

Finial

FUNDAMENTALS

Joe Larese



I became interested in turning delicate finials after watching Cindy Drozda's *Finial Star* DVD. Until then, most of my lidded boxes were topped by furniture-style knobs that were nothing like Cindy's slender and elegant work. With plenty of practice and perseverance, I began turning long, thin finials, and I soon realized the reason for my success was twofold. First, I developed the skills necessary to make fine cuts. Second, and just as important, I followed the process shared in this article that separates the task into manageable steps, with the finial divided into working sections, each of which is completed before the next begins. Working the blank from right to left (tailstock to headstock), the trick is to clear away enough wood to make the necessary cuts while keeping enough mass on the headstock end to support the delicate work.



1 Turn the first taper with a spindle-roughing gouge.



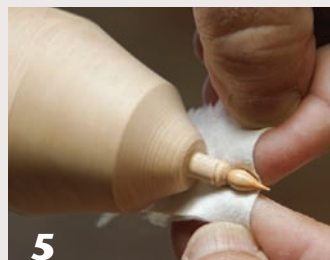
2 Reduce the first working section to 1/4" (6mm) diameter with a parting tool.



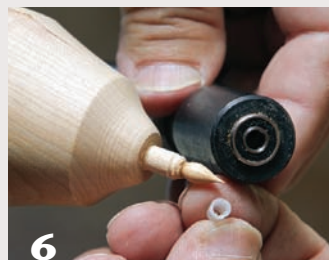
3 Use a 3/8" (10mm) spindle gouge to create a sloped taper to meet the 1/4"- (6mm-) diameter tip section.



4 Add a concave section to create the flame tip.



5 Polish the flame tip.



6 Use a miniature live center with protective plastic tip.



7 Using the mini live center, reduce the next working section to $\frac{3}{8}$ ".

Many of the finials I make are designed to cap the top of a turned box. For that reason, the finial base is usually a large, semicircular bead that leads to a cove, or a V cut that blends into a cove. The cove acts as a finger hold, allowing the lid to be easily lifted, and I size the cove to fit small fingers. From there, the finial can become much thinner, and I usually turn a long vase shape that rises to a graceful curve, ending in a flame-shaped tip that rests on a "saucer." This shape also works well for the icicle part of a turned holiday ornament, but the larger bead is omitted and replaced with a taper sized to the opening of the globe portion of the ornament. I mix and change the shape of various elements, but I try to avoid excess. One of my favorite finials was made by Jean-François Escoulen. An elongated flame emerges from a small cove flanked

by two delicate beads to make a simple, beautiful shape.

Preparing the blank

Start with a 2" (5cm-) diameter blank about 5" (13cm) long. Straight grained, air-dried cherry, soft maple, and birch are good practice woods. Make sure to form a tenon and shoulder that allow the four-jaw chuck to give the best possible support. Mount the blank and bring up the tailstock with a live center, removing the point from the live center if possible. The point of the live center will create a hole at the tip of your turning, which is not a desirable feature. I prefer to use a spindle-roughing gouge to turn a taper from the midway point down to the live center (*Photo 1*).

Turning the tip and saucer

Use a parting tool and a series of cuts to reduce the tip to about $\frac{1}{4}$ "

(6mm) diameter by 1" (25mm) long (*Photo 2*). Switch to the $\frac{3}{8}$ " (10mm) spindle gouge to taper the stock material to meet the $\frac{1}{4}$ " diameter tip section (*Photo 3*). Creating this transition is critical and this step is repeated whenever there are two different adjoining diameters. Leaving a square shoulder between these varying diameters will likely result in a serious catch.

Readjust the toolrest and concentrate on the $\frac{1}{4}$ "-diameter working section to make the next cuts. Using a $\frac{3}{8}$ " spindle gouge, create an ellipse that will eventually form a flame-shaped tip. Remove the tailstock and gently use the freshly sharpened edge of the spindle gouge to cut a concave portion at the very tip (*Photo 4*).

