

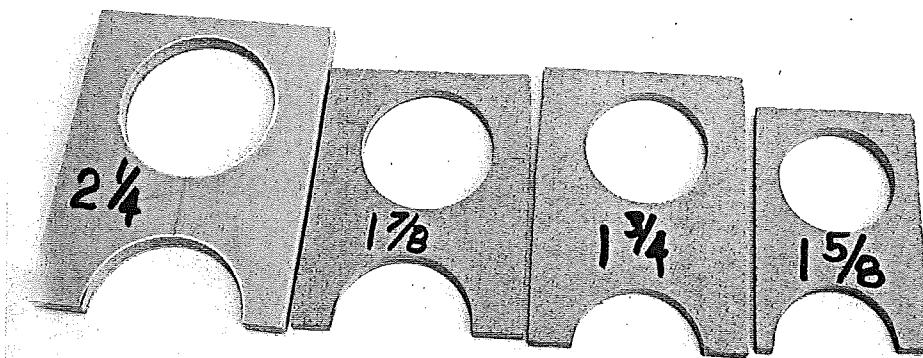
TOOLS

The tools I have used in the production of these ornaments are ones that most woodturners have on hand in their workshops. In most cases, you will find you can use the tools you already have to make the cuts necessary to complete the projects. If the tools and materials list calls for a $\frac{3}{8}$ " (10mm) gouge, and you do not have one, you could easily use a $\frac{1}{4}$ " (6mm) or $\frac{1}{2}$ " (13mm) gouge instead. Sometimes specialty tools are required, but often these can be made by shaping existing tools to create the necessary items. Occasionally, you might need to purchase a specialty tool, but this is just an opportunity to add another useful item to your tool rack.

Woodturning requires sharp tools and practice, and practice requires evaluation, or little progress will be made. Keep your tools sharp, practice, evaluate your progress, and have fun!

TEMPLATES

I make and use templates to check the dimensions of cylinders I am turning. I make the templates out of a $\frac{1}{4}$ " (6mm)-thick piece of tempered Masonite. To make your own templates, cut the Masonite into pieces about 3" x 5" (76 x 127mm). Mark a line down the center of each piece. Determine the size of the holes you need to drill based on the size of the drill bits you use most often. I use multi-spur bits ranging in size from $\frac{1}{2}$ " (13mm) in diameter to $2\frac{1}{4}$ " (57mm) in diameter. Mark a spot on each Masonite piece to drill a top hole and a bottom hole. Drill holes where you marked them. Now, cut away the bottom portion of the Masonite, so that the bottom hole becomes a half circle (see the photo below). You can use this template to check both the diameter and radius of your cylinders.

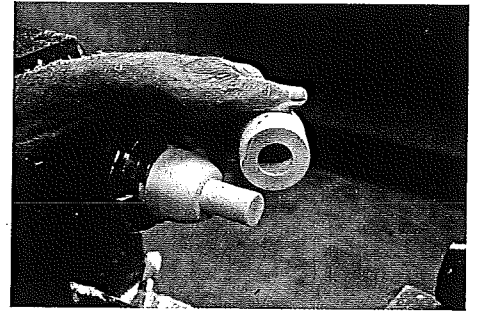


Using templates makes checking the diameter of your projects simple and easy. Make a set like the one shown, including templates for the diameters you turn most often.

To make a mandrel, turn the hardwood of your choice into a cylinder and cut a dovetail on one end. With this completed, you are ready to turn the working end of the mandrel. Determine the length of the shaft needed to securely seat the drilled blank on the mandrel. A mandrel shaft for the bottom of an ornament will need to be about 1½"-2" (38-51mm) long. The mandrel shaft for the top of an ornament can be shorter, usually ¾"-1" (16-25mm) long. You can take the rough shaft sizes from the plan for the project you are turning.

Secure the dovetail end of the mandrel in the chuck and turn the shaft to size. Don't make the shaft diameter too small or the mandrel will be unusable. Try placing an ornament body on the mandrel's shaft to check the fit. Turn a small chamfer on the end of the shaft and check the final dimension. Once the body opening starts to go over the chamfer, the correct diameter of the shaft will be determined. Use the mark on the chamfer as a guide and continue to shape the shaft, removing fine, light shavings and checking the shaft diameter for size. A snug fit with the ornament body is desirable, but not too tight. Holes drilled in different species of wood with the same drill bit can vary in size by several thousandths of an inch, so the mandrel must be turned to fit the smallest hole. If need be, the mandrel's shaft can be padded with masking tape or paper towel to hold body pieces that fit too loosely.

