

Inside-out ILLUSION ORNAMENT

BY WALT WAGER

Inside-out ornaments are typically made by using four rectangular blanks that are glued together, turned, then separated and glued back together so that the outside shape can be turned to complement the inside shape. This can be a tedious and exacting process with an uncertain outcome. This article presents a way to get the inside-out look without gluing and regluing. You might call it an “inside-out illusion.”

Use a template

A template provides a roadmap for the project (**Figure 1**). Start the project with a blank of matching 2-1/8" square × 3-1/2" (5cm × 9cm) long blank.

Transfer measurements

Carefully measure, mark, and connect the lines for the drill holes around the blank using a square (**Photo 1**). This is important because the better the holes are aligned, the smoother the inside will be. Use a center punch to mark the center of the holes to be drilled with a Forstner-style bit (**Photo 2**).



Create a template

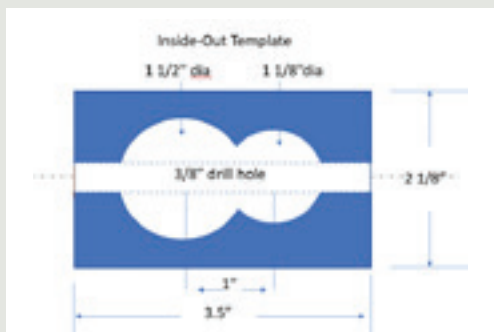
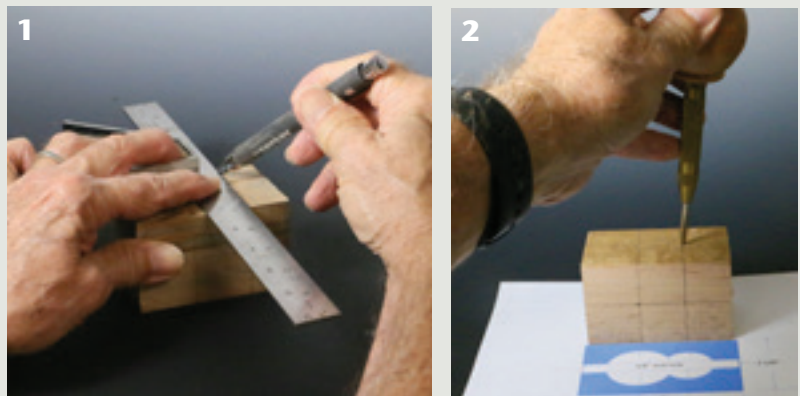


Figure 1 Draw a template to guide your turning. The holes should be located 1" apart so they overlap, but their location along the central axis is not critical—centering them by eye will work.

Mark the blank



Transfer measurements to your blank, connecting the lines around the perimeter of the blank that indicate the location of the hole centers. Mark the centers with a center punch.

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Drill the holes

Secure the blank in a drill vise or clamp it to the drill table—do not try to hold the blank with your hands. I drill the 1-1/8" (3cm) hole first because doing so makes it easier to drill the larger hole later (**Photo 3**).

Drill at least half-way through the blank. Rotate the blank 180 degrees and drill the next small hole, meeting up with the other side. The more accurate the better. Rotate the blank 90 degrees and repeat the drilling exercise for the remaining two sides (**Photo 4**). Switch to the 1-1/2" (4cm) Forstner-style bit and drill the lower set of holes (**Photos 5, 6**).

Finish the interior

If the inside needs sanding, select a short piece of turning stock that fits in your chuck jaws. Turn a tenon on the end that loosely fits the smaller hole and glue part of an abrasive sheet to it (**Photo 7**). This can be used in the chuck at a slow speed. If you want to paint the inside, do so now (**Photo 8**).

Drill for finials

Drill a 3/8" - (10mm-) diameter hole through the blank for the finials (**Photo 9**). Remove the blank from the chuck and replace it with a jam chuck with a 3/8" -diameter tenon in the center (**Photo 10**).

Mark the blank



A blank this small cannot be safely handheld for drilling; be sure to mount it in a vice or clamp. Start by drilling the 1-1/8" holes, boring slightly deeper than half the blank thickness before turning the blank over to drill from the opposite side.

Repeat the exercise until all four sides are drilled-through.



Switch to the 1-1/2" bit to drill the lower holes using the same technique.

Complete the interior



Sand the interior, either by hand or using a shopmade sanding arbor mounted on your lathe.



This is also the time to embellish the interior, if that's consistent with your design.

