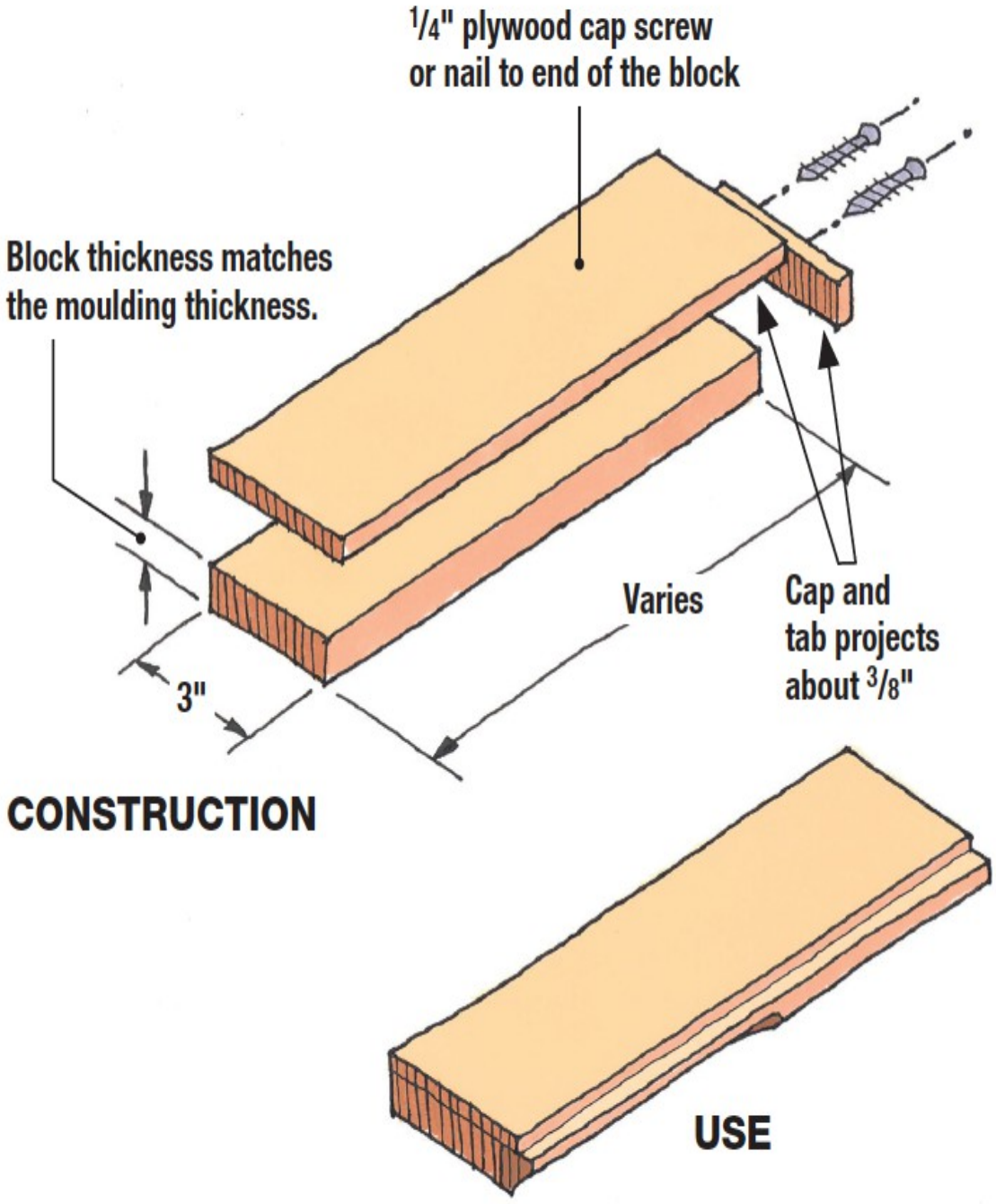
8. Jointing Fence

Make a perfect jointing fence by ripping two strips of MDF to 4” wide. Glue them together and bore a clearance hole for the bit and you’re nearly there. The key to this fence is the application of laminate to the outfeed side of the fence. You can use one or two pieces of laminate, depending on the amount of material you’d like to remove. Align the outfeed of the fence to the bit and you’ll be jointing in no time.



