



Twisted Icicles

Christmas ornaments with a different twist

Turning Christmas ornaments is a fun-filled fall project. Here's a variation that adds the challenge of a double-barley twist to the popular icicle design.

Get started

For lathe tools, you will need a 1¼" spindle roughing gouge, ⅛" parting tool, ⅜" spindle gouge or ½" skew chisel, and ¼"-square scraper. To hollow out the globe, use a small bent- or curved-angle hollow tool.

The twists on the icicle require a lathe index system or an externally applied index system. You'll also need a ⅞" cup drive, a 4-jaw scroll chuck with 2"-deep jaws, a 4-jaw scroll chuck with 1" jaws for small-diameter work, and a Jacobs chuck.

For detail on the captured ring, a curved dental pick is ideal. (The next time you visit your dentist, ask the hygienist for worn-out dental picks—they make great mini tools for projects like this.)

To cut the icicle twists, you'll need a ¼" tungsten carbide rasp; Dixie Industrial Supply (dixiepins.com) is one source of 80-grit rasps.

For turning stock, select 3×3×6" stock for the globe. I turned several globes from the seasoned trunk of my family's Christmas tree from the previous year. Select the trunk area where many branches exit, and then bandsaw a 6" segment to be turned between centers. The icicle requires 1×1×6½" stock in a contrasting species. For this project, I used Honduran redheart, which

By Bill Bowers

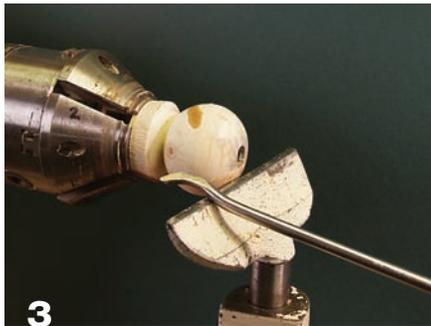
Photo: John Hetherington



1
With a spindle roughing gouge, turn the globe stock to about a 2½" diameter.



2
Mount a 3/8" brad-point bit in a Jacobs chuck, then drill through the globe.



3
With micro hollowing tools, reduce the globe wall thickness to 1/8".

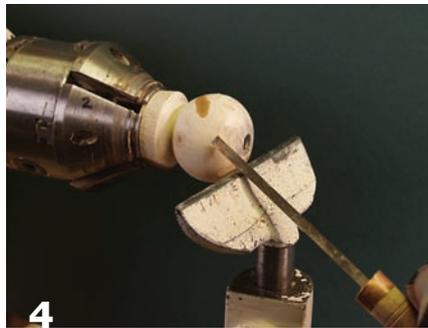
turns easily and details well.

When turning the globe, wear a face shield and a throw-away shirt, as a lot of pine sap will stick to your clothing and tools.

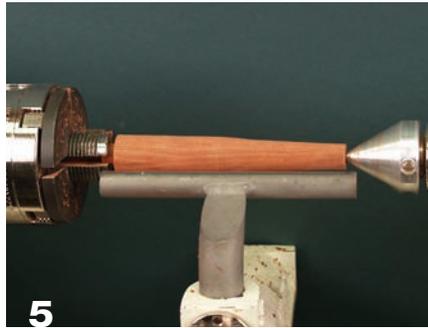
Turn the globe

Mount the 3x3x6" turning stock in spigot jaws at one end. Then, bring up the tailstock. With a 1¼" spindle roughing gouge, turn the stock round. Note the pleasant appearance of the numerous branch knots as shown in **Photo 1**.

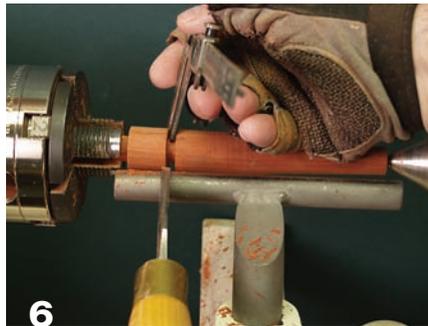
Turn a 2½"-diameter sphere, being sure to leave enough stock



4
With a ¼"-square scraper, square the opening of the globe bottom.



5
After turning the stock round, reduce the icicle diameter at the headstock to 9/16".



6
With a thin parting tool, reduce the icicle diameter to fit the globe's bottom opening.

near the spigot jaws to support drilling. Mount a Jacobs chuck and 3/8" brad-point bit in your tailstock. After dialing down the lathe speed to about 200 rpm, drill through the sphere as shown in **Photo 2**.

Using small hollowing tools, as shown in **Photo 3**, reduce the interior of the globe to about 1/8" thick. Use compressed air to frequently remove small chips from the interior of the globe.

