

# Square Peg in a Round Hole



A streamlined approach to making decorative plugs by the dozens

BY ROGER HEITZMAN



The last time I chopped square holes for decorative pegs, I finished the task with a sigh of resignation and a silent lament: “There must be an easier way.” That was years ago, and after I again went and designed almost 50 such pegs into several Arts-and-Crafts-style pieces for a client, my first thought was, “OK, wise guy, now what?” My second thought was to use this opportunity to find that easier way to make and install this attractive detail.

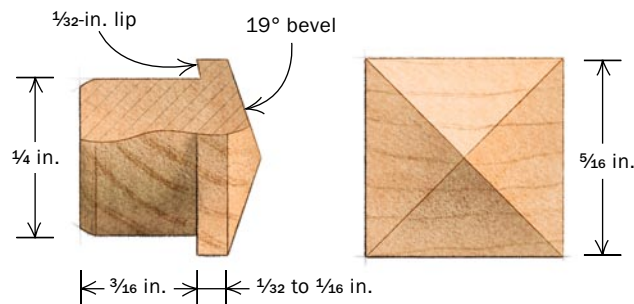
There are three steps in the traditional method of making decorative pegs: Bore the holes and make them square, fabricate the pegs, and dress the exposed ends. I wanted to streamline all three operations.

The first step was to eliminate the repetitive chore of striking a round hole square. That meant I had to find a way to create a round stem on a square body. The plug cutter came immediately to mind. My plug cutters all had sharp-angled shoulders, unsuitable for this use, so I took a 1/4-in. plug cutter to my grinder to reduce the shoulder bevel to a more practical, almost square, angle.

Armed with a suitable cutting tool, I was left to decide whether to cut the stem on pre-squared stock or to cut the squares after drilling the stems. A few trials left little doubt that the required precision and speed would come only from cutting the squares after drilling the stems.

Using my drill press, tablesaw, and bandsaw, I was able to produce and install the pegs in a fraction of the time it took to make them the old way, and with more consistent results.

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# 1. Make the pegs



**1** **Modify a plug cutter.** Chucked in a variable-speed drill, the cutter is slowly rotated into a spinning grinding wheel. Dip the cutter frequently in water. When done, grind a slight back bevel on the tip of each tooth.



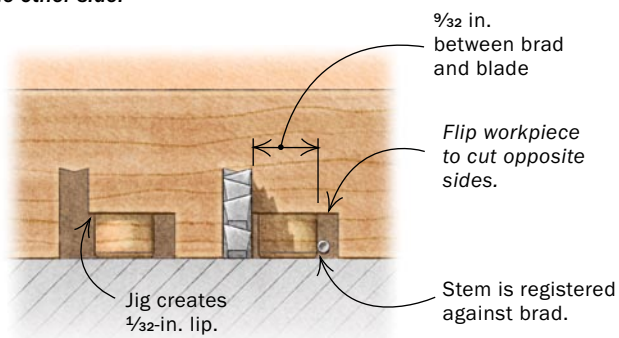
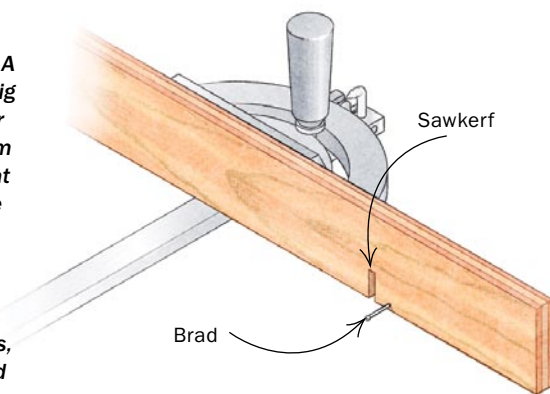
**2** **Drill the stems with the modified cutter.** The distances between the stems are not important, but use the depth stop on the drill press to keep the lengths of the stems consistent and clamp a fence to the drill-press table to keep the rows straight.



**3** **Rip strips to form the pegs.** Keep the stems centered on the pegs as you create the desired peg width (in this case, a  $\frac{5}{16}$ -in. square needed a cut  $\frac{1}{2}$  in. to either side of the  $\frac{1}{4}$ -in.-dia. stem).



**4** **Crosscut the pegs.** A shopmade indexing jig allows you to register one side of each stem against a brad so that the saw cuts the side of the cap exactly  $\frac{1}{32}$  in. away from the stem. After completing all of the cuts on one side of the stems, turn the piece around and cut the other side.



Flip workpiece to cut opposite sides.

Stem is registered against brad.

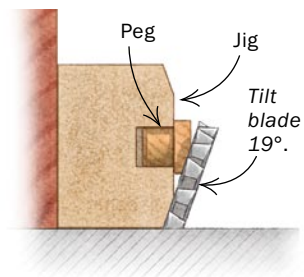


**5** **Cut off the pegs.** Set the bandsaw fence and saw the pegs off the stock to their overall height.

## 2. Bevel the tops



**1**  
**Insert the pegs in a jig.** Drill  $\frac{1}{4}$ -in. holes through a piece of medium-density fiberboard (MDF) and insert the pegs. Make sure the sides are aligned and the grain is parallel to the long axis of the jig.



**2**  
**Bevel two sides.** With the tablesaw blade tilted to  $19^\circ$  and the fence carefully set, bevel the first face of the pegs. Then flip the jig body and bevel the opposite face.

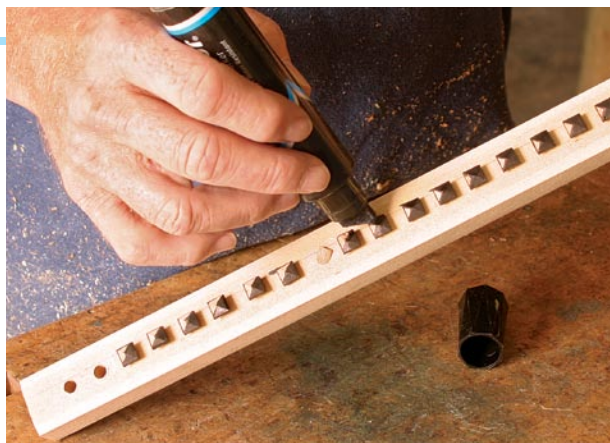


**3**  
**Turn the pegs.** Using pliers, carefully turn each peg  $90^\circ$  in its hole (above) and bevel the two remaining faces (right).



## 3. Apply the finish

**Expose the sides of the pegs.** To apply dye to the whole cap of each peg, use a thin rod or nail punch to press each peg almost halfway out of the jig. Use a permanent marker to dye the caps of the pegs, unless you intend to use shellac as a topcoat. In that case, use a water-based dye.



**Remove the pegs.** Use a rod or nail punch, clamped in a vise, to press each peg out of the jig.