WESTERN CAPE WOODTURNERS ASSOCIATION

NEWSLETTER : MAY 2026

The Western Cape Woodturners Association is a group of folk with a common interest in woodturning and wood.

We aim to promote the art of turning wood and to create awareness of this craft in the community and encourage young members to join the fellowship.

Members meet every Wednesday at 6.30pm to do " hands-on " turning and get instruction and help.

The venue is the Pinelands Hobbies Club, Nursery Way, Pinelands, Cape Town.

The Formal Meeting is on the 3rd Wednesday of the month at 7pm.

Visitors are welcome .

MAY 2026:

The topic for the general meeting on 20th May at 7pm will be a DVD of Snapshot demos of the 2006 AAW symposium.

" IN THREE WORDS, I CAN SUM UP EVERYTHING I'VE LEARNT IN LIFE : IT GOES ON! "

Robert Frost

American Association of Woodturners Symposium 2026 Raleigh, N. Carolina

Register for the Virtual Symposium.
You will have access to Live-Streaming demonstrations(Eastern Std. Time) and access to these recordings for 90 days (until 24th September 2026)
Cost is $ 175 and registration closes June 3rd.
Check the AAW website:
memberservices@woodturner.org

Western Cape Woodturners Association Committee :

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CONTENTS :

EDITOR'S NOTE :

This month I have some useful articles. Jim McPhail's article on layered bowls is similar to the technique that John Wessels showed us on how to make a bowl out of a plank.

I am sure most of us have inadvertently gone through the bottom of a bowl, which is usually accompanied by certain words of "dismay" !

The article by Bob Patros gives a good solution to fixing this dilemma as usually the bowl is turned from a special wood and what is needed is a " Plan B "

The 3 tips for home-made depth gauges, for measuring the depth of a bowl by Bill Small should prevent that "oops" of hollowing too deeply.

Over the next few months, I am going to put some tips into the newsletter for woodworking and woodturning which you might find interesting.
They are taken from, and I acknowledge, The Taunton Press, UK, from "Fine Woodworking on Proven Shop Tips' 1985'and 1990.
Some of these are a bit dated but one can usually pick up an idea to cheaply make your own tool or jig.
So I hope you find them useful.

Birthdays in May :

A Very Happy Birthday to :

Colin Forsyth
Henry Nel
Bradley Rogers

NEW MEMBERS:

A Big Welcome to John Spargo, we hope you will have many happy hours at the lathe and learn many new skills.

Our grateful thanks to The American Association of Woodturners, American Woodturner & Woodturner magazines and authors :- Jim McPhail, Bob Patros and Bill Small for permission to reproduce their articles. Also our thanks to The Taunton Press and Fine Woodworking Magazine.

Layered Bowls

Jim McPhail shares his techniques for these turned gems that excel in showing off the beauty of wood.

By Jim McPhail

At the Utah Woodturning Symposium in June, Jim McPhail demonstrated to overflowing crowds. All eyes were focused on his process for showcasing wood. Although Jim doesn't claim to have invented the technique he uses, we know of no other turners who have built a business around this process. Here is Jim's story.

So what's a layered bowl?

Layered bowls are turned from stacked layers of a variety of woods in difference thicknesses. Segmented bowls are similar, but many of the segmented layers are turned from several species of wood to create a pattern. Layered bowls also differ from laminated bowls, which generally feature wood of the same thickness.

There is an endless variety of concepts and combinations within the layered bowl framework. For example, the bottom of a layered bowl can be a two-piece, book-matched layer; a layer may be created from several alternate laminations of veneer. Some favorite combinations are shown in the chart *opposite*.

Parts to a layered bowl

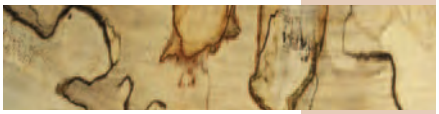
The basic layered bowl has a top and bottom layer, each often turned from the same wood species. The center layer is a contrast layer, often showing off color or figure interest.

For this article, Jim assembled a 1½×3½" bowl, *above*, from cocobolo, black ash burl, red palm, and veneer accents of black marfum and persimmon. The detail *opposite* locates each species.

7 favorite layers


Center (pith) cut oak


Book-matched flat-sawn oak


Spalted maple (map figure)


Black palm texture


Red palm texture


Quarter-sawn lacewood


Two layers riff-sawn lacewood

The side layers accent and separate the top and bottom from the center layer. Finally, the veneer layers further define the layers and add interest and detail to the bowl. The basic bowl may not need the side layers or may substitute multiple layers of veneer.

There are many options to make the center layer interesting:

- Highly figured burl, spalting, or other natural patterns.
- Grain figure based on how you orient the grain of the layer.
- Split center layer, creating a pattern.

Even-layered concepts

There is no limit to other concepts and combinations. If you make different colored layers with the same thickness of wood, you create a more formal, regimented design. Variations on even layered bowls include:

- Riff-sawn layers, a "basket-weave" pattern.
- Center layers of spalted wood, cut and re-glued with veneer layers. This reminds some shoppers of antique maps.


Maple burl top and bottom; five lacewood center layers. "I borrowed from other 'round' crafts by combining the texture of basketry and the shape of ancient pottery."

Basic layered bowl components


Cocobolo top and bottom; sequentially cut layers of spalted maple. "I call this series map bowls because the pattern reminds me of an old globe map."

• Natural wood figure, cut and re-glued with veneer layers.
• Laminated layers of veneer.
• Even layers, creating a graduation from dark to light values.

Bloodwood top and bottom; sequentially cut layers of honey locust. "I cut the center layers for this bowl with the pith as the center layer; the flame figure was just good luck."

Holly top, African blackwood bottom; alternating layers of hard maple and black castello. "This is one of a series of black, white, and grey bowls."

Cocobolo top and bottom; layers of red palm cut from three different boards. "I am always looking for wood colors and textures that will create a graduated effect."

Sizes and shapes

The complexity of the design and production of layered bowls goes up exponentially with the size of the bowl. I've found that textures and figures that look great on a 3"-diameter bowl may get completely lost in a 7"-diameter bowl. Most of my bowls are between 2½" and 5".