Accommodate finials



Through-drill the center of the blank with a 3/8" bit.



Use a shopmade drive tenon (3/8") turned on a scrap blank mounted in your chuck jaws to reverse-mount the blank.

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Shape the exterior

Secure the blank between centers and shape the outside of the ornament (**Photo 11**). I use a 3/8" spindle gouge (**Photo 12**). The ghosting holes make it easy to see where to cut.

Finish the exterior

If needed, you can use a negative rake scraper to remove tool marks left by the spindle gouge (**Photo 13**). Sand the outside using a foam pad while the lathe turns at a moderate speed (**Photo 14**). Apply sanding pressure only from the bottom, keeping your fingers clear of the ornament holes.

I spray a lacquer finish with the piece off the lathe, followed by buffing (**Photo 15**). If you are going to mount an object in the center (like a turned Christmas tree, snowman, or a bird) do so now.

Add finials

People are amazed when they see finely turned finials, and they really aren't all that difficult to do. Here's how I do it.

Turn the exterior



Mount the blank between centers and shape the exterior with a spindle gouge. Aim for uniformly thick walls, following the interior lines.

Finish the outside



A negative rake scraper takes light cuts by design. If you don't have one in your collection, go straight to the abrasives to finish the outside.



Use a finish of your choice. After curing, buffing will take the finish to the next level.

First, if this is one of your first attempts at a finial, find an example that you would like to duplicate. I recommend picking a reasonably simple shape as a good place to start.

Mount a finial blank

With the body of the finished ornament being about 3" long, a 6" (15cm) bottom finial looks good. Start with a hardwood blank (I'm using maple) about 8" long and between 3/4" and 1" (19mm - 25mm) square. I secure the blank in spigot jaws in my chuck (**Photo 16**). This set of jaws allows me to turn the finial without relying on the tailstock for support.

Tackle the finials



Secure a blank for the finials in spigot jaws. If you don't have spigot jaws, you may want to start with a larger blank that will fit your chuck.

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Round the finial blank



Round the blank and taper the tip down to about 1/8".

Round and taper

Using a spindle roughing gouge, taper the blank from the headstock to the end (**Photo 17**). For efficiency, you can round the blank as you're tapering, rather than as two distinct steps. Aim for about 1/8" diameter at the tip (**Photo 18**).

Shape the lower finial

Using a 3/8" spindle gouge, start shaping the end (**Photo 19**). Work your way back towards the headstock, cutting downhill (**Photo 20**). A small skew also works well here—put the bevel on the wood *before* picking up the cut, and keep the bevel on the wood throughout the cut (**Photo 21**). Use the skew or spindle gouge to finish shaping the top of the elongated bead (**Photo 22**).

Using the spindle gouge or skew, continue shaping the finial, working toward the headstock, always cutting downhill (**Photo 23**).

Almost finished; shape the transition to the tenon on the top (**Photo 24**). Using a parting tool, peel the top of the blank down to a 3/8" tenon (**Photo 25**). A preset caliper with rounded tips will help you achieve a correctly sized tenon.

Shape the lower finial



Begin shaping the tip of the finial into an elongated bead. Work your way towards the headstock, shaping the finial in short sections.



A skew can leave a superior surface, although some finial details leave little room for maneuvering. A small spindle gouge is an option for these areas.

Add details



Continue shaping features near the top of the lower finial. Add a transition to the 3/8" tenon that will connect the finial to the ornament.



Use a parting tool and caliper to peel the 3/8" tenon on the top.

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Finish the lower finial

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Sand the lower finial and apply the finish of your choice. The author uses a friction polish, which is easily and quickly applied at the lathe.

Complete the upper finial

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The top finial will feature an eye hook for hanging the ornament. Shape this small feature to be consistent with the design of your lower finial.

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Use an adhesive to attach the finials to the ornament.

The Perfect Final Finish

Beeswax • Carnauba • Mineral Oil



Sand and finish

With the tenon shaped, sand and apply a finish of your choice (**Photo 26**). I like to use a friction polish while the finial is on the lathe because it is fast, and the final result is evident.

Shape the top finial

Using the stub remaining in the spigot jaws, turn a finial for the top of the ornament. Illustrated here is a simple cone with the 3/8"-diameter tenon (**Photo 27**). Notice I have the piece supported with the live center because there is so little material for the jaws to engage.

The resulting top and bottom finials are shown in **Photo 28**. I decided a dark paint finish would contrast well with a maple ornament capturing a Northern cardinal (**Photo 29**). ■

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