Check the wall thickness with a feeler gauge bent from a coat hanger. Then clean up and square the globe opening with a ¼"-square

"I turn the seasoned trunk from the previous year's Christmas tree."



7
For a captive ring, use a cove cut to create the center band.

scraper, as shown in **Photo 4**.

With a parting tool, bring up the tailstock and reduce the tenon to about 5/8" diameter. Sand the sphere with progressively finer grits, moving from 180 grit to 400 grit. With a 1/8" parting tool, part off the globe.

Turn the icicle

Mount the icicle stock between centers and turn the stock round. With a skew, turn a slight taper at the tailstock. At the headstock, turn the dowel to about a 9/16" diameter to fit #1 Talon or comparable jaws, as shown in **Photo 5**.

With calipers, measure the globe's largest opening. Then use a parting tool to turn a matching spigot about 1½" from the end stock, as shown in **Photo 6**.

Use a 3/8" spindle gouge to turn a cove as shown in **Photo 7**. Leave a 3/32" rim for what will become the captive ring.

With a sharpened dental pick,



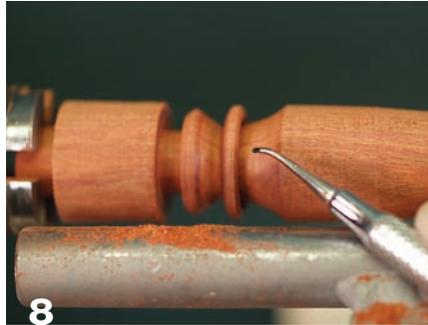
round over the ring, slightly undercutting the ring on each side, as shown in **Photo 8**.

Delicately sand the ring with 180- to 400-grit sandpaper, as shown in **Photo 9**. Before sanding, apply stick wax to your sandpaper. The wax will act as a lubricant, cooling agent, dust suppressant, and sanding sealer for non-oil finishes.

Part off the ring with the dental tool, as shown in **Photo 10**.

Add the twists

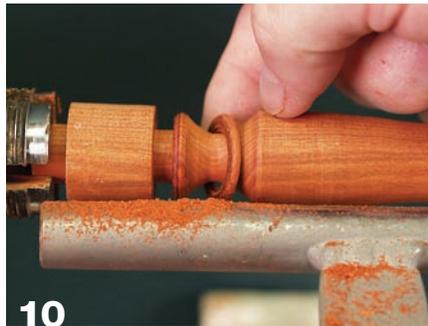
Shape the remainder of the icicle at the tailstock end. Lay out a thin double-barley twist as shown in



8
A used dental pick (sharpened with a hook) is ideal for undercutting the captive ring.



9
Before parting off the captive ring, smooth the surfaces with wax-loaded sandpaper.

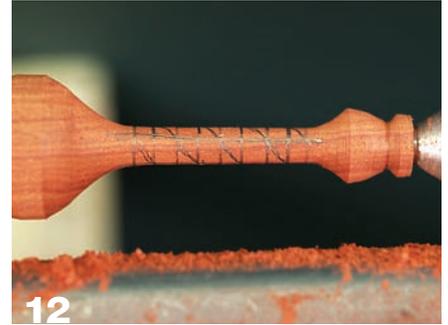


10
After sanding the captive ring, part off the ring with the dental tool.

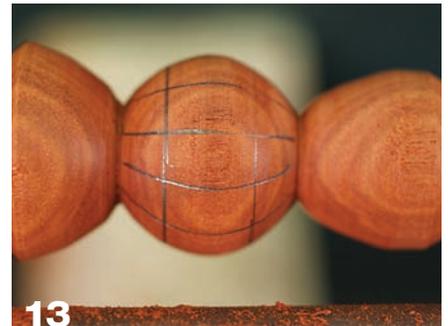
Photo 11. On a 24-point lathe index system, mark horizontal pencil lines with the tool rest dead center at 6, 12, 18, and 24. These are the start lines. Next, mark circumferential lines every 4 mm, then divide the spaces in half. These are the pitch (degree of slope steepness) lines. For a right-handed twist, start at the tailstock end and draw a diagonal pencil line from the lower right-hand corner to the upper left-hand corner of the rectangle. Follow sequentially into the adjacent forward rectangle until you reach the headstock.



11
At the tailstock end, lay out start and pitch lines for the double-barley twist.



12
Lay out the two cut lines for the right-handed double-barley twist.



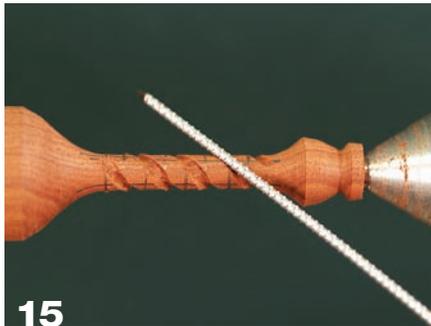
13
Lay out 12 horizontal start lines and two circumferential pitch lines.