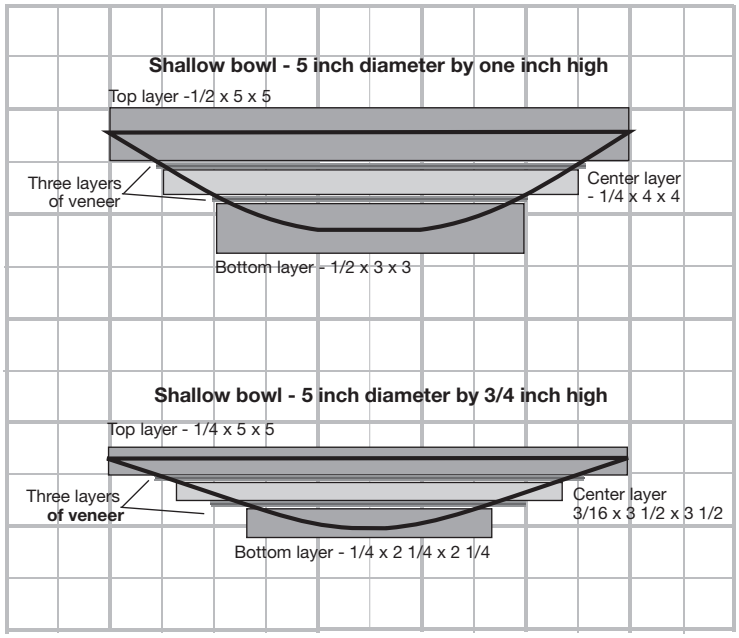
Layers must be dry (stable) to ensure that you don't have a pile of wood rings a few years later. You'll need to sand flat and evenly thin (or thick) to ensure that they glue evenly and turn symmetrically. You can consider bowls from two basic viewpoints: bowls viewed from the side and bowls viewed from the top—what I call "outside" bowls and "inside" bowls.

Outside bowls have thicker layers, which create bowls that are high enough that the elevation view is the most interesting. Inside bowls have thin layers, which create bowls that are flat enough that the plane view is the most interesting.

You can also find inspiration from other disciplines, such as pottery bowls.

The shape of the bowl often depends on the design concept you create when you choose woods and combinations of woods. A bowl with a great-looking bottom layer obviously needs to have a wide-bottomed shape to show off the figure. If you want a map bowl to look like a globe, you, of course, need to make a "half-round" bowl.

Shallow Bowl - Stepped Glue-up



One way to develop shapes is to buy a tablet of quarter-inch scale graph paper as shown *above*. Draw a box showing the height and width of a bowl with a centerline drawn top to bottom. Then you can try a wide range of shapes on one side of the centerline; the ones you like can be completed by folding the graph paper on the centerline and tracing the side you've drawn onto the other side of the centerline. It's a lot easier than trying a bunch of shapes on the lathe!

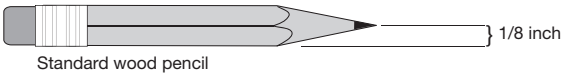
Resawing blanks

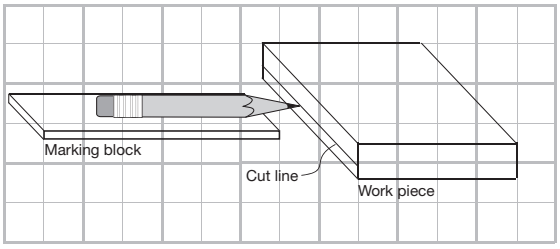
When I get ready to resaw blanks, I rely on a standard #2 pencil—regardless of the thickness of the stock—to find the desired thickness. Here's how.

As shown in the illustration directional, a standard #2 pencil will draw a line ⅛" above its base. Knowing this, you can make a set of marking blocks as shown *above* that will streamline the marking process.

—Jim McPhail

Marking Blocks





Marking block height + Pencil = Cut line height
[Example: 3/16th inch block + pencil (1/8th inch) = 5/16th inch cut line height]

Cut and assemble

Once you've selected your layers and appearance, it's time to cut, assemble, turn, and finish the pieces. Here are some tips to improve your results:

Bandsawing. If you're going to do a lot of resawing, you will get a better result from a 3-teeth-per inch (tpi) blade at least ½" wide. I prefer a ¾" 3 tpi skip-tooth blade.

Sanding. It's important to sand the glue surfaces smooth and flat. I recently started using a Performax drum sander that has helped me sand faster and more accurately.

Gluing. I use cyanoacrylate (CA) glue for all my assembly and first coat of finish. A 13-layer, four-hour glue-and-clamp job with shop glue takes only about 30 minutes with CA glue. The CA fumes will make your eyes water, so use in a well-ventilated area.

Waste blocks. If you decide to turn a lot of bowls that are 7" or less in diameter, make up a set of waste blocks fitted to your chuck. (My blocks are made from 2×2" scrap blanks, 3" long.) When I have used a block to turn four or five bowls and the block is down to about 1" long, I glue a 2×2" plug onto the working end of the block in order to use it again.

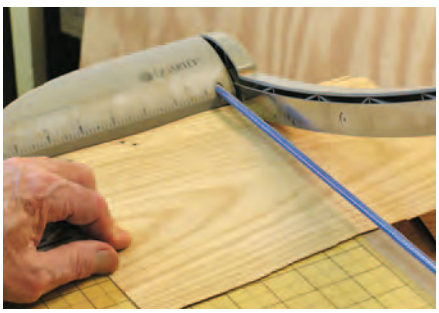
Surface finishing. The steps to sand and finish the bowl include grits 180, 240, 320, and 400. Spread a thin coat of CA glue on the bowl surface after the 320-grit sanding. The thin CA will act as a sanding sealer and usually fills any thin gaps between layers.

Wipe on the glue with the lathe at about 200 to 300 rpm and immediately wipe off the excess with a soft cloth before the CA glue sets. Use additional coats of CA as needed for a final finish.

1 Bandsaw each layer for the bowl to approximate thickness desired. For additional stability while resawing, spot-glue scrap block to the side of the workpiece.

2 Drum-sand each layer to final thickness. (The dust flap was left open for photography purposes.)

3 Cut layers to final size. Stack pieces in proper order, and number top to bottom.



4 Choose contrasting or accenting veneer colors. With a heavy-duty paper cutter, trim veneer squares about ½" larger than the bowl layer.

5 Place a veneer square on a piece of wax paper, and spray activator on the veneer. Then squeeze a generous spiral of CA on the layer to be glued.

6 Press layer onto the veneer and quickly move it in a rotary motion to even out glue between the two pieces. Activated CA will set in about 8 seconds.

7 Use a sturdy pair of scissors to trim excess veneer and CA from all four sides.

8 Do not use activator to glue same-size components. You will have about 30 seconds to position layers. Note registration lines for alignment.