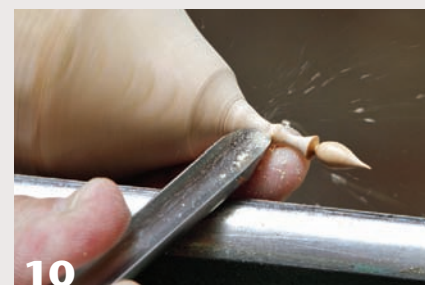
It is important to shape, sand, and polish the tip while having the support of the thicker material on the headstock end. I usually start ▶



8 Using the long point of the skew chisel, define the intersection of the flame tip and saucer.



9 Restore the taper on the stock to meet the new $\frac{3}{8}$ " working section.



10 Use a finger for support when making a delicate cut.



11 Restore the taper to meet the section for the elongated vase.



12 A peeling cut with the skew chisel begins to define the vase shape.



13 A planing cut with the skew chisel showing finger support for the thin shaft.



14 A planing cut with the skew chisel further defines the vase shape.

with 220 grit and use small pieces of abrasive, shaping each to complement the curve of the cut surface. Creating a sharp crease in the abrasive helps to get into tight intersections and avoids rounding over crisp details. I usually sand to 600 grit and use a Tripoli product to polish each portion (*Photo 5*).

A miniature live center can be used to support the work (see sidebar) (*Photos 6, 7*). Use the spindle gouge or the long point of a $\frac{1}{2}$ " (13mm) skew chisel to make

a V cut to define the base of the flame (*Photo 8*). Sand and polish the intersection at the flame's base before using a parting tool to reduce another inch of the blank down to about $\frac{3}{8}$ " (9mm) diameter. Reshape the adjacent taper down to the newly established $\frac{3}{8}$ " diameter (*Photo 9*).

To transition from the flame to the next sections, cut a saucer approximately the same diameter as the widest part of the flame, and complete the saucer with a

finishing shear cut. Working from that diameter, use the $\frac{3}{8}$ " spindle gouge and an underhand grip to make a gentle sweeping cove cut to the left. I use my index finger to provide support and cut in from the right to form a wide cove, the bottom of which is the thinnest part of the finial. Care must be taken because excess pressure will cause chatter and could break the finial (*Photo 10*). Sand and polish the just-completed section under the saucer.



15 A peeling cut with the skew reduces the stock diameter for the next cove.



16 Form the base of the finial using a $\frac{3}{8}$ " spindle gouge.



17 Make a V cut with the long point of the skew chisel to define the vase-to-cove transition.



18 Use a $\frac{3}{8}$ " spindle gouge to cut the cove.



19 Define the intersection between beads with the skew chisel.



20 The completed finial before parting off the lathe.

Turning the shaft

Starting about 1" (25mm) from the chuck, re-turn a taper to provide the clearance to form the shaft and the elongated vase shape (Photo 11). In a series of cuts, use a portion of the skew chisel to peel away waste to rough out the vase shape (Photo 12). Using an underhand grip and supporting the shaft with a finger, orient the skew chisel to make planing cuts to shape the shaft and the vase (Photos 13, 14). Again, sand and polish this portion before moving on.

Turning the base and cove

Using the skew chisel, peel down a portion to the left of the vase base

to a diameter of about $\frac{3}{4}$ " (19mm) to block in the portion of the finial that will be a cove (Photo 15). At this point, I like to define the end of the finial base with a parting tool, shear cut the finished diameter, and turn a large bead to meet the cove intersection (Photo 16). These cuts go quickly because the blank has plenty of support. Using the long point of the skew chisel, resume defining the intersection of the vase and what will become the cove (Photo 17).

Turn a cove that will connect the vase base with the large bead at the base of the finial (Photo 18). At this point I elected to add a smaller bead with the $\frac{1}{4}$ " (6mm) spindle gouge,

followed by careful use of the skew chisel's long point to create a crisp transition at the intersection of the two beads (Photo 19). Sanding the cove and bead completes the finial (Photo 20). ■

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Mini live center

The torque needed to turn the bearings on a standard live center is capable of twisting and breaking a thin finial. For that reason, I make miniature live centers with a small sealed bearing that spins easily. Router bit pilot bearings are excellent quality, reasonably priced, and can be readily found by searching online for "replacement router bit bearings."

