

WOODTURNING

FUNdamentals

AAW
EDUCATION

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PROJECTS & TECHNIQUES

Embossing Your Turnings

Dave Buchholz

Slimline Bullet Pen

Scott Schlosser

Skewing a Bead

George Hatfield

TIPS

Serious Bowl Busting Catches

Wally Dickerman

Breathing is Good - Part 3

Harvey Rogers

Hands-Free Spindle Lock

Bob Gerenser

Maintain Even Wall Thickness on a Natural Edge Bowl

J.P. Neff

VIDEOS

Turning a Christmas Tree Ornament

Brad Vietje

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Cover photo: Brad Vietje

WELCOME

A Note from the Executive Director

In this issue of *Woodturning FUNDamentals*, we are happy to offer an article written by Wally Dickerman entitled, *Serious Bowl Busting Catches*. Wally has been an AAW member since 1986 and is still turning at the age of 93. We are very fortunate to be able to share Wally's wisdom and skills with you. This issue also offers a project article and 20-minute video entitled, *Turning a Christmas Tree Ornament*, by Brad Vietje. Making ornamental trees is a lot of fun for turners of any experience level, and a very good skill-builder for beginners. You'll develop your ability to make smooth and accurate interrupted V-cuts in a wobbling piece of wood that is turned on four axes. If you're looking for even more resources to build your woodturning skills, I'd like to remind you that past issues of *Woodturning FUNDamentals* are available to members at <http://www.woodturner.org/default.asp?page=FUNDamentalsRes>.

Included with this issue is our new AAW Member Publications and Services guide. AAW is eager to support your woodturning endeavors and values your continued membership. Taking advantage of publications and services available to you with an AAW membership, will help you to stay "plugged in" to the worldwide woodturning community.

As always, *Woodturning FUNDamentals* invites you to submit your questions, tips, projects, and problems to us. Every turner develops tips and techniques that work, and also runs into frustrating obstacles from time to time. You're not alone. Please send your submissions to us at linda@woodturner.org.

I welcome your suggestions and concerns.

Respectfully,
Phil McDonald
Executive Director
phil@woodturner.org





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PROJECT VIDEO

Turning a Christmas tree ornament



Introduction

When I first discovered these little ornamental trees, I realized that they aren't quite so simple as they look! They are a lot of fun for turners of any experience level, and a very good skill-builder for beginners. To get good results, you'll need steady, relaxed hands, and sharp tools. The trick here is to develop your ability to make smooth and accurate interrupted V-cuts in a wobbling piece of wood that is turned on 4 axes. A little chipping is fine, because you can clean it up at the end, but strive for the very best clean-edged cuts you can make. With practice, these can be turned out pretty quickly, so you can make up sets that make great gifts. Once you have mastered this version, there are a number of other variations that can be explored.

I've only tried a few, so you'll have to see where your creativity takes you, and post your versions. I use a dead cup center to drive the block of wood, which has a number of advantages, but there are other methods that would work well. One way might be to turn a little rounded stub for a drive center, and mate that with a drilled recess in the tree blank, sizing each for a friction drive that still allows tilting the piece on different axes.

Wood Selection

I demonstrate the turning method using old, dry Hemlock, but the best woods would be light in both color and weight (if you opt to hang them), relatively soft, and fine grained. I prefer the softer "hardwood" varieties (deciduous trees), since softwoods tend to have more pronounced differences between the softer, early season growth and the harder, late season growth. In the Northeast where I live, ideal local woods would be Basswood, Boxelder (a.k.a. Manitoba Maple in Canada), Soft Maple (silver, red, striped, etc...), Aspen, Cottonwood (or any member of the *Populus* family), or White Birch. In the Pacific Northwest, Big Leaf Maple or Holly might be great choices, and there are probably many others. For practice, use wood that's cheap or free; if you can get good results from a Spruce or Fir 2x4 split down the middle, you'll really be smiling when you try a better turning wood!