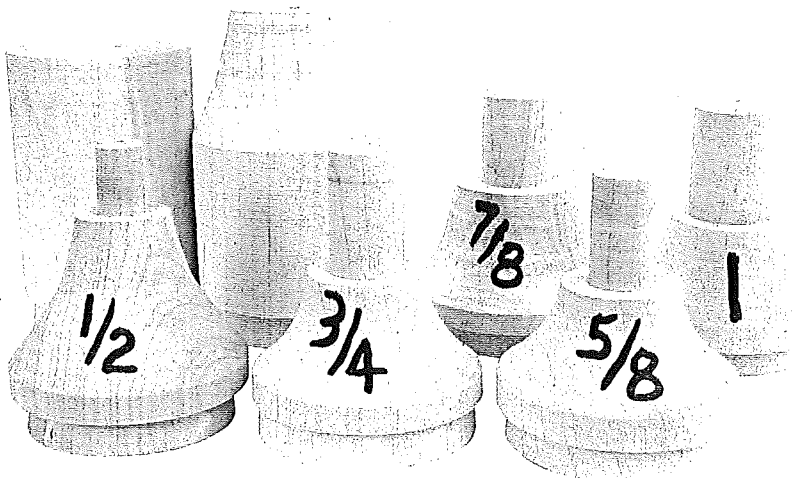
I typically use mandrels with shaft diameters of ½" (13mm), ⅝" (16mm), ¾" (19mm), ⅞" (22mm), and 1" (25mm). The length of the shaft is determined by the requirements of the ornament. I don't put any finish on the mandrels, but simply label them to indicate their size.



Use the project you are creating to determine the necessary length and diameter of the mandrel shaft, and then turn the shaft to those dimensions. Check the fit against the project piece.

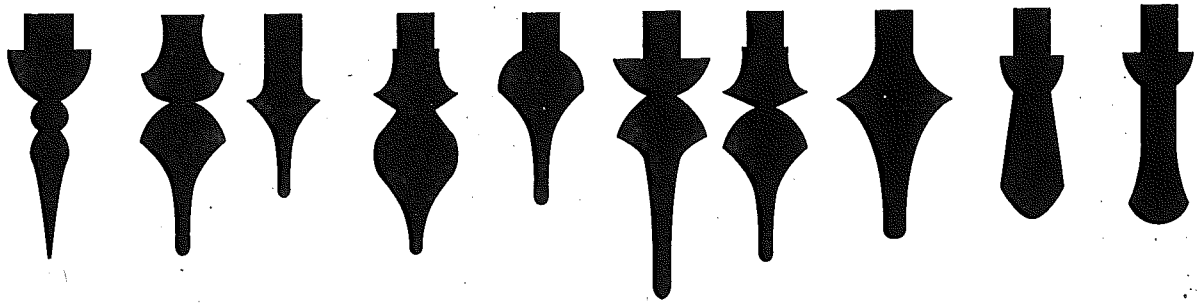


If a project piece does not fit snugly on the mandrel, shim the shaft with masking tape or paper towel to get a better fit.

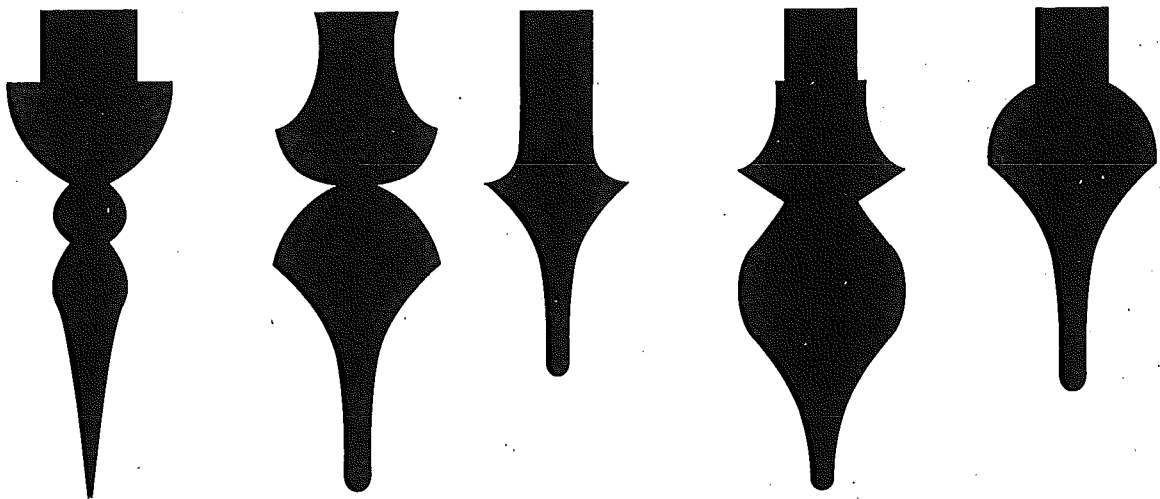


Just like it's useful to have a set of templates, it's also a good idea to have a set of mandrels on hand.