Skip a rectangle at the tailstock end and draw another line yielding two cut lines, as shown in **Photo 12**. Next, draw the layout for spirals on the sphere. Spirals that are about 25–33 percent of the circumference are most appealing. To give a smooth curve to the surface of the sphere, space pitches narrower at the poles.

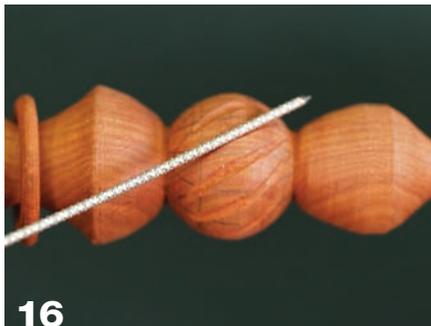
Mark 12 equidistant horizontal lines utilizing the 24-point index on the lathe. Then add two pitch lines, one at the Tropic of Cancer and one at the Tropic of Capricorn, as shown in **Photo 13**.



14
The section of the sphere shows 12 cut lines for a left-handed twist.



15
With a 1/16" rasp, cut the coves for the barley twist. Between cuts, lock the lathe spindle.



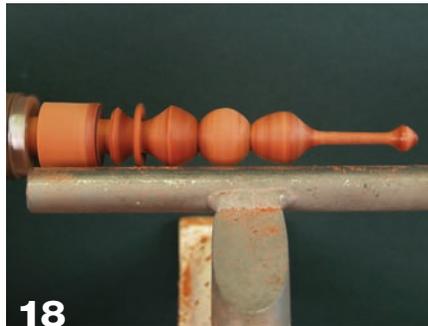
16
Use the rasp and lathe index to cut the 12 coves on the sphere.

Starting at the headstock end, draw a pencil line from the lower left-hand corner of one trapezoid to the upper right-hand corner. Continue the pencil line into the next trapezoid until you reach the tailstock end. Do the same for the other 11 trapezoids to yield 12 left-handed cut lines, as shown in **Photo 14**.

Cut the twist lines with a 1/16" rasp, as shown in **Photo 15**. Lock the spindle and carefully rasp one twist, unlock the spindle, rotate the icicle, and continue the cuts. Remember to use a delicate touch



17
Use ropes of twisted sandpaper to smooth the twists in the icicles.



18
Turn a delicate ball on the tip of the icicle. Sand the tip carefully.

on this thin, fragile icicle.

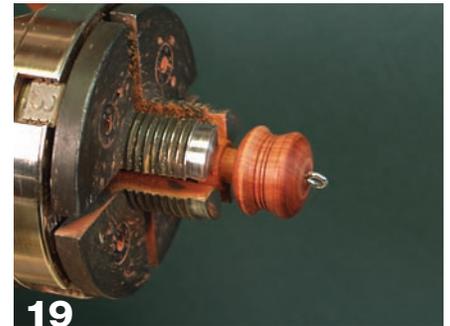
Use the same technique to rasp the 12 cut lines on the sphere as shown in **Photo 16**.

After establishing all the cut lines, sand the grooves with sandpaper twisted into 1/16" ropes, as shown in **Photo 17**. For a smooth appearance, use 80, 120, 150, 240, and 320 grits on all surfaces of the cut coves. Sand with a delicate hand. Use waxed sandpaper for a final sanding of the icicle. (Because wax will clog the coves, avoid applying on the twists.) Be sure to remove all pencil marks.

After the sanding is complete, fashion the icicle tip, as shown in **Photo 18**, and sand it carefully. Part off the icicle. Verify the fit between the sphere and globe, then join the two pieces with thick cyanoacrylate (CA) glue.

Turn the ornament cap

With calipers, measure the diameter of the opening in the



19
With the lathe running at about 200 rpm, thread the screw into the ornament cap.

globe top. Turn a tenon to the diameter of the opening, then shape the cap. Sand through the grits listed earlier.

With a 1/16" bit, drill a small hole for a brass eyelet. Dial down the lathe speed to about 200 rpm and allow the lathe to turn the eyelet into the cap, as shown in **Photo 19**. With CA glue, adhere the cap to the globe.

Apply a finish of your choice, being careful to avoid drips around the captured ring. On these turned ornaments, most buyers prefer a gloss finish over a satin finish.

Bill Bowers (turningsbb.com) lives in Anchorage and is a member of the Alaskan Woodturners Association.