Markers

I have gotten good results with permanent art markers, as well as fabric markers. You need a relatively fine brush tip to get down into the bottom of the V-cuts. Some markers will bleed into the exposed end grain, so I recommend testing your markers

on a few scraps of different woods, and try coloring a 45-degree bevel on end grain (or bevel the end of a board with a hand plane) before trying to color a piece you don't want to mess up. I have not tried brushing on different sorts of paint, but I know that would work, too.

Safe spinning,
Brad Vietje
Newbury, VT

Brad Vietje is a part-time wood turner from rural northern Vermont. He learned the basics of woodturning from his late father, Ted Vietje. Brad is a general purpose, all-around science geek: a former neuroscience researcher and solar energy business owner, he's been an amateur astronomer and telescope maker for many years, and now teaches physics and astronomy at a local observatory. Brad turns wood whenever he can find the time, and is building a new shop, where he hopes to teach woodturning in the near future.

Video: Brad Vietje turns a Christmas tree ornament



- Turning a Christmas tree ornament, featuring Brad Vietje (TRT 29:34).
- Video link: <http://vimeo.com/142137240>.
- Tip: If you have trouble accessing the video directly from this document, you may copy the video link and paste it directly into your browser.

SAFE TURNING IS FUN TURNING.

An accident at the lathe can occur with blinding suddenness. Respiratory and health problems can develop over time. Take appropriate precautions when you turn. Use face shields, safety glasses, and dust masks. Follow all manufacturers' safety guidelines. For more about woodturning safety, visit AAW's website at woodturner.org.

EMBELLISH YOUR TURNINGS

“Artistic” talents not required for embossing

There are many ways to embellish your turnings, and in this article I will cover one method, embossing. Some individuals feel they are not “artistic,” so let me assure you that this technique does not require the ability to draw. This technique is actually quite easy and quick. It can be extended to more elaborate means if you wish.

My embossing started with a Christmas gift from my daughter-in-law. Previously I had no idea this technique even existed. The description of embossing said that it could be used on wood, so I felt that I should try to emboss woodturnings, also. To learn something about this technique, I searched YouTube for videos on embossing. There are many videos that show beginners' techniques, which are aimed mostly at scrapbookers. These are usually done on paper but the techniques are applicable for wood.

This is a simple and easy first step at embellishing. The materials needed for embossing can be obtained in the scrapbook sections of craft stores (e.g. Hobby Lobby, A.C. Moore, Michael's). Minimum needs are a stamp (\$5 to \$10), embossing powder (\$5), glue pad (\$10), and heat gun (\$22). The costs are modest and you may be able to get by with less, depending on what you have available. The range of stamps is large but most are aimed at individuals making greeting cards. I found many nature designs that were appropriate for what I wanted.



Photo 1: Preparing the base of a cherry plate with a recess to mount on a 4-jaw chuck.

You need a relatively flat surface for embossing. I haven't tried curved surfaces, but this might work on a gentle convex surface. Turn a platter or bowl with a wide rim for decorating with your pattern. Choose a stamp pattern sized for the width of the rim. I turned a small plate (about 7" – 17.5cm diameter) with a recess to fit my chuck (photo 1). The piece of wood was $\frac{3}{4}$ " - 1.75cm cherry, and it was held on the lathe with machine screws protruding $\frac{5}{16}$ " – 7mm into the wood. Since the wood is only $\frac{3}{4}$ " - 1.75cm thick, you don't have much extra wood when creating the plate since you have to remove at least $\frac{5}{16}$ " – 7mm on the top surface to remove evidence of the screws and the recess has to be about $\frac{1}{8}$ " – 3mm deep. This leaves you with $\frac{5}{16}$ " - 7mm thickness maximum for the bottom of your plate. You, of course, can make it thinner but you don't have much room for errors. You should finish sand the wood's surface before you start any embossing.