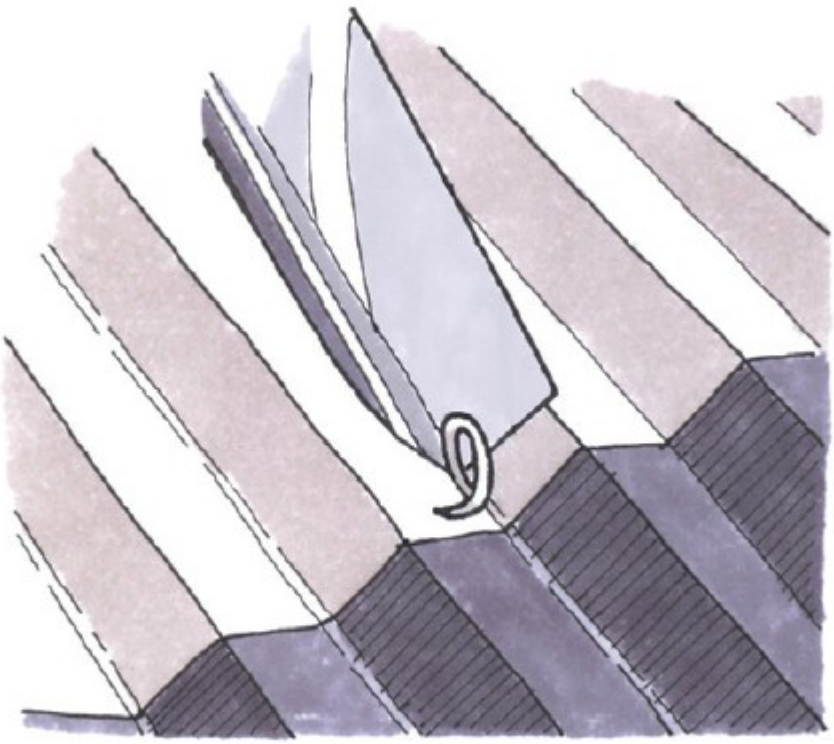
9. Moulding Pusher

The length of this push block doesn't matter as much as the width. Keeping your fingers 3" from the bit is always a great idea. When pushing moulding through a shaping bit that's less than an inch wide, use this pusher. The 1/4" plywood cap and back tab are the essential parts of this pusher.

