

ADDING LEATHER TO TURNED WORK

Denis Beauchesne



During the Covid lockdown, restrictions prompted many woodturners to expand to new hobbies, such as art or music, or try different lathe projects. I started tinkering with leather crafting and thought, “Why not try

hand-sewing leather thread and adding other forms of leather to my turned pieces?” I found that my wood/leather crafting concepts were endless!

In this article, I show a simple woodturned box and a bowl with an

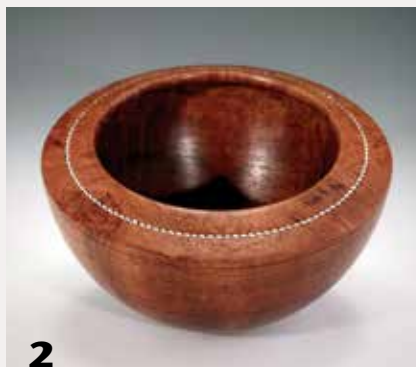
undercut rim to illustrate adding a piece of flat leather and hand-sewn leather thread (Photos 1, 2). I love the clean and striking contrast between the wood and the precisely applied hand-sewn thread.

This project requires some indexing to locate the drilled holes for the thread, but I’ll offer a simple method for doing this.

Sample projects



1 An elm box with maple burl lid. The box’s sidewall includes hand-sewn leather thread, and the lid features a circle of hand-sewn leather, 3" × 3¼" (8cm × 8cm)



2 A birch bowl with undercut rim featuring hand-sewn leather thread, 4½" × 3" (11cm × 8cm)

Hole placement/indexing

Determine a pleasing visual placement of the sewing holes on the wood. Keep in mind you should be able to reach the holes with the sewing needles with your fingers, as shown in the *Helpful Hint sidebar*. A vessel opening of 2½" (6cm) or larger should allow for adequate access.

You will need some kind of indexing function to locate evenly spaced holes on your vessel. Index marks can be achieved with the stops that come on most lathes. For visual

spacing, I prefer to use sixty or more holes. Since my lathe has only forty-eight index stops, I printed and mounted a polar graph on a circle of 1/8" - (3mm-) thick acrylic sheet. PDF polar graphs are available on the Internet. I generated the one shown in *Photo 3* using a demo copy of the Graph Paper Maker software from blackcatsystems.com. Some of these graphs are free, and others can be purchased.

Cut out the center hole on the mounted polar graph to fit onto the lathe spindle. Be sure the chuck is mounted snugly, so the index wheel, chuck, and the lathe spindle rotate in unison.

I made an index board comprising a wood base with magnets and a vertical stop. I positioned two magnets about 5" (13cm) apart to match the centers of my lathe bed ways. I used clear acrylic sheet for the vertical stop for better visibility when positioning the radial marks from the circular graph. The top edge of the acrylic should match the center of your lathe spindle (*Photos 4, 5*).

Place the indexing vertical board onto the lathe bed so that the magnets in the bottom of the board are attracted to the lathe bed, and position the vertical acrylic sheet upright against the index wheel. The index lines, or spokes, then line up with the top of the clear upright.

Drill holes

After pre-turning a vessel to about 75% wall thickness, remove the chuck from the lathe, leaving the workpiece tight in the jaws. Place the graph disk onto the lathe spindle and remount the chuck with your workpiece attached. You are now ready to start drilling the holes for sewing your leather thread. The holes should be wide enough to accommodate the thickness of a ▶

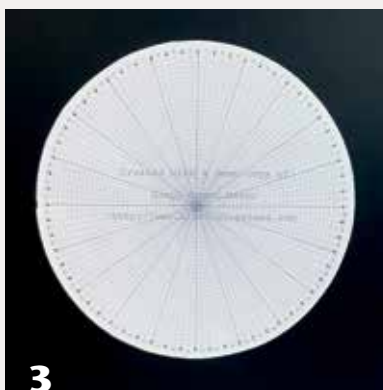
Helpful Hint!