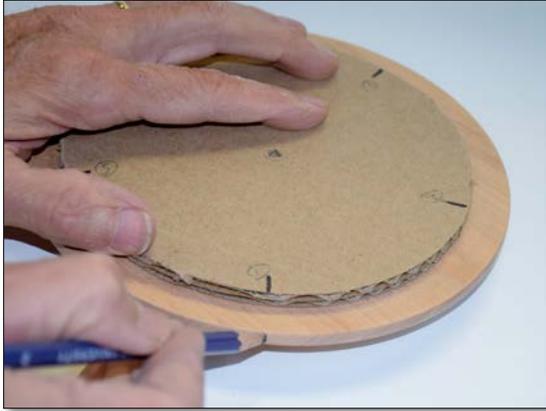


Photo 2: Marking the edge of the plate to guide placement of the stamps.



Photo 3: Placing the stamp with glue on the plate.

I lightly mark on the edge (photo 2) where I want to apply the embossing. When marking an index around the rim, use a cardboard circle with angle markings on it and mark with a pencil lightly on the edge to indicate where you will apply patterns. This makes it easier to clean up the markings without damaging your embossing (you can sand away or use denatured alcohol to remove pencil marks).

The first step, after choosing which stamp to use, is to apply glue from a stamp pad. Press the stamp onto the pad (photo 3), making sure to get an even coating of glue. I use colorless glue but you can get lots of different colors of glues on stamp pads. If you use a transparent embossing powder, then you will be able to see the colored glue lines. Apply the stamp to the wood with firm pressure to get an even application of the glue.



Photo 4: Sprinkling embossing powder on the glued area.

Sprinkle embossing powder (photo 4) over the glued stamped surface. You should be able to see the glue on the wood's surface. I do this over a paper plate to catch the excess powder. I tap the wood with my knuckles to gently vibrate the surface to make sure the powder covers the entire glue area. Shake or gently brush off the wood surface outside of the stamp area and catch the excess powder on the plate.



Photo 5: Brushing off excess embossing powder.

Use cheap artist paint brushes (photo 5) to brush extra embossing powder away. I find that a flat brush does most of what I want here. You can fold the paper plate to get the excess powder back into the jar. A piece of paper would also work well in place of a paper plate. If you get extra glue from the edges of the stamp, you can brush the excess powder off before you apply the heat to melt the powder.



Photo 6: Heating the powder to melt and bond it to the wood.

Heat the powder with a hot air gun (photo 6) until the powder melts and becomes glossy. Craft stores sell small heat guns for this purpose. It takes a few seconds to get the powder to melt. You will see the surface become glossy as it melts. Too much heat can cause bubbling of the powder. You may need to experiment with the distances from the heat gun to the wood's surface. Too close and the heat gun blows the embossing powder away before it can melt. Embossing powder is some type of plastic and comes in a size between granulated sugar and confectionary sugar. It takes a few seconds for the powder to cool before you can touch it.



Photo 7: Applying varnish to the plate.

To clean the stamp I use a slightly wet toothbrush (I wash old toothbrushes in the dish washer) and gently rinse away excess glue. You need to be aware that the stamp may have water soluble glue so don't let water sit where the stamp is glued onto the wood block.



Photo 8: Lightly rubbing the plate to remove dust nibs after a coat of varnish has dried.

All sanding should be done before embossing, since you can do only very light sanding after embossing. To produce a glossy finish, I use a clear gloss spar urethane varnish, diluted 50/50 with paint thinner. I wipe this on with paper towels (photo 7) while the turning is spinning on the lathe. I put on about 10 coats. Between coats I rub the finish lightly with Scotchbrite Grey pads (photo 8) or with 500 or greater grit sand paper to remove any imperfections on the surface.

If you didn't get the embossing powder to cover all the detail of the stamp or if you don't like the design, you can start all over. I use a paint scraper (photo 9) to remove bad embossing and then sand the area. Make sure you scrape and sand in the direction of the grain. This minimizes the amount of sanding needed.



Photo 9: Using a paint scraper to remove an embossed design.



Photo 10: An example of a dual-colored embossing showing two pine cones in black with pine needles in green.

