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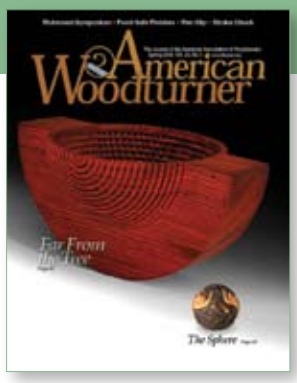

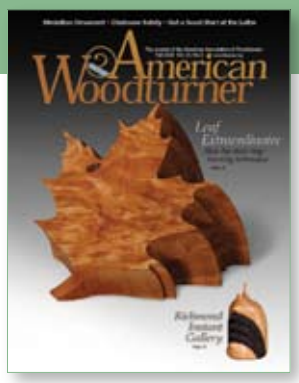

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The Scoop on Ice Cream

By Matthew Hill

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American Association of Woodturners

Several years ago this article would have started with the following three steps: Drive to the nearest Wal-Mart or Target and buy an ice cream scoop with a plastic handle. Remove the handle by placing it on the lathe bed and striking it with a hammer to shatter or crack the plastic. Pick up plastic pieces flung far and wide across the shop.

For this effort you'd have been rewarded with a lightweight plated scoop with a skinny tang that was no match for a tub of hard ice cream.

Fortunately, you can now buy an unhandled solid-brass scoop with a confidence-inspiring tang (item #29848; $9.99 from Rockler Hardware; rockler.com, or 800-279-4441). The kit includes a brass ferrule so you won't have to scrounge the Ace Hardware plumbing aisle. So skip the three steps and begin here.

Get started

At the lathe, you will need a 1¼" spindle roughing gouge, a parting tool, a ⅜" spindle gouge, and two 1" skews, one with the traditional straight grind and the other with a radius grind. You'll need a cup center (Oneway markets this as a safe driver) and a revolving cone center. In the event of a tool catch, the turning blank "stalls" on a cup center, preventing damage to the workpiece and possibly you.

For stock, select a 1½×1½×6½" dense, close-grained wood blank.

Prepare the blank

Mount the blank between centers. Turn the blank round with a spindle roughing gouge. Remove the blank and mount a drill chuck in the headstock. Chuck in a ⅜" brad-point bit and mark a 1¼" drilling depth by placing a piece of masking tape on the bit (¼" deeper than the length of the 1" scoop tang).

Remount the blank between centers using the drill bit as the headstock center. Advance the tailstock slightly while turning the blank by hand to start the drill bit into the wood. With the lathe set at a slow speed (about 500 rpm), turn on the lathe. To drill, stop the blank with your left hand and advance the tailstock quill with your right hand (**Photo 1**). If you need to clear chips from the hole, stop the lathe, back off the tailstock, and twist and pull the blank from the drill bit.

To mount the blank for turning, remove the drill chuck from the headstock and replace it with your cup center. Mount a revolving cone center in the tailstock and mount the blank between centers. The cone center fits into the drilled hole, and all subsequent turning centers on this hole. If you don't have a cone center, you can make a cone-shaped