9 Mark diagonal centering lines on bowl base. On dark woods, mark with a white gel pen as shown *above*.

10 Using the center mark, spin a circle with a compass to the edges of the base layer.

11 With a bandsaw, remove the corners. Keep the best corner as a record of the woods and their thicknesses.

12 Using the centering marks, adhere a waste block to the bottom of the ready-to-turn piece with CA glue.

13 Turn the outside shape and sand to 320 grit. At about 300 rpm, apply a thin coat of CA and immediately wipe off excess. Polish with Micro-Mesh.

14 Turn the inside of bowl, then finish the inside by repeating the finishing steps used on the outside of bowl.

15 Part the bowl off the waste block after spraying inside and out with one coat of lacquer. Turn and finish bottom (shown mounted on a vacuum plate).

Finishing. A combination of CA as a sealer and Micro-Mesh as an abrasive/polishing agent are key factors in a really fine, touchable finish. Depending on the woods you incorporate in your bowl, you can either use the Micro-Mesh immediately after the CA or lightly sand the surface with 400 grit before using the Micro-Mesh.

Start with the coarsest Micro-Mesh grit, 1500. The amount of sanding residue on the sheet after each pass is an indication of when you need to proceed to the next grit. I use 1500, 2400, 3600, and 6000 grits, with 12000 used to polish the bowl after it's been lacquered. Apply a single, thin, wet coat of lacquer on the bowl immediately after the Micro-Mesh to avoid dust or fingerprint oil from marring the surface. (I use Deft brand gloss lacquer in an aerosol can.)

Jim McPhail (JimMcPhail.com) is a member of the Southern Highland Craft Guild and is on the Board of Carolina Mountain Woodturners, AAW's largest chapter. He lives in Fairview, North Carolina.

Sources

Wood. Cormark International (cormarkint.com) is a direct importer of African hardwoods at wholesale prices.

Veneer. Certainly Wood (certainlywood.com) stocks more than 100 varieties of veneers.

CA glue. ARGCO (argco.com; 877-747-4744) is a national supplier of plumbing materials. Argco sells CA in 1-pound or larger quantities. The activator comes in 15-oz. spray bottles. Contact Bruce Hallmark at 877-747-4744 or Bruce@argo.com. I prefer thick for adhering layers and thin for finishing.

Micro-Mesh Abrasive. Gamco Services (gamcoservices.com; 407-865-3484) is a metal-shop supplier that sells Micro-Mesh abrasives in 12×12" sheets at $10.10 each.

—Jim McPhail

Turning a ~~Mistake~~ Into an Opportunity

(AKA, Plan B)

Bob Patros

Before and after. If you have misjudged the bottom thickness of a bowl and turned through it, consider a contrasting plug to save the day.

A seamless fix

1

A maple plug was turned and inserted in this beaded, off-centered, walnut platter. The contrasting wood was chosen to accentuate the piece.

2

Decorative grooves were turned on the foot surrounding the plug to help integrate it visually.

Contrast and shape

3

4

This time a light-colored cedar bowl is complemented by the darker walnut pedestal. The bottom is concave for stability.

Many woodturners have, at some point, misjudged the depth of a piece and turned through the bottom. Usually, a lot of effort has been spent by the time you get to that point, and it feels like a shame to let all that effort go to waste. One day, my wife retrieved from the woodpile an off-center platter I had just turned. It had a hole in the center, so I had given up on it. Fortunately, she saw potential and asked me to fix it. After careful consideration, I turned a maple plug and inserted it into the platter (*Photos 1, 2*). To do this, I had to ensure flat surfaces for a good glue joint.

I've learned that contrasting woods, or other materials, can enhance a piece quite nicely. For my next fix-it project, I turned a walnut pedestal for a cedar bowl with the plug flush on the inside, and a concave bottom so the piece sits evenly (*Photos 3, 4*).

Sometimes, using the same wood can complete the piece beautifully. In yet another project, a walnut vase, I turned a matching plug as an entirely new base to repair a hole. The bottom groove hides the glue line, and while the grain of the base does not match identically, it is virtually unnoticeable (*Photo 5*).

Fixing a hole is time-consuming, but the results can be an artistic blessing in disguise. To many beginning turners, this is known as "a design opportunity." You will be challenged to maintain your form and may not know if you have succeeded until the project is completed. You'll get practice remounting work on the lathe, making good glue joints, and employing contrasting materials.

Fixing a hole

There are many ways to achieve the same results, as is often the case in life. Let's take a look at one way to fix a hole in a bowl. Here is the process I used to fix the bottom of a walnut bowl (*Photos 6, 7*). In this case, I turned a plug from box elder for contrast. As with the cedar bowl, the inside has a smooth transition from top to bottom, and the bottom is turned concave so the bowl will be stable.

The hole presents itself

I mounted and turned a dried walnut blank (*Photo 8*). For demonstration purposes, I deliberately turned through the bottom, creating a quarter-sized, jagged-edged hole (*Photo 9*). (Another potential cause for a hole is a misjudgment while coring.) The hole I created did not upset the tenon I had turned on the bottom, so I proceeded to even the hole's edges.

After you turn through a piece on the bottom, remounting may be necessary. If you created a hole while turning the inside, you may still have an intact tenon or sufficient recess to hold the piece. If a hole is made while working on the outside, or foot, and the tenon is already removed, you will likely have to come up with a remounting, or reverse-mounting, strategy (*see Reverse-Mounting a Bowl sidebar*).

Plan A – tenon still intact: Using a square carbide-tipped tool, I refined the hole without adding a taper; I wanted the plug to fit flush when inserted and glued. Refining the hole made it a little larger. I was cautious not to make it too large, as the chuck still needs to have a sturdy grip on the tenon (*Photo 10*).

Plan B – tenon absent: Considering the thickness and shape of the bowl, I felt that eliminating the tenon would give me a better chance of having a good transition from the rim to the foot. ▸

Matching and invisible


5

A walnut plug was used to fix the hole in this walnut vase. Grooves hide the glue line, and add a simple decoration. The grain does not match identically, but the fix is virtually invisible.

An example bowl


6


7

This walnut bowl was intentionally turned through the bottom, then repaired with a foot of box elder. Again, contrasting woods and a concave bottom are employed, transforming a flaw into a design feature.

The hole appears


8

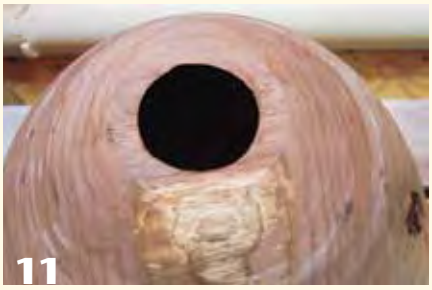

9

The blank was mounted, and a quarter-sized, ragged-edged hole was created intentionally. Coring too deeply is a common cause of holes, especially for turners still learning.