I found that I can use one stamp for a design with more than one color. I first emboss the design with one color on heavy paper, then I cut the paper to mask one of the colors. In the photo (photo 10) I had a stamp that showed two pine cones and some pine needles. I wanted the pine cones black and the needles green. The photo shows the design done first in black, then done in green and black, and then the paper with the design cut in order to separate the color portions.



Photo 11: An example of a hand-carved design of a tree with stylized leaves

You can also make your own stamps by carving flexible rubber pads. A search of the internet will reveal many sources. I show a design (photo 11) carved in pink plastic and glued to a block of wood. I wanted to have a tree shape with separate leaves. The tree trunk is embossed with black powder and heated. After that, I carved a stylized leaf and glued it to a small wooden dowel. I use this to apply the glue and then sprinkle green embossing powder. I can apply the leaf stamp several times before applying the powder and heat.

Since I live in the high peaks region of the Adirondack Mountains of New York State, I wanted to create a design for a logo to be applied to the bottom of my turnings. A member of the Woodchuck Turners of Northern Vermont, Sean Murray of Wild Wood Vermont, volunteered to turn my design into a laser-engraved stamp. The photo (photo 12) shows the stamp after it has been glued to a flexible backing and a wooden block.

The finished design on a piece of cherry is also shown. The last two photos (photos 13 and 14) show examples of this technique on larger turnings.



Photo 12: Laser-engraved high-peaks logo design with my name on cherry wood with the stamp.



Photo 13: Maple shallow bowl with evergreen embossing on rim.



Photo 14: Cherry platter with snowflake design.

This technique is fun and easy to do. The tools needed are modest. The commercially available stamps are numerous. I encourage you to just try this on scrap wood and see if it fits your turnings.

~ Dave Buchholz
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Dave Buchholz is a retired physicist living in the Adirondacks of New York State. He turns mostly local domestic woods in a variety of forms and styles with many types of embellishments.

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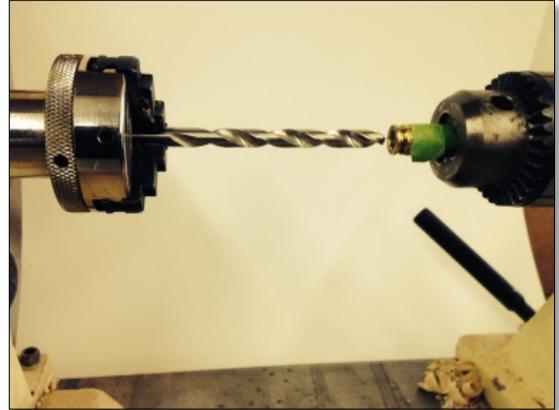
SLIMLINE BULLET PEN

Making a memento from a bullet casing and a pen kit



Photo 1: 7.62 x 51mm shell casing.

I saved the shell casing in photo #1 from my Father-in-Law's funeral service as he was recognized for his military service. I have made many bullet-style pens from kits, but this one was different. I did not have a kit, but I wanted to do something special with the shell casing. I used a basic slimline kit, altering some of the components.



Basic tooling needed to drill a 7mm hole through the shell casing includes two types of 3-jaw chucks. Before drilling the 7mm hole, be sure to carefully remove the primer in the end of the casing. I used tape to protect the shell when drilling the 7mm hole. In this photo, the headstock is on the left.





I used a longer length of 7mm tubing (available from PSI) instead of the standard length included in the kit. The extra length is necessary due to the longer length of the shell casing. There is a very small amount of tubing extending from the smaller end of the casing and about 3/4" (1.75cm) on the larger end. The inside diameter of the casing is approximately 8mm. Before gluing the brass tube, I glued a piece of maple on the brass tube, installed it on a mandrel, and turned the maple to fit snugly into the small end of the shell casing. Remember, the other end is already drilled to 7mm. I used epoxy to glue all items together. One additional detail, since the shell casing was a "blank," the end was crimped. I was very careful in reforming the end into a circular shape.

