

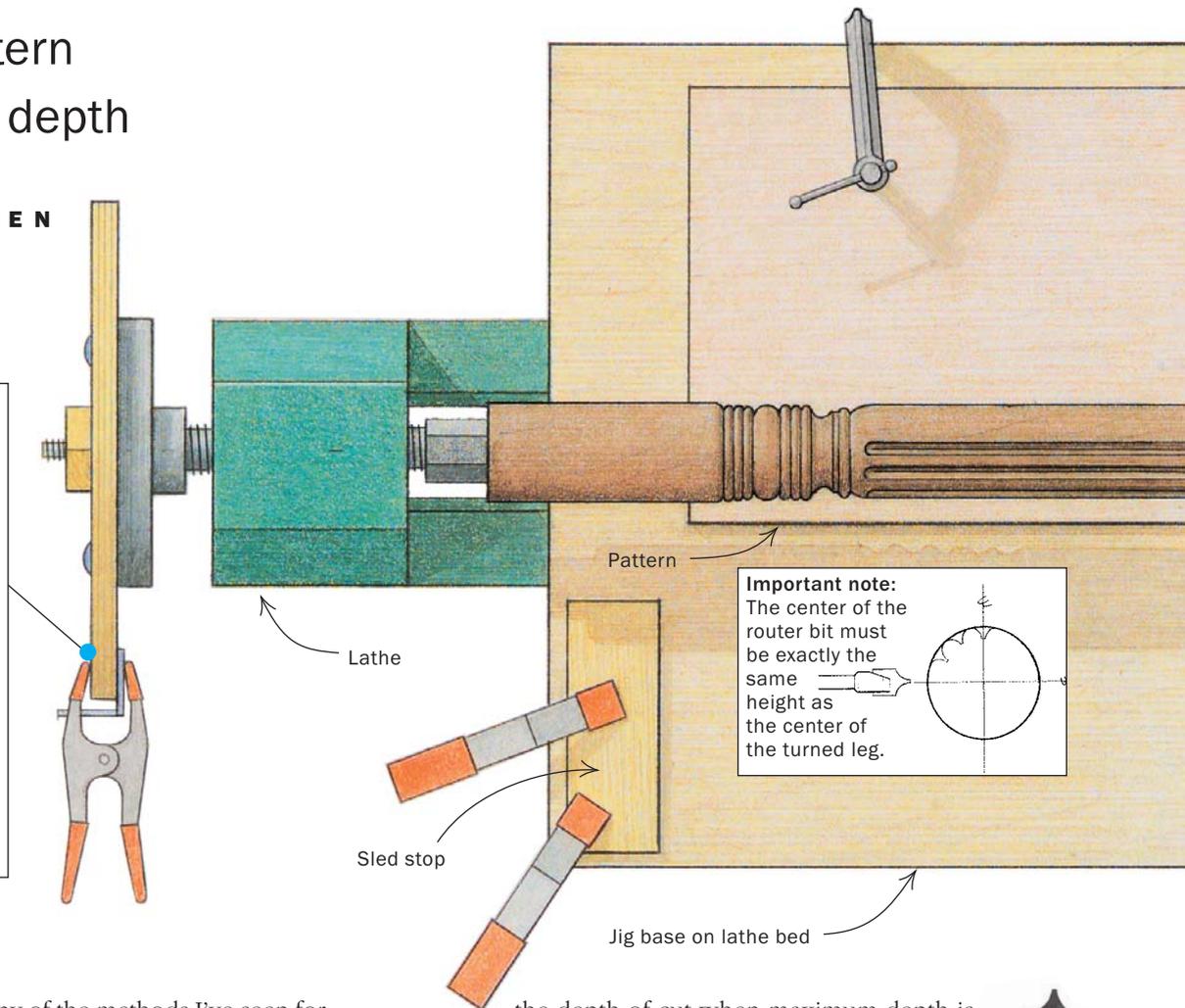
# A Jig for Cutting Curved and Tapered Reeds

A router, a lathe and a simple pattern allow for variable depth

BY JOHN VAN BUREN



**Reeding a turned, tapered, Sheraton-style leg starts with a wheel.** After the author turns his leg blanks, he leaves them on the lathe. A plywood wheel attached to the lathe's outboard faceplate keeps track of the stops every 30° for each of the 12 reeds.



I've never been satisfied with any of the methods I've seen for cutting reeds on a turned and tapered leg. The problem is that the variable depth of the reed cannot be adjusted with precision. Obviously, for the reed to stay properly proportioned in the lower, narrower sections of the turning, the router bit must make a shallower cut so that the size of the reed diminishes with the size of the leg. This can be done with a lathe and two simple shopmade jigs: a horizontal router sled and a pattern made of 1/4-in. plywood.

## A sled for the router

The sled holds the router bit in a horizontal position and has two bearing surfaces cut out of one piece of wood screwed to the vertical face of the sled. The top bearing surface—just below and even with the outer edge of the bit—rides against the surface of the turning and limits the maximum depth of the reeding cut. The bottom bearing surface rides against the edge of the pattern and controls

the depth of cut when maximum depth is not desired—for example, at the narrow end of the leg. I use a 3/16-in. radius (#10.24.01) point-cutting roundover bit from Highland Hardware (800-241-6748).

## The pattern guides the sled

After turning the leg blanks but before cutting the pattern, clamp or bolt a jig base to the lathe bed. The base is a piece of 3/4-in. plywood with a smooth surface for the router sled to ride on and broad enough to hold the pattern and the sled. Mine is 16 in. by 42 in. The height of the jig base is adjusted with shims so that the tip of the router bit in the sled is exactly the same height as the lathe centers.