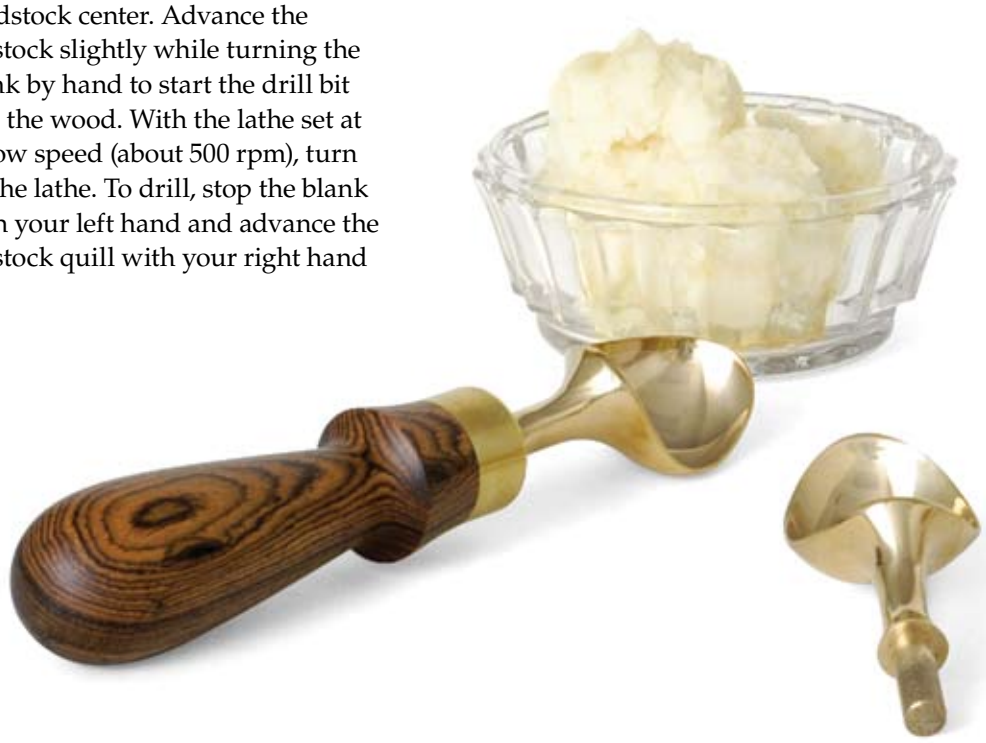
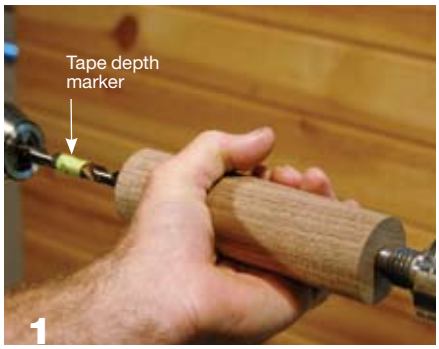


Photo: John Hetherington

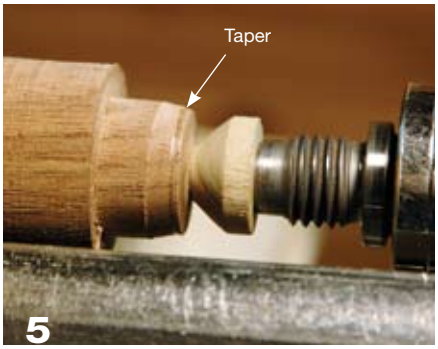


Hold the block with the left hand while advancing the quill with the right hand. To stop the drilling, remove your left hand.

If you don't have a cone center, turn shop-made cone-shaped covers to fit over your revolving cups.

One option: Turn a cone that fits on the end of your cup center. The cone should taper down to a diameter less than ⅜".

With a parting tool and calipers, size the tenon with the lathe running. Set the calipers to the outside diameter of the ferrule.



A small burnished area on the taper at the end of the tenon establishes the finished diameter of the tenon.

Use the skew as a scraper to size the tenon to match the diameter marked by the ferrule. Take light cuts and test the fit frequently.

cover to fit over your revolving cup center (**Photo 2**). For a simpler but less permanent option, turn a cone that simply fits on the end of your cup (revolving) center (**Photo 3**).

Fit the ferrule

Mark the length of the ferrule on the blank. Begin sizing the ferrule tenon by setting calipers slightly larger than the inside diameter of the ferrule. Place the calipers on the spinning blank, and cut with a parting tool until the calipers slide over the tenon (**Photo 4**). Turn the remaining tenon length to this diameter. Make sure the caliper tips have been carefully rounded and smoothed at the ends. (Any small point or roughness could cause the calipers to catch and be thrown toward you.)

Fitting the ferrule is a process of trial and error, repeatedly cutting and testing until you reach the desired fit. Begin by cutting a small taper on the end of the tenon (**Photo 5**). Try to force the ferrule onto the taper using a twisting motion as though threading it on. This creates a mark close to the finished diameter of the tenon.