Carefully trim each end square. Using this shell casing adds additional length to the bottom of the pen, compared to a standard slimline pen. It is possible to use the full length of tubing; it is simply up to the individual. I chose a special piece of Australian burl with a 7mm tube glued inside.

A minimum amount of turning must be done on the bottom section of the pen to be sure the nib will fit into the shell casing

without a "bump." After turning the upper section to final diameter to match the diameter of the casing, I used a parting tool to shorten the upper section. After sanding, I applied a cyanoacrylate (CA) glue finish.

One final consideration is to apply lacquer to the brass shell casing. After a year, the brass has begun to tarnish, which in my opinion only adds charm and character to the pen.

~ Scott Schlosser
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I am a high school Technology and Engineering teacher at Rappahannock County High School in Washington, VA. I learned to use the wood lathe in my seventh grade shop class. Since then I have been hooked on woodworking in its various forms. I am a member and President of Apple Valley Woodturners in Winchester, VA. I turn functional items, segmented bowls, open segmented forms, and other utility items mainly as a hobby. I integrate woodturning into my high school classes. I am proud of the fact I have had more than a dozen students buy a wood lathe in the last three years. Woodturning is catching on with high school students!



This pen is a memento. I do show the pen, along with many others, to students for inspiration.

SKEWING A BEAD

Mastery through practice and understanding

As a FULL-TIME teacher of woodturning for twenty years, I can truly say that the one thing I have found most woodturners have difficulty with is turning a bead with a skew chisel. The beginner has difficulty because there are a number of things you have to remember—and they all have to be remembered and applied at the same time. Failure to comply with any of the actions or make the smallest mistake and “*bang!*”, you’ve got a dig-in.

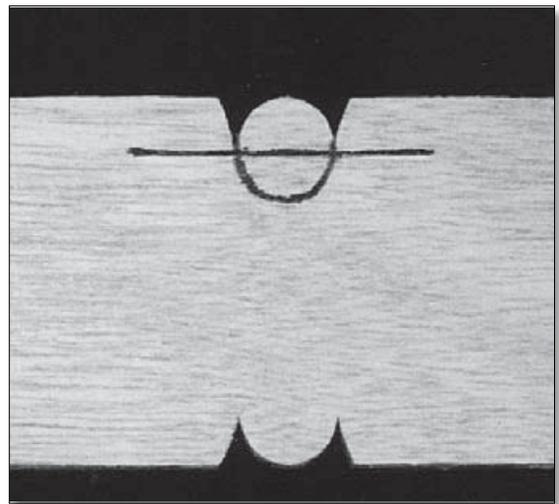
In frustration many people give up and use the gouge. But a gouge has a number of disadvantages over the skew:

- A gouge can’t make the deep, narrow clearance cuts necessary to begin a bead; you have to begin with a skew anyway, and it’s inefficient to change tools.
- A gouge can’t make clean shape-joining cuts between beads.
- A gouge is slower than a skew.

A lot of books tell you what to do to turn a bead—but what you also really need to know is what you are doing wrong when you have a dig-in. With the lathe revolving at around 2500 rpm and the tool being maneuvered in an area the size of a bottle cap, the slightest mistake happens so fast that even a stop-frame video camera can’t pick up what you are doing wrong.

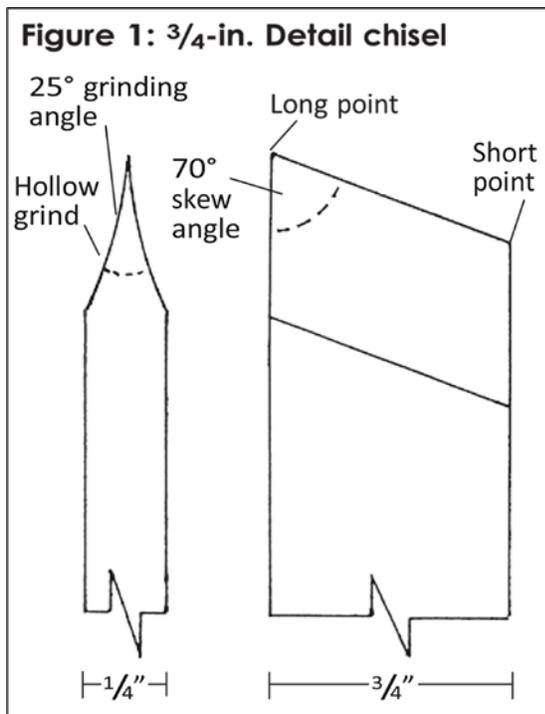
In this article I will tell you what is required to turn a bead, plus make some suggestions on how you can check to find out what you are doing wrong.