Two options for proceeding


10

Plan A: Using a square, carbide-tipped tool, I cut straight in to refine the hole with no tapering. I kept the hole small so as not to weaken the tenon.


11

Plan B: The tenon was removed after reverse-mounting the bowl and the hole enlarged. Both plans call for symmetrical holes and flat, true surfaces to receive the plug with a good glue joint.

Size the plug


12


13

Start with plenty of extra plug wood to give yourself maximum flexibility in shaping the base, or foot. Round the plug between centers, then sneak up on a tight fit, using calipers at first, then light cuts while checking the fit frequently.


14

The final fit should be snug and even. Be patient—if you take too much off and the plug is loose, you will need to start over.

Eliminating the tenon produced a much larger hole (*Photo 11*). Again, the hole needed to be trued up with a flat surface for a good glue joint.

Turning the plug

For the plug, I used box elder for contrast. Use plenty of stock to overmatch the bottom (*Photo 12*). Having plenty of wood to spare allowed me to turn away any excess stock for my desired foot, while maximizing design options.

I rounded the block between centers with a roughing gouge. Using calipers to gauge the size of the hole and the plug, I then turned the plug to a rough fit (*Photo 13*). A snug fit is essential for a tight-seamed glue joint. To sneak up on a good fit, I removed the block from the lathe repeatedly between cuts to assess the fit. Taking light cuts thereafter, I continued this process until I arrived at a snug fit (*Photo 14*).

Gluing in the plug

I used two-part epoxy to affix the plug in the hole. I generously applied the glue to both the plug and the bottom of the bowl, then gently jam-chucked the bowl so as not to mar the inside. I brought the tailstock up to keep the piece centered and to apply clamping pressure during the glue's drying time (*Photo 15*).

After the glue had dried fully, I turned a tenon on the plug material and remounted the bowl to begin the final turning of the bowl's interior (*Photo 16*).

Finish-turning the inside

Using light cuts, I finish-turned the inside of the bowl until the plug was flush with the bottom (*Photo 17*). Before reversing the bowl to finish the outside, I completely power-sanded the inside. I used a shop-made depth tool to determine the inside measurement and marked the outside at the base after reversing

Reverse-Mounting a Bowl


The Straka Chuck

There are several ways to remount a bowl in anticipation of gluing a plug into a hole in the bottom. (*A vacuum chuck is one method that will not work until the hole is plugged.*) There are several chuck jaws on the market that will accommodate this need, such as a Longworth-style chuck, Oneway Jumbo Jaws, or Nova Cole jaws. You also could gently jam-chuck, or friction-fit, the rim into a recess in a wasteblock. The shopmade Straka chuck is yet another option, as described in Alan Lacer's Spring 2008 *AW* article, "The Straka Chuck: Versatile and Proven Reverse-Chucking" (vol 23, no 1). Part of the challenge while remounting is centering the piece the best you can.

Shown here are Nova's Cole jaws with long grippers to ensure a good hold on a reverse-mounted bowl (*Photo a*). Once remounted, retrue the bottom of the bowl. This is essential because, after you glue in the plug, you will be re-turning the bottom to create a new tenon. If you are off center initially, your results will remain uneven. Use the edge of a metal ruler to confirm the base is flat and ready for gluing (*Photo b*).


a


b

the bowl (*Photo 18*). This measurement is critical, as you don't want to create another hole and begin this process all over again!

Finish-turning the outside

I remounted the bowl using a vacuum chuck. The tailstock was brought up with a rotating center to secure and center the piece. I turned away the excess wood, and the foot began to take shape (*Photo 19*). With the vacuum chuck securing the piece, I was able to remove the tailstock for final shaping and sanding.

My usual finish is Danish oil. I leave each coat to dry overnight before applying the next coat. I then wait about a week before buffing the finish.

Creative problem solving

I have used this process on a platter, vase, and pedestal bowl. There were some variations in tackling those projects, including remounting and having a concentric hole and flat base for gluing. I've learned to enjoy the challenges presented by these "design opportunities" and have been more than pleased with the outcomes. Consider saving your pieces that didn't quite work out as planned. Be creative, as woodturners are known to be, and devise your own way of fixing things up. ■

Photos by Kristin Royalty.

Living in La Crosse, Wisconsin, Bob Patros has been a member of the Coulee Region Woodturners for more than eleven years and of the AAW for almost as long. He can be reached at rjpatros05@gmail.com.

Glue plug, remount in chuck

15

Two-part epoxy was generously applied to both the plug and the bottom of the bowl, then the bowl was gently jam-chucked at the headstock. Pressure from the tailstock and live center centered the piece and provided clamping pressure for twenty-four hours to ensure a strong bond.

16

After the glue was fully dry, I turned a tenon on the plug material and remounted the piece in a chuck for finish-turning of the bowl's interior.

Finish the inside

17

Light cuts were used to finish-turn the interior of the bowl, followed by sanding. I completely sanded the interior before reversing the piece to finish-turn the outside of the bowl and foot.

18

With a depth tool made from a yardstick, the inside depth was recorded, then marked on the outside to note where the bowl bottomed out at the base—important information if you don't want to turn through the bowl's bottom a second time.

Finish the outside and foot

19

With the tailstock in place for safety and centering, I used a vacuum chuck to secure the bowl for finishing the base. Excess wood was turned away as the final foot was shaped and then sanded.

JOURNAL ARCHIVE CONNECTION

There are several methods of gauging a bowl's bottom thickness during the turning process. Three inexpensive methods are described in Bill Small's Winter 2003 *AW* article, "Cut Bowl Bottoms with Confidence with These Three Easy-to-Make Depth Gauges" (vol 18, no 4). This and all past journal articles are available to AAW members online at woodturner.org.