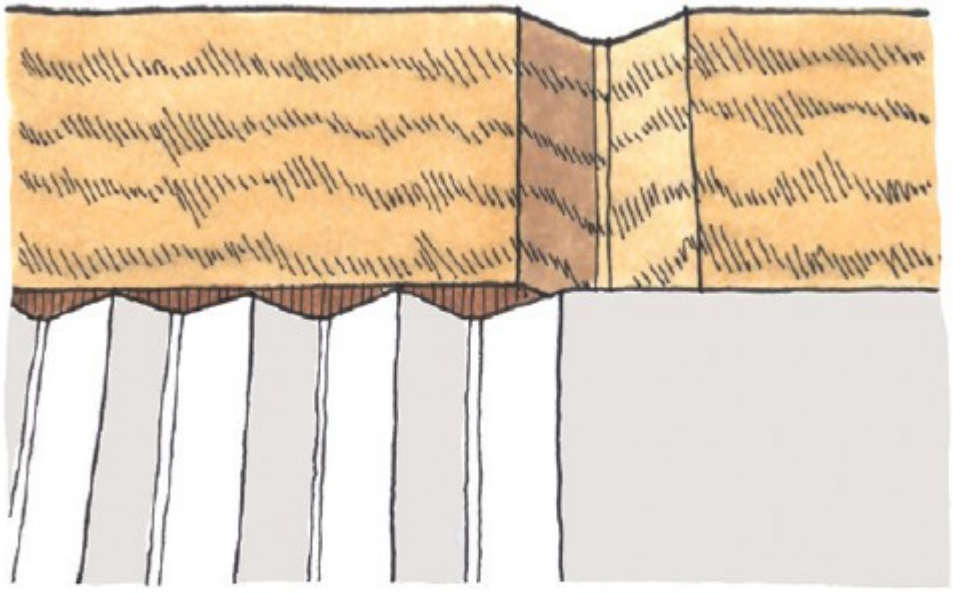


10. Diamond Branding Jig

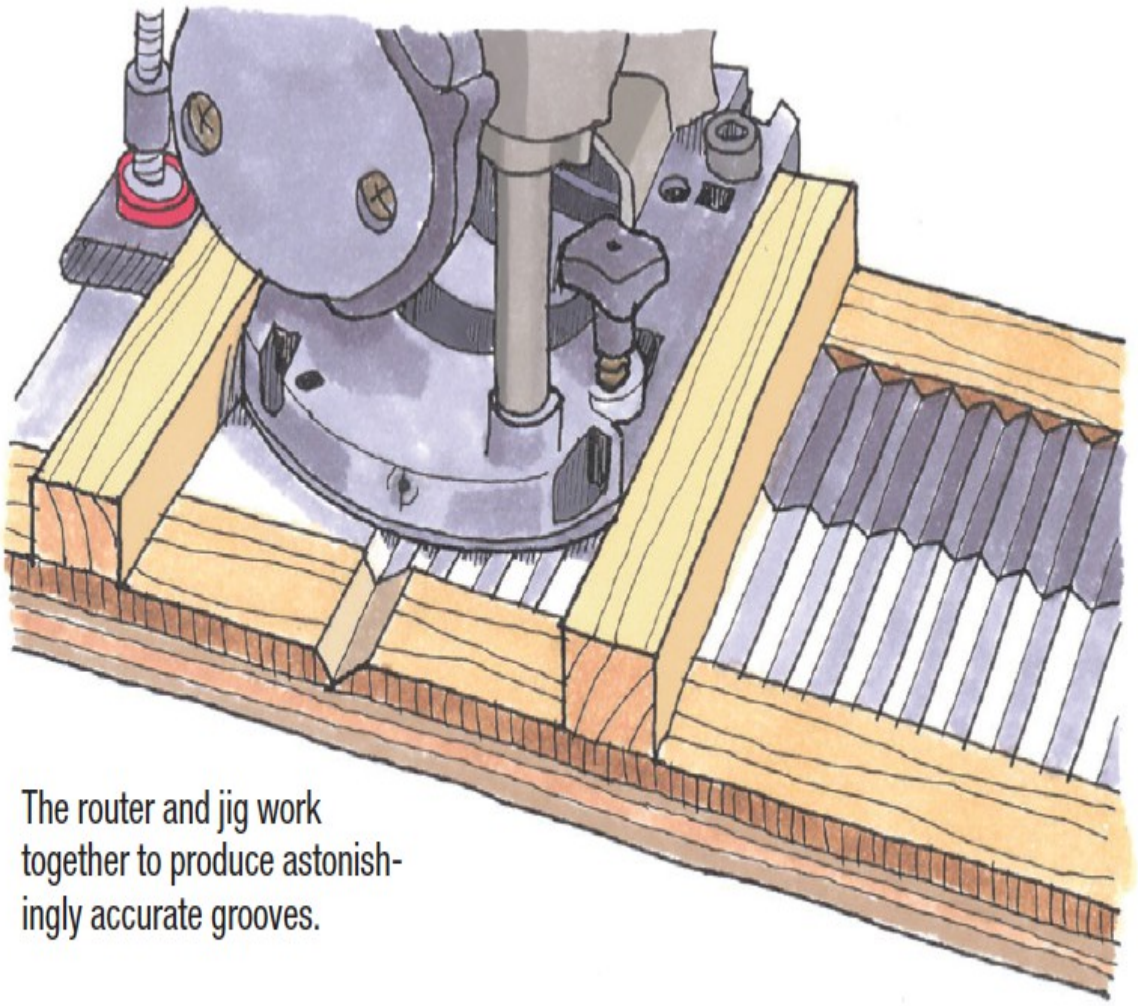
You can make diamond banding with just a V-bit and small jig. Your jig needs to be wide enough to span your workpiece, and you'll need a 120° bit or an angle of your choosing. Slide the sled over to your next mark with each pass. The bottom of each groove will need just a quick clean out with a gouge. Then, glue up mating pieces and cut them to size for your inlay.



The V-groove gouge removes the flat left by the router bit.



Spacing the V-grooves is critical and the index mark makes for foolproof accuracy.



The router and jig work together to produce astonishingly accurate grooves.