To practice, I suggest you start with a piece of 2” x 2” (5cm x 5cm) medium-density timber, 12 inches (30.5cm) long. Mount the timber in the lathe and turn it down to the largest-diameter cylinder possible, ensuring that all the flats have been turned off and the cylinder is smooth.



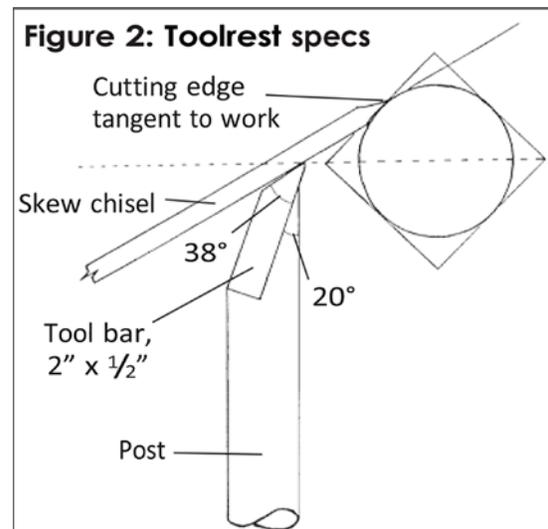
The shape of a bead

Before turning any shape, a turner must have a clear concept of what the shape should be. A true bead is the top half of a circle, that is, a full, well-rounded, symmetrical shape with the highest point in the middle and both sides finishing vertical. The depth of the bead should be half the width.



The tool

The first consideration is the tool. It is almost impossible to do any job efficiently without using the correct tool in good repair. Although a 1/2" (13mm) bead may be turned with various sized chisels, I prefer what I call a 3/4" detail chisel. In fact, I use this tool to do almost all my detail skew work, except for those areas in which it physically won't fit, where I use instead a 1/4" detail chisel. The 3/4" skew (1/4" thick) has reasonable rigidity, fits into most areas, and keeps the long point clear of the work. Figure 1 shows this tool and names its parts. Figure 2 shows the tool in relation to the toolrest.



Stance, grip, and procedure

Face the lathe with both feet about 4 inches out from and pointed toward the bed. Your feet should be spread to about the width of your shoulders to allow you to transfer your weight from one leg to the other without losing your balance.

I find the underhand grip to be the easiest for the beginner to use, as it allows more tool control. The chisel is clamped onto the toolrest between the index finger (which is under the toolrest) and the thumb on top; the other three fingers wrap around the chisel for extra support. This gives you maximum control to locate the cutting edge, while the other hand grips the handle about 12 inches back from the toolrest—giving you leverage and the ability to roll the tool. The handle is held against the side of the body to give you extra support.

Turning procedure amounts to three steps:

1. Mark out both sides and center of the bead.
2. Make V-cuts on either side of the bead for tool clearance.
3. Roll cuts from the top center to either side of the bead. (It is better practice to turn one complete bead at a time.)