Turn a blank to match the Morse taper of your tailstock or consider purchasing an arbor blank that has a Morse taper. I get mine from Victor Machinery Exchange (under "Product Index" and then "Arbors, blank" on their website).

I place the arbor blank in the headstock spindle and drill a slightly oversized hole to fit the outside diameter of the router bit bearing, then change to a smaller bit and drill a deeper hole to provide clearance for the tip of the finial. I carefully place a couple of drops of epoxy on the outer part of the bearing (avoid getting any epoxy on the inner portion), and gently bring up the tailstock with a cone center to align the bearing.

Cushioning material should be used to protect the part of the finial that is sanded and polished. I have good luck using the cut-off ends of glue spouts. The tiny cone shape helps center and protect the finial tip.

Making light cuts and supporting the work are the most important aspects of successfully turning delicate finials. The miniature live center will become a useful accessory as you gain experience.



21 Drill the arbor blank to receive a bearing insert.

Finials GALLERY



Keith Tompkins, Untitled,
2010, Walnut burl, ebony, 5" x 6" x 14"
(13cm x 15cm x 36cm)



Keith Tompkins, Untitled, 2007,
Cherry burl, ebony, 6" x 4" (15cm x 10cm)



Several years ago, I set upon a quest to create a finial that was sleek, fluid, and graceful without copying the traditional finials we have grown to love. My inspiration for this design comes from visualizing the curves of honey flowing down a string, just before it drips.

—Scott Hackler



I push myself, even if it means the possibility of losing a piece—I can always pick up another length of wood. By pushing limits, I get closer to experiencing my full capabilities.

—Ashley Harwood



Keith Burns,
untitled, 2012,
Bradford pear, dye,
8" x 3½"
(20cm x 9cm)

Keith Burns, untitled, 2013,
Black ash burl, African blackwood,
4¾" x 4½" (12cm x 11cm)



Ultra thin and fragile finials are proof of technical expertise, but they are frequently impractical for functional or even decorative vessels. I strive for practical finials that complement the vessels they adorn. The finial forest shown here was an exercise in exploring finial forms.

—Jamie Donaldson



In the late 1960s, my standard open-spiral work progressed into twisted hollow forms. Developing a twisted finial to decorate the top of my work seemed a natural progression. The twisted finial and thin, twisted-stemmed goblets are now my personal signature.
—Stuart Mortimer

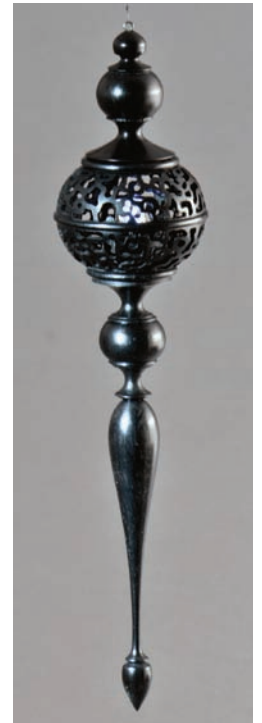


Jean-François Escoulen, boxes.

Cindy Drozda, *Sue's Blue Waterfall*, 2012, Maple burl, African blackwood, dye, moonstone, paua shell, 14k gold, 8" x 10" (20cm x 25cm)



Cindy Drozda, *Cleopatra*, Boxelder burl, dye, African blackwood, akoya pearl, 14k gold, 12" x 8½" (30cm x 22cm)



Finials are the final touch of elegance for a vessel or reliquary. It is a matter of understanding the transition between beads, coves, ogees, and fillets, and then putting the elements together in a way that pleases the eye.
—Steve Sherman



The finials made for the large fixed-tool rose engine pieces are inspired by the work of central European ivory turners of the 17th and 18th centuries. They are the last element to be completed, and with the end in sight, the temptation to rush is hard to resist. Part of the challenge is maintaining the patience and attention to detail that brought all the rest of the piece to fruition.
—Jean Claude Charpignon