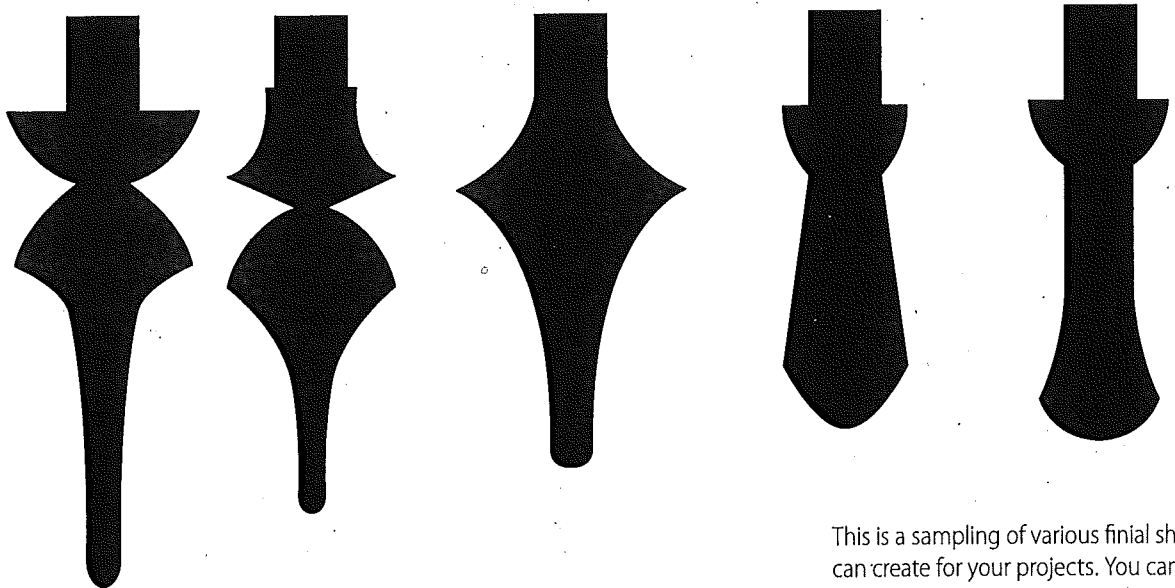
Actual Size



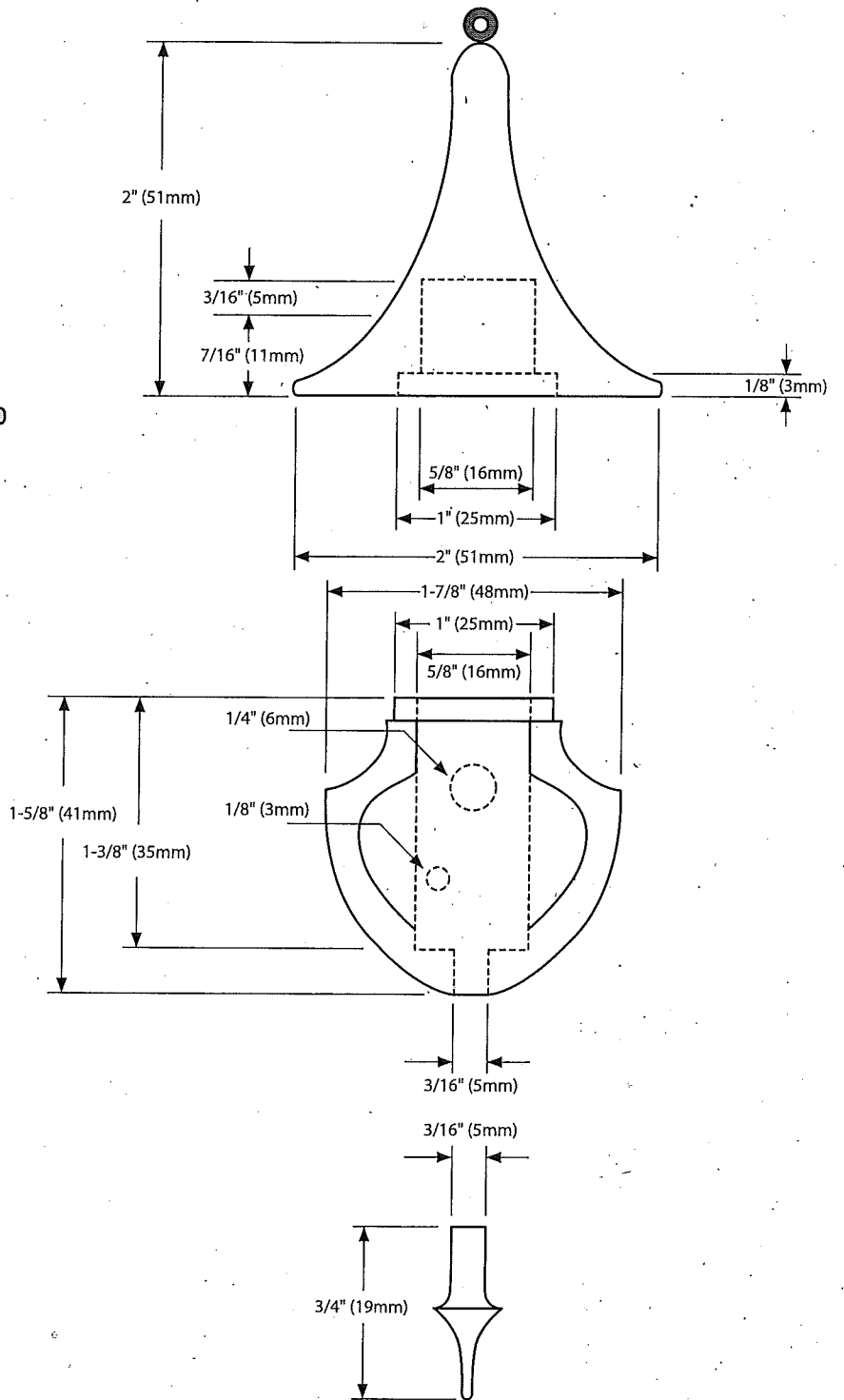