The pattern is simply a piece of 1/4-in. plywood cut in the same profile as the turned leg. To prepare it, set the leg between centers on a lathe, and drop a perpendicular repeatedly from the turning

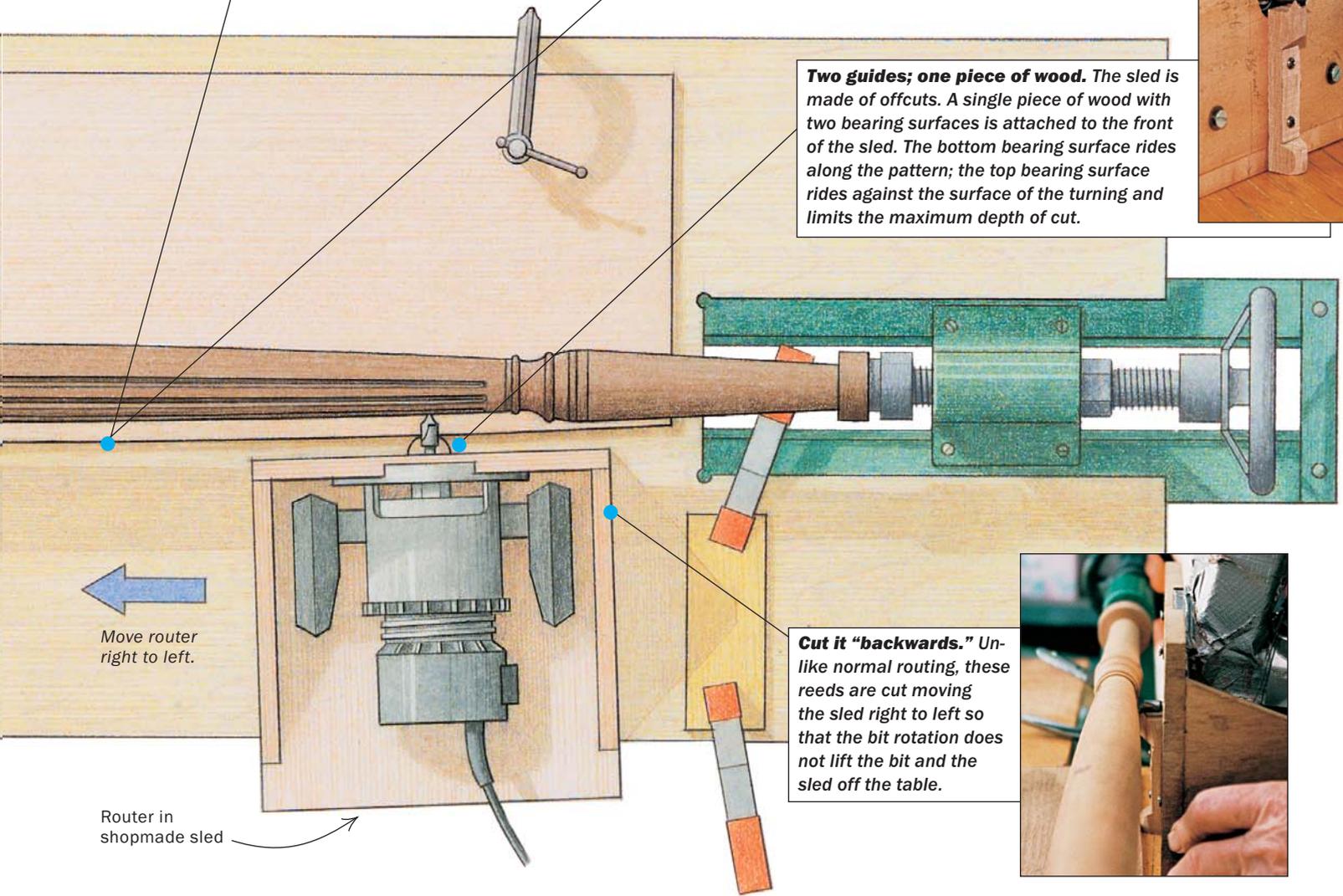




**First, drop a line, but make sure it is true.** Using a square, drop a perpendicular repeatedly from the turning to the pattern blank. Connect the points and bandsaw carefully so that the pattern profile is the same as the turned leg.



**Next, check and clamp the pattern.** After the bandsawn pattern has been filed smooth, clamp it exactly under the leg. To make shallower reeds at the bottom of the leg, move the end of the pattern slightly toward you.



(using a try square) and mark it on the plywood. This line mimics the outline of the piece to be reeded. Bandsaw the pattern carefully—right at the line—then file it smooth. Next, you have to make a decision about where you want less or more cutter depth. Filing away the pattern edge allows deeper cutter penetration. In the case of a uniform taper, you only need to slide the pattern toward the sled at the narrow end of the leg to move the cutter away from the piece for the shallower cut. Clamp the pattern in place on the jig base. Lateral stops for the router sled are clamped to the jig base to limit the length of the reed.

Make a plywood “protractor” for indexing each reed location and fix it to the outboard faceplate. To reed a Sheraton-style leg

with 12 reeds, rotate the turning and fix it at 30° intervals for the reeding cuts.

One last tip, usual routing routine would suggest that you move the router from left to right. In this case, such movement might cause the bit to ride up and ruin the adjacent reed. Instead, move the bit from right to left, because the rotation of the horizontal bit tends to hold the cutter down. This method can also be used to cut flutes or facets rather than reeds. All that’s left in any case is some hand-sanding. □

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