Using the parting tool, cut down to the mark. Cut and test until the ferrule fits snugly over the end of the tenon. Now use a skew chisel as a scraper to cut the entire length of the tenon to this diameter (**Photo 6**). Keep the tenon straight by sighting it over the ways of the lathe bed. Avoid undercutting the tenon.

I like to push and twist the ferrule all the way on. It should be a tight fit but not so tight you can't remove

Remove the ferrule, then take light cuts with a skew to clean up the shoulder on the ¾"-wide tenon.

With the long point of the skew, make a series of V-cuts to part the handle from the lathe.

the ferrule to protect it during the upcoming sanding steps.

Before starting to form the handle, clean up the tenon shoulder using a skew chisel and a shoulder cut (**Photo 7**).

Shape the handle

With the ferrule fitted, the rest of the project is all about design and spindle-turning skills. Turn the coves and beads with the ⅜" spindle gouge. Rough out the large gradual curves with a spindle roughing gouge and refine the contour with a radius skew and a planing cut. Rough out the rounded ends with a spindle gouge and refine the shape with a radius skew and a rolling cut.

Before sanding, I like to finish-turn the end of the handle so there is about ¼" of wood still driving the piece. On a project where all of the turning can be done with cutting tools, I'll start sanding with 180 grit, move to 220, and finish with 400 grit (400-grit paper actually burnishes the wood, which feels good and produces a low sheen).

Before sanding, reduce the lathe speed to about 500 rpm. Be careful to preserve your detail. If you can't remove the ferrule, cover it with masking tape. The best method I have found for sanding contours is to apply the sandpaper to a ½"-thick foam pad using 3M Spray 77 or Spray 90. (Both adhesives release when placed under a 100-watt bulb for a minute or so.)

The 1"-thick foam sanding blocks sold at paint stores are an ideal density for sanding curves, cylinders, and tight radii. Cut them to the size you need and apply sandpaper over the existing abrasive with one of the adhesives mentioned above.

After finish-sanding, slide on the ferrule and clean up any torn grain at the top of the ferrule with the skew chisel and a shoulder cut. If you're using a wood cone center, cut all the way to the cone.

For the final step, part the handle from the waste. First, back the pressure off between centers. Then, using the long point of a traditional skew, make a series of light V-cuts (**Photo 8**). If you're careful you can turn down the waste to less than 1/16".

Now make the final parting cut slightly beyond the end of the handle so that no fibers break off inside the handle. Put a hand under the handle to catch it as you part through. Finish-sand the end of the handle.

Assemble and finish

To secure the ferrule, place a small bead of epoxy around the inside bottom of the ferrule. Slide it on and use mineral spirits to clean up any squeeze-out. Then spread a generous amount of epoxy in the hole and push the scoop in until it seats. There should be a little bit of squeeze-out to clean up with mineral spirits. After the epoxy cures, apply an oil finish. (I use mineral oil.)

Buy ice cream. Scoop, eat, and enjoy.

A few words about design

Design involves form and function, and function includes comfort and strength. The handle should feel good in the hand and not break when applied to a pint of Häagen-Dazs Swiss Vanilla Almond. A simple cylinder would achieve this. But we're after more. We're on a quest for beauty! We want to transform the commonplace, the everyday object. We want the ice cream scoop to be a source of inspiration for generations to come, the distillation of a mature and profound aesthetic.

I generally work more efficiently and have fewer dogs if I spend some time sketching designs on paper. I make full-size sketches so I can use them to establish critical diameters when I begin turning. Although drawings help, good design evolves through the process of making lots of things and then critiquing them. Critiquing your own work and the work of others is essential to the development of ideas and the refinement of design.

If you are at a loss for ideas, then copy a profile that you like. You can learn a lot this way. Remember: Creating a series of coves and beads on a cylinder is an exercise, not a design. Coves and beads are elements of design, often used to accentuate areas of transition.

—Matthew Hill

Matthew Hill (mhillturn@sbcglobal.net) is a woodturner and turning instructor who lives in Oklahoma City, OK.