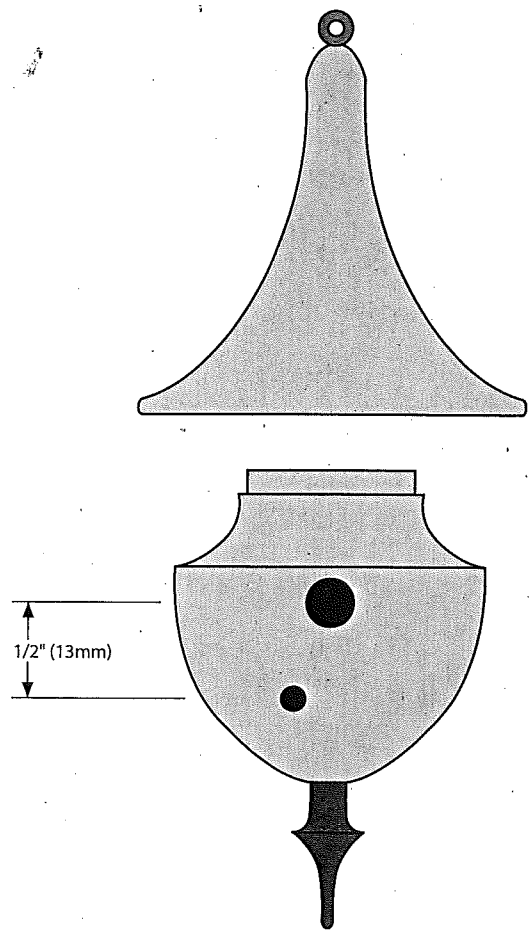
2x Actual Size