Cut Bowl Bottoms with Confidence

By Bill Small

With These Three Easy-to-Make Depth Gauges

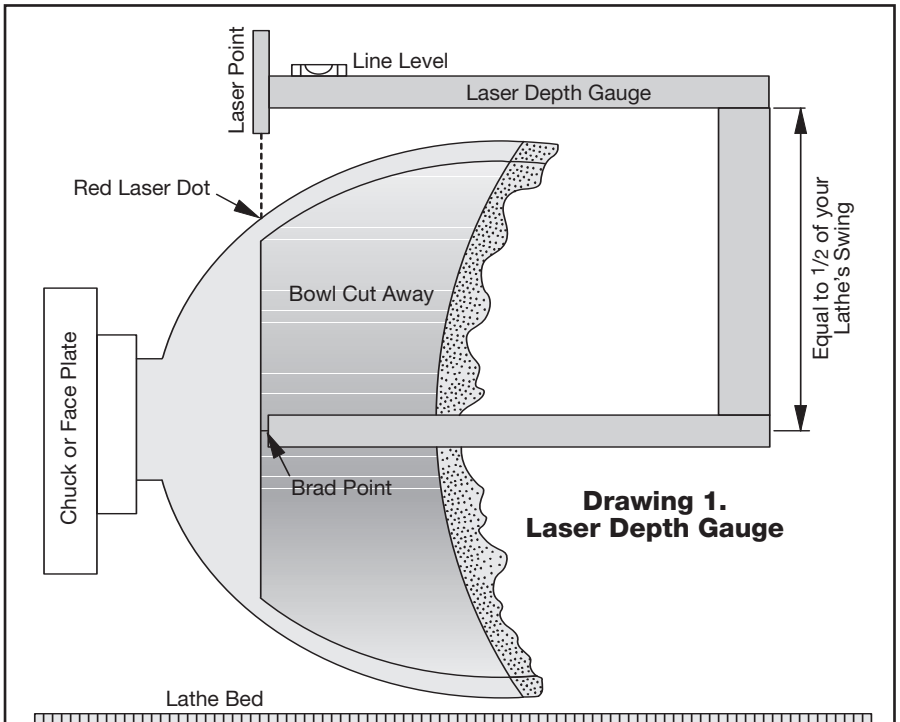
All of us have blown through the bottom of a bowl or left a chunky bottom for fear of cutting any deeper. Determining the exact thickness of a bowl bottom is particularly difficult with a natural edge bowl or one with a foot that has a recess cut into its underside. The three depth gauges described here take the guesswork out of these challenges. And the bonus: Each is easy and inexpensive to make.

Ruler Depth Gauge

If your bowl has a foot with a recess, you need another way to determine the depth of the recess (on or off the lathe). Drawing 2 shows a simple gauge made using a 6" steel ruler, two wood strips, a 10-24 x ½" thumbscrew and matching machine nut. Cut a channel in one wood strip to hold the ruler. In the other strip, drill a hole and epoxy the nut in place. Then glue together the two wood strips. Make wooden cross members of varying lengths to accommodate bowl feet of varying diameters.

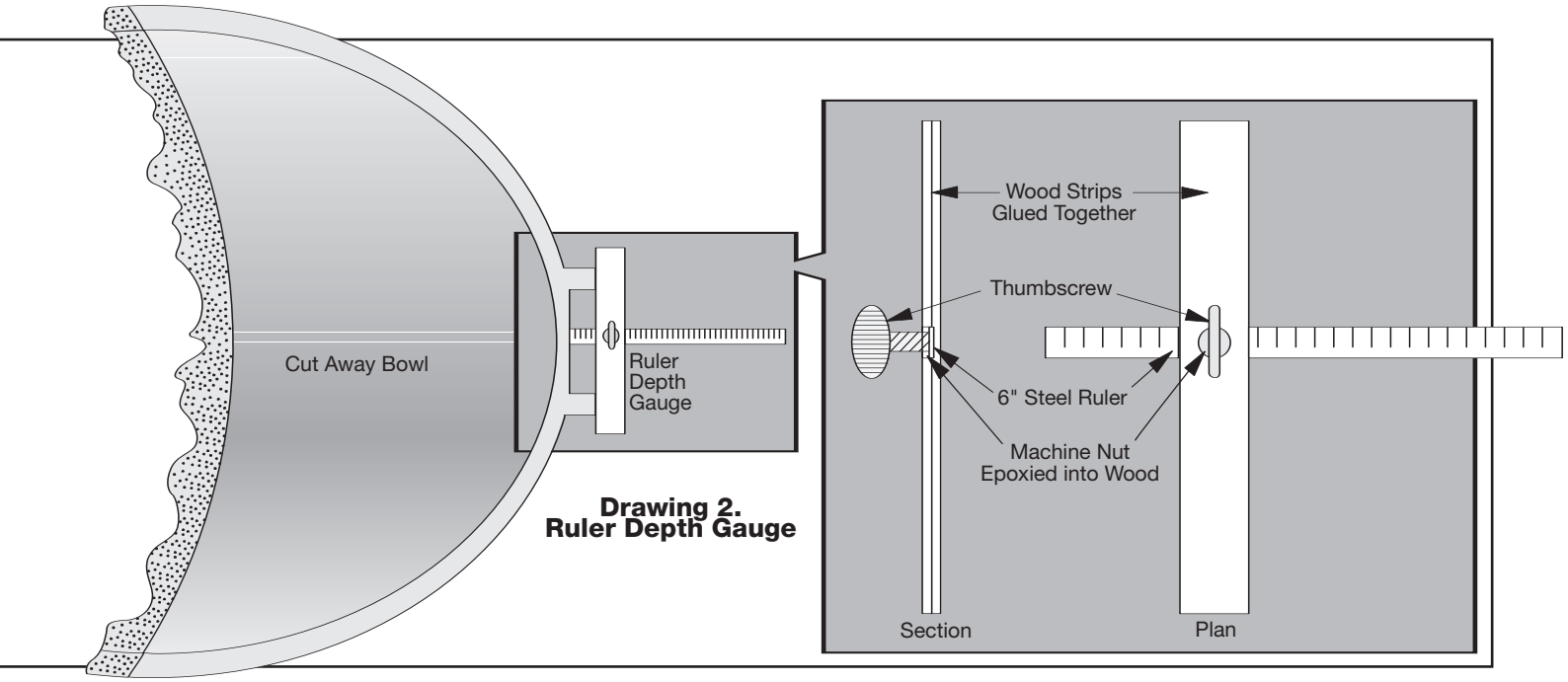
Laser Depth Gauge

Grab this C-shaped gauge to locate the inside bottom while the bowl is mounted on the lathe. You can use it when initially cutting a green wood bowl blank or when re-turning a dry blank into final form. A laser pointer (see author's note at *right*) is mounted on the frame so that the laser dot hits the outside of the bowl at the same depth as the inside cut. The key is to have the laser beam perpendicular to the lathe bed to get an accurate reading. You can achieve this alignment with a plastic line level glued to the top of the frame. A brad point helps keep the frame aligned to the bowl bottom while in use. As long as the frame is lightweight and resilient, you can build it from wood, metal, or plastic.



Drawing 1. Laser Depth Gauge

Author's note: Laser pointers vary dramatically in price. Check prices at your local office-supply store or on the Internet.