Design with Accessibility in Mind



When designing a turned piece to which you plan to hand-sew leather thread, make sure to allow enough space to work with the thread and needle inside the piece. Adding leather thread works well on a box wall as well as on an undercut bowl rim.

Polar graph for indexing



The author printed a polar graph from blackcatsystems.com with sixty dot segments, fifteen in each quadrant.

ADDITIONAL RESOURCES

EXPLORE!

More information on lathe indexing is available in the AAW's online archives. Log on at woodturner.org and use the Explore! search tool to find these and other articles:

- "Basket Illusion Demystified," by Harvey Meyer, *AW* October 2016 (vol 31, no 5)
- "A Better Index-Locking Pin," by John Lucas, *AW* August 2019 (vol 34 no 4).



Shopmade indexing board



A simple length of wood with embedded magnets, along with an upright of clear acrylic, serve as an indexing board. The top of the acrylic is at spindle height and indicates where to stop each interval.

Drill holes



6 The author uses a Oneway Drill Wizard to drill the holes for the hand-stitching. The drill bit is at spindle height. Drill a new hole at each indexed interval (with the lathe off).



7 A Foredom tool serves as a drill. It is clamped to the Drill Wizard using a shopmade wood collet.

Add color



8 Leather dye works well to color the wood prior to stitching. A contrasting color to the thread gives a dramatic effect.

needle and two threads, about .044" (a little more than 1mm) thick.

I use a Oneway Drill Wizard mounted in the lathe's banjo, with a Foredom flexible-shaft tool and chuck as a drill. No matter what kind of drilling jig you use, make sure to position the drill bit at the height of the lathe spindle (*Photo 6*).

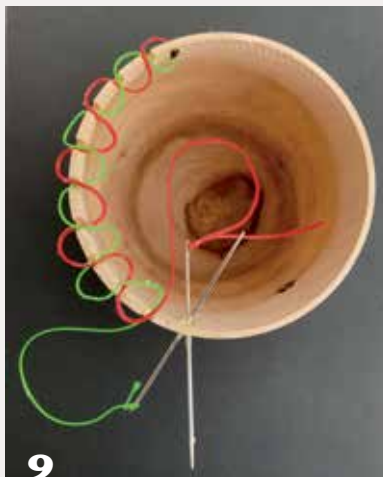
I made a wood collar, or collet, to hold the Foredom chuck (*Photo 7*). The wood collar cylinder has partial cuts in it to allow the wood to flex as I tighten the chuck in the Drill Wizard holder.

I use a $\frac{1}{16}$ " (1.6mm) drill bit to ensure the needle and double threads fit through the drilled holes. Determine the hole locations and start drilling holes based on the index positions on your printed disk. Align the clear acrylic's top edge with a radial line on the graph. Drill a hole, then rotate the graph to the next radial line. I use a small blue clamp to hold the disk in position. Once all the holes are drilled, remove the chuck and paper graph disk. Note: keep the workpiece mounted in the chuck for remounting and turning to final wall thickness.

Apply color and finish

Before applying color, finish-turn your project. Turn to the final wall thickness and sand to a smooth finish. Part off the vessel, retain the excess wood for a jam chuck, or use a vacuum chuck to reverse-mount the piece to complete the bottom of the bowl/box.

Sample stitching



9 Two colors of thread are used to illustrate the saddle stitch pattern, though in actual use, it is just one length of thread and two needles.

To add color, I used Fiebing's leather dye on this project. I diluted the dye to a 1:5 ratio with isopropyl alcohol. Wearing protective gloves, slowly apply light coats of diluted dye with a dabber to achieve your preferred color (*Photo 8*). Use a paper towel to rub off and/or work the dye into the wood. The key is to create contrast between the surface color and the thread. If you have a dark vessel, use a light-colored thread or vice versa. Leather sewing thread is available in a range of colors.

I sprayed the colored wood vessel with a base clear coat, allowed it to dry, and re-sanded it. I added a final clear coat after the sanding was completed. Once the finish has dried, you can add the hand-stitched leather thread.