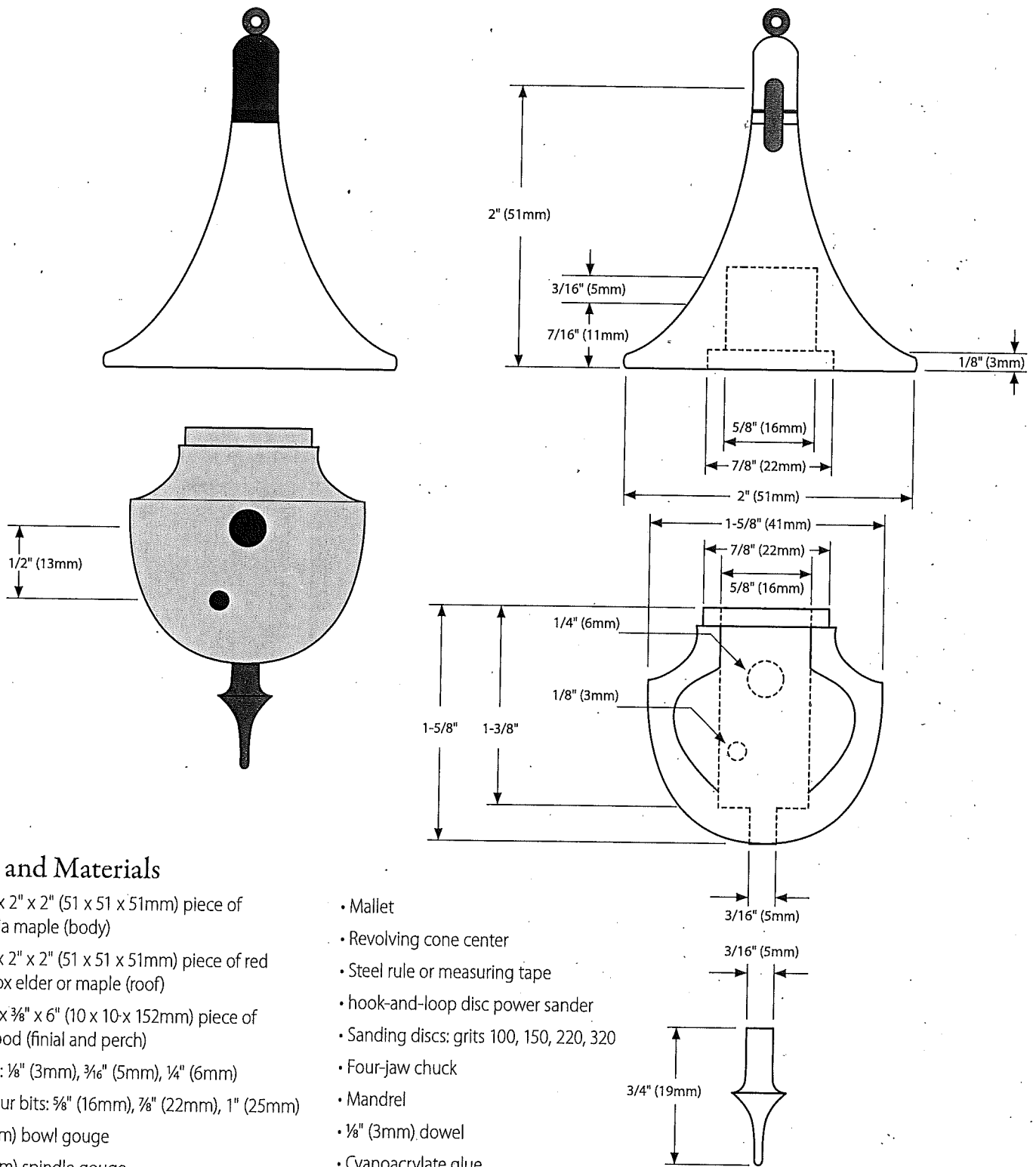


2x Actual Size



This is a sampling of various finial shapes you can create for your projects. You can also design and turn your own finials.





Tools and Materials

- One 2" x 2" x 2" (51 x 51 x 51mm) piece of ambrosia maple (body)
- One 2" x 2" x 2" (51 x 51 x 51mm) piece of red heart box elder or maple (roof)
- One 3/8" x 3/8" x 6" (10 x 10 x 152mm) piece of blackwood (finial and perch)
- Drill bits: 1/8" (3mm), 3/16" (5mm), 1/4" (6mm)
- Multi-spur bits: 5/16" (16mm), 7/8" (22mm), 1" (25mm)
- 1/2" (13mm) bowl gouge
- 3/8" (10mm) spindle gouge
- Variable-speed drill
- Calipers
- Drill chuck
- Formed scraper
- Center punch
- Parting tool

- Mallet
- Revolving cone center
- Steel rule or measuring tape
- hook-and-loop disc power sander
- Sanding discs: grits 100, 150, 220, 320
- Four-jaw chuck
- Mandrel
- 1/8" (3mm) dowel
- Cyanoacrylate glue
- Screw eye
- Steel wool
- Wax
- Wood glue
- Spray lacquer of choice
- Soft paper towel

*The author used these products for the project.
Substitute your choice of brands, tools, and materials as desired.*