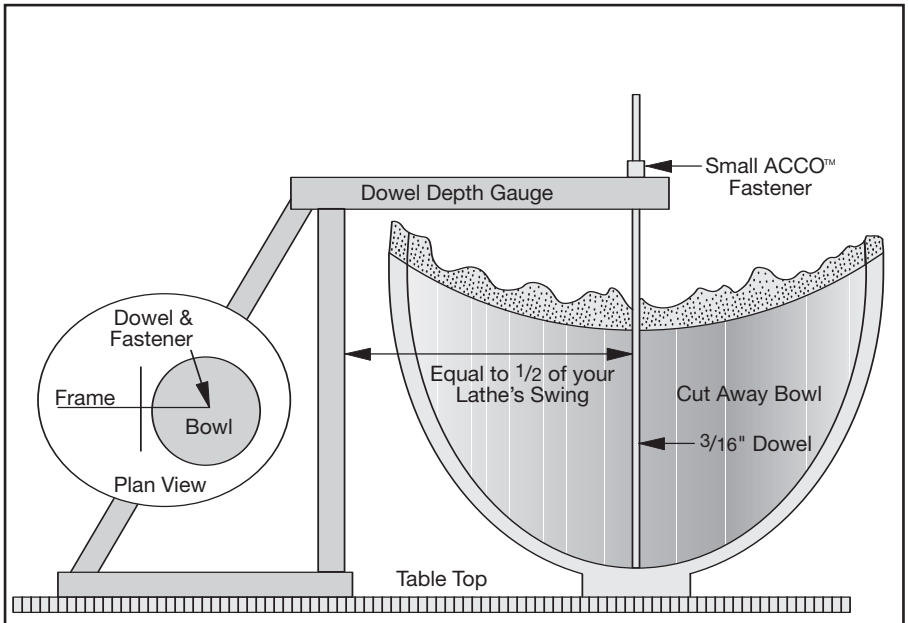


Drawing 2.
Ruler Depth Gauge

Dowel Depth Gauge

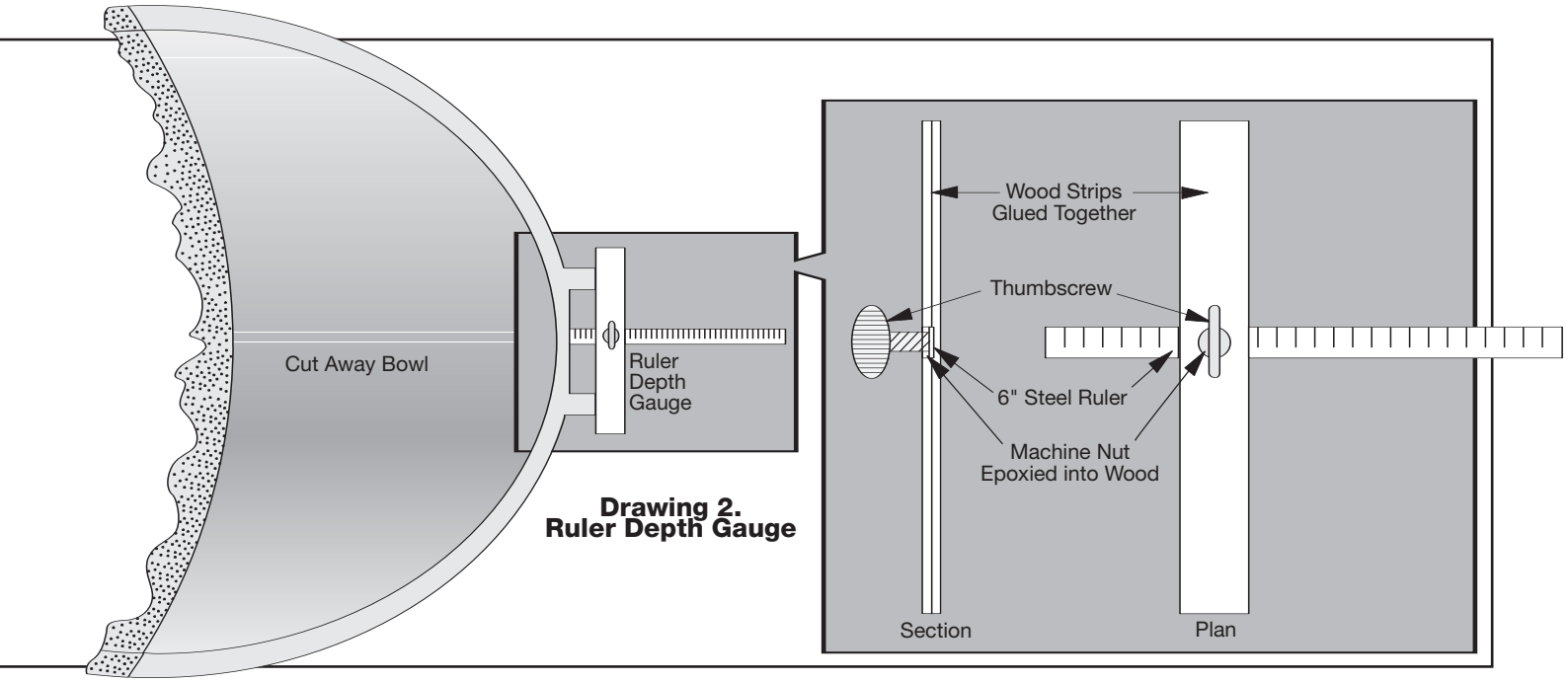
Use this gauge to locate the inside bottom when the bowl is off the lathe. Set the bowl on a tabletop with the gauge's frame extending over the bowl as shown *at right* in Drawing 3. Note that you'll need to construct the frame (made from wood, metal, or plastic) with at least three feet on the tabletop for stability.

Pass a 3⁄16" dowel through a hole in the frame and lower it until it hits the bowl bottom. Slip a small ACCO ™ fastener (available at office supply stores) over the dowel and resting on the frame. Lift up the dowel and remove the bowl. Lower the dowel until the fastener again rests on the frame. The distance between the end of the dowel and the tabletop indicates the thickness of the bowl bottom.



Drawing 3. Dowel Depth Gauge

Bill Small (williamsmall@comcast.net) lives in Danville, CA and is president-elect of the Bay Area Woodturners Association.