Add leather thread

I used a simple saddle stitch sewing pattern, which works with two needles and one length of thread. I use #003 John James Saddlers Harness needles for projects like this. Some circular needles may work in tight spaces. A rule of thumb for thread length is roughly

Box lid with leather round



10 Mounted in the chuck is a new box lid. Turn a recess to accept the thickness of the leather round. The author holds a completed example.



11 A caliper is used to measure the width of the recess, then the author uses a circle cutter to cut the leather to fit.



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eight times the circumference of your hole pattern, assuming a wall thickness of around ¼" (6mm). It is better to have more thread than not enough. I used a waxed 0.8mm white hand-stitching thread.

Once I complete the sewing, I normally cut the last thread and tuck the end into a discreet area. Add a very small dab of white carpenter's glue to hide the cut end. For added strength, leather crafters normally burn the cut thread end. I prefer the glue method, as the burning leaves a visible dark spot.

The saddle stitch uses one thread and two needles at the ends. *Photo 9* helps to illustrate this stitch. For clearer visibility, I connected two colored threads as one to illustrate the continuous figure-8 pattern on a cutaway demo bowl. I started at the top portion of the vessel and worked my way around in a counterclockwise direction. More clarification on saddle stitching is available on YouTube.

Add leather on a lid

To add leather to the lidded box shown in *Photo 1*, I pre-turned a

recess in the lid matching the thickness of the leather (*Photo 10*). I added a groove on the wood to allow the sewn thread to sit flush on the backside.

I used a caliper to measure the recess width and depth to confirm the recess matched the size of the

leather (*Photo 11*). The round leather was cut with a circle cutter that does not leave a center hole (*Photo 12*). Prior to cutting, tape your leather piece to your cutting board to reduce shifting. Pre-cut a paper template to confirm the size in the recess in the lid. ▶

Pricking Irons

Pricking irons are used to mark equally spaced stitches in leather, with the aid of an awl and wood mallet. Thick leather or a cutting board under the work helps to prevent damaging the pricking irons' chisel points.



Hand-stitch the leather



13 A pricking iron is used to indicate hole locations for hand-stitching leather thread into the round of leather.

I hand-punched the stitching hole pattern onto the leather using pricking irons (Photo 13). The white dots are for clarity and to guide the pricking iron in a circle. I then sewed the leather thread into the round of leather and glued the leather to the box lid using a water-based contact cement.

Various leather coatings are available as finishes.

Other projects

I turned and carved the ends on the clutch purse shown in Photos 14 and

15, then wrapped the wood with hand-sewn leather. The leather is held in place on the wood edge with contact cement and small upholstery tacks.

I also made a birch bowl and added a sewn leather handle (Photo 16).

I have turned many tools used for leather crafting, as shown in Photo 17. These tools are all integral to leather crafting: a mallet, width cutter, various sized awls, and burishers. The endgrain block is an

ideal base for striking pricking irons and hole punches. ■

Denis Beauchesne is a retired business owner of an exhibit design and fabrication firm in Saskatchewan, Canada. He has been turning for about nine years, is a member of the South Saskatchewan Woodturners Guild, and has provided the club with a few demonstrations. He enjoys visual arts, music, and shop time. Contact Denis at denisb@sasktel.net.

Other project ideas: purse



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The author turned and carved the ends in cherry, then attached leather to create an elegant purse. It measures 4¾" (12cm) diameter and 8" (20cm) long.

Recommended Leather Supplies

In Canada:

- OA Leather Supply (Saskatchewan), oaleathersupply.com

In the U.S.:

- Rocky Mountain Supply, rmlathersupply.com
- Buckle Guy, buckle-guy.com
- Weaver Leather Supply, weaverleathersupply.com

Other project ideas: handled bowl



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Hand-sewn leather serves as a beautiful and useful handle for this birch bowl, 8" diameter.

Tools of the trade



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The author's shopmade leather-crafting tools.