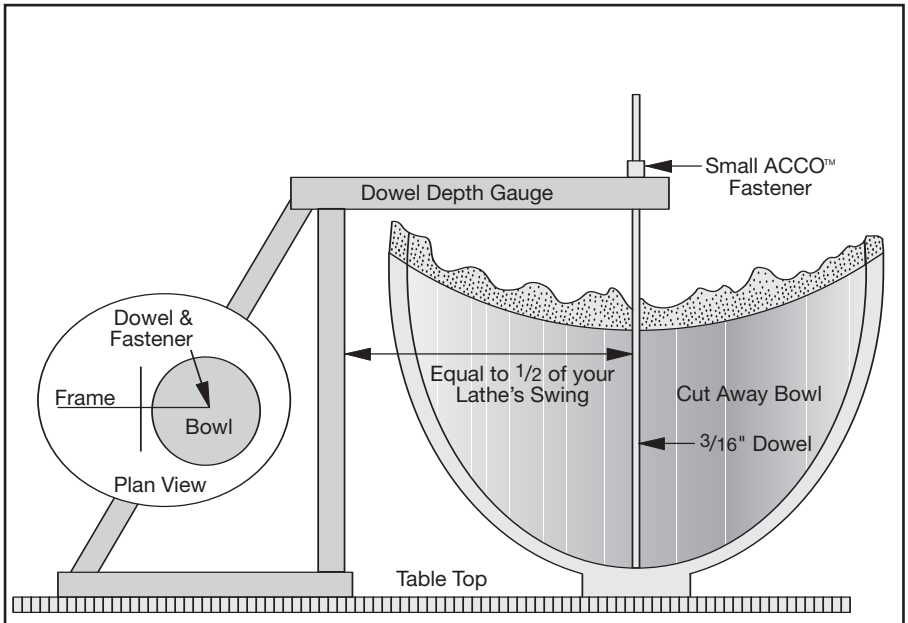


Drawing 2.
Ruler Depth Gauge

Dowel Depth Gauge

Use this gauge to locate the inside bottom when the bowl is off the lathe. Set the bowl on a tabletop with the gauge's frame extending over the bowl as shown *at right* in Drawing 3. Note that you'll need to construct the frame (made from wood, metal, or plastic) with at least three feet on the tabletop for stability.

Pass a $\frac{3}{16}$" dowel through a hole in the frame and lower it until it hits the bowl bottom. Slip a small ACCO ™ fastener (available at office supply stores) over the dowel and resting on the frame. Lift up the dowel and remove the bowl. Lower the dowel until the fastener again rests on the frame. The distance between the end of the dowel and the tabletop indicates the thickness of the bowl bottom.



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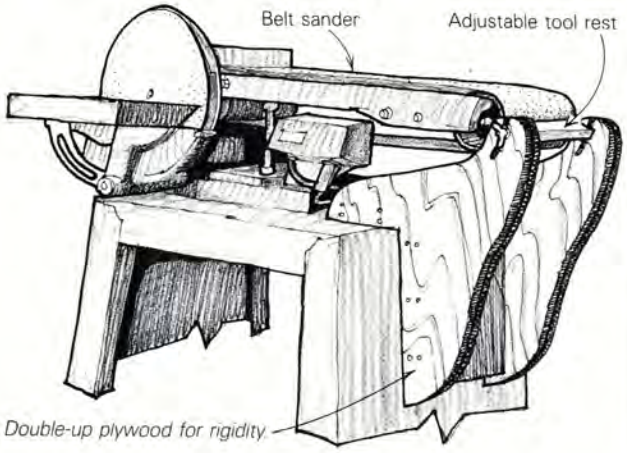
Sander Jigs & Fixtures

Chapter 18

Tool-grinding fixture for the belt sander

We developed the fixture below to take advantage of our belt sander as a wide-surface grinder. Because the sanding belt has much more surface area than an abrasive wheel, the grind is cool, with less danger of overheating the cutting edge. The

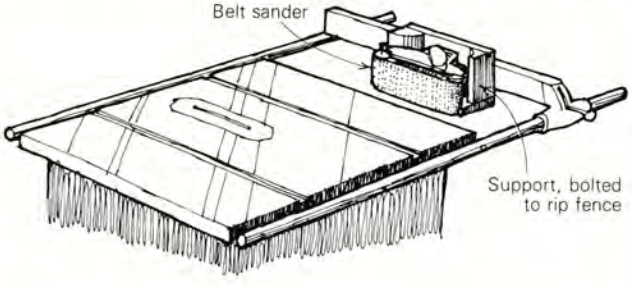


fixture is easily removed, so it doesn't interfere with other, more conventional uses of the belt sander. The tool rest can be reset using a wing-nut/slot arrangement to grind at different bevels, or to give more or less hollow grind.

—Steve Vetter and Norman Gritsch, Washington, D.C.

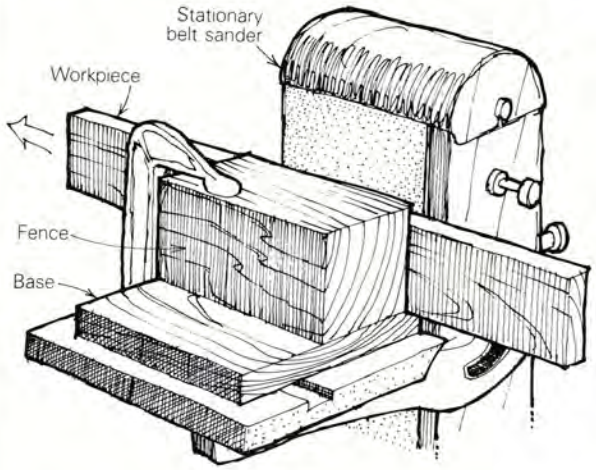
Edge-sanding fixture

Here's a fixture that turns a belt sander into an edge sander. Simply build a wooden fixture that supports and locks your belt sander in a horizontal position. Bolt the fixture to the tablesaw's rip fence as shown, and use the saw's flat cast-iron surface for the work. *—Wayne Hausknecht, Tucson, Ariz.*



Thickness-sanding on the belt sander

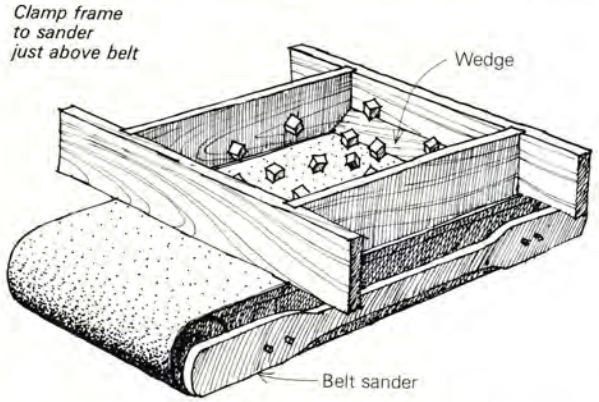
Lacking a commercial thickness sander, I use my standard 6-in. stationary belt sander as shown to face-sand thin strips of resawn stock. The base of the fixture touches the sanding belt. The fence is slightly angled, to provide a wedging effect for pressure. Cross-grain sanding removes wood fast, and the work can't kick back. *—William B. Allard, Tacoma, Wash.*



Making little wooden balls

Faced with having to reproduce a number of ½-in. diameter wooden balls (to replace missing ornamentation on an old fireplace), I discovered a virtually painless procedure using a large belt sander. Build a box frame, open on the bottom, and clamp it to the stationary part of the sander so it sits just off the belt. For ½-in. diameter balls, cut ½-in. cubes and toss them in the box frame. Put a cover on the box (Plexiglas is best) and turn on the sander. The sanding belt will throw the cubes around in the frame like dice on a game table, knocking off their corners and edges until they're perfect spheres.

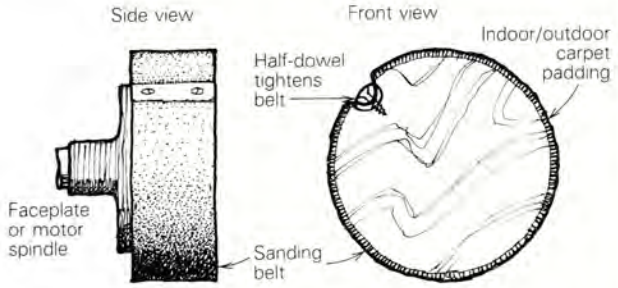
If the cubes don't tumble about but rather line up neatly against the far wall of the frame, glue a wedge there. If this doesn't work, you could vary the number of cubes, presand



the corners or throw in a few ball bearings to keep the cubes tumbling. Using this method, I produced a dozen or so perfectly shaped balls in an hour's sanding time. Had I shaped the balls by hand it would have taken longer and the result would have been less uniform. Perhaps laziness really is the mother of invention. *—Charles Reed, Washington, D.C.*

Sanding drum

This homemade sanding drum is sized to fit belt-sander abrasive cloth belts. I use mine on a shaper, running it at less than 1000 RPM, but it would work on a lathe, too. To make it, glue up a slightly oversize round blank as wide as the sanding belt you plan to use. To determine the required diameter, divide the belt length by *pi* (3.14). Turn down the blank so



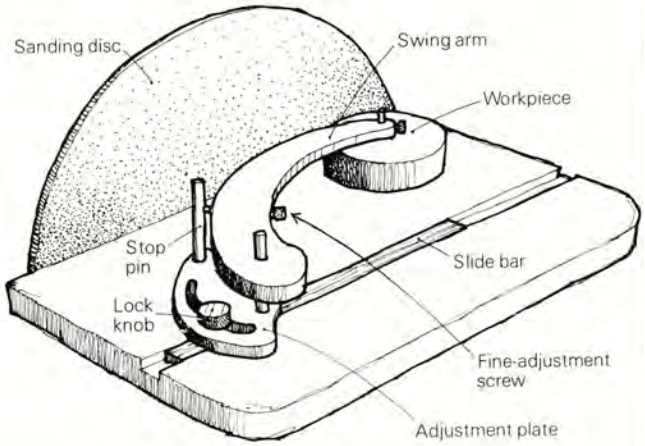
that the belt plus padding fits snugly. To tighten the sanding belt on the drum, rip a ¾-in. dowel in half and install it in a slot in the circumference with flathead screws, as shown.

—Charlie Thorne, San Luis Obispo, Calif.

Boss spinner makes discs

While visiting a woodworking pattern shop I ran across this tool called a "boss spinner." It is used with a disc sander to make wooden discs of varying diameters and thicknesses. As I found it, the unit was made from wood. Aluminum would perhaps give more accurate adjustment.

The boss spinner consists of three main parts: a slide bar that fits the channel in the sander table, an adjustment plate and a swing arm. A slot in the adjustment plate allows gross



circle size adjustment while a screw in the swing arm provides fine adjustment. The sketch shows only one pivot hole and adjustment screw in the swing arm. You can extend the capacity of the spinner by drilling a series of pivot holes and installing a fine-adjustment screw for each position.

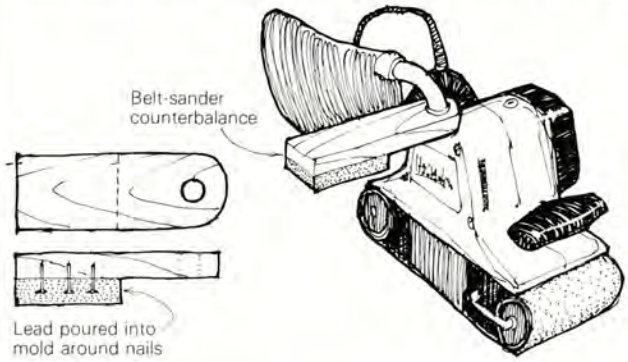
To use the boss spinner, first set the rough radius: With the fine-adjustment screw against the stop, rough-adjust the radius of the disc with the adjustment plate and locking knob. Set the rough radius about 1/16 in. oversize. Now position the circle blank under the center pin. Feed the workpiece into the sander and rotate by hand until the fine-adjustment screw hits the stop. From there, use the fine adjustment screw to reach the final diameter.

—Richard M. Williams, Cleveland, Ohio

Counterbalance improves belt sander

The belt sander can be a valuable tool in the production-shop world of tight schedules and competitive prices. But most belt sanders are designed with a flaw that renders them difficult to control: The motor hangs off one side, throwing the machine off balance. Unless you apply constant corrective hand pressure the sander will gouge or edge-scoop the work. A balanced machine will not scoop and allows the user to concentrate on direction and coverage.

To correct the imbalance I add wood and lead weights to my belt sanders. The amount of weight and position will vary with the sander. Fasten the weight under handles, knobs or whatever. The counterbalanced machines pass my test when they balance on a ¼-in. thick piece of plywood set under the centerline of the belt. *—Rod Goettelmann, Vincentown, N.J.*



Circle duplicator

My circle duplicator uses 3/16-in. thick aluminum for its arm, adjustment cam and base, which is laminated with epoxy to a piece of hardboard that slides in the slot of my disc sander. Start with rough, oversize blanks and position the adjustment cam so that when the swing arm touches it, you have an accurately sized disc. The cam can be locked in position for accuracy. My device handles diameters from 2 in. to 6 in.

—Jay Wallace, Ashland, Ore.