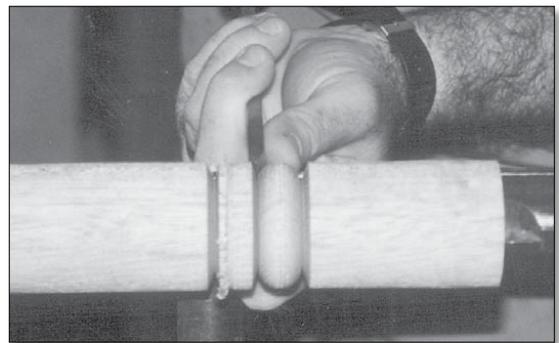
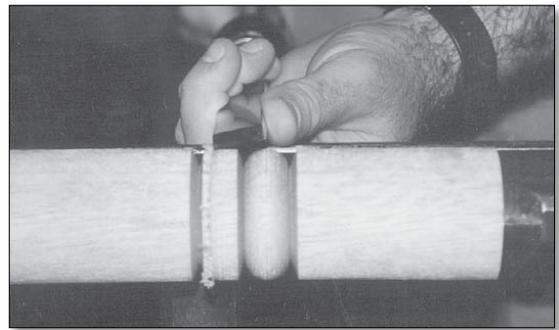
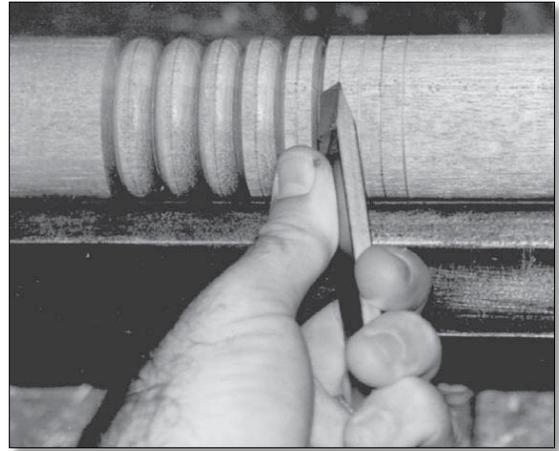
Marking out

Set a pair of dividers to $\frac{1}{2}$ " wide, support the dividers on the toolrest, and while the lathe is revolving, carefully mark a series of $\frac{1}{2}$ " spaces along the whole length of the timber, using a dragging action to prevent the dividers from grabbing.

With the lathe still revolving, mark (by eye) the centers of the spaces with a pencil—again, in dragging action. The divider marks will be the side of the beads. The pencil lines should remain when the beads are finished; otherwise, you will have lost the diameter.

V-cuts

V-cuts are made to give tool clearance when shaping the bead. Using the long point of the chisel, make a slicing cut on either side of the bead. A slicing cut is made by placing the chisel on its edge (that is, vertical) on the toolrest, with the long point touching the cylinder at a tangent. Now lift the handle so the point cuts, in an arc, about $\frac{1}{8}$ " deep (photo). The slicing action—in contrast to the plunge cut, which pushes straight in rather than arcing down—will reduce the possibility of your chisel point burning. To widen the slicing cuts, position your chisel so the long point is at a tangent and touching the cylinder $\frac{1}{16}$ " away from the first cut. The chisel should be in a straight line to the bottom of the first cut and tilted on the toolrest so the cutting edge is in line with the chisel. To check this, run your eye down the cutting edge. If the cutting edge is either side of the line of the chisel, there is a chance that the top section of the cutting edge will grab the timber and run along the job in that direction.



Now lift the handle in a slicing action, and you should make a ring-shaped shaving. Repeat the process on the other side of the original cut. The depth of the V-cuts should now be just over $\frac{3}{16}$ ".

Shaping the bead

To cut with the grain, you must cut from the center (pencil line) of the bead down on both sides. This is where people have all the fun (the dig-ins), and the reason is simply that they are not cutting on the short point.

Place the chisel on the toolrest, square to the lathe axis, flat on its side, and tangential to the cylinder. Now tilt the chisel up slightly so the short point picks up a shaving, then roll the chisel over onto its edge to cut part of the quarter circle. Remember, the cut you are making must be kept on the short point only and it must stay cutting tangentially to the cylinder.

It will take at least two or three cuts, working from the top to the bottom of the bead. As you are approaching the vertical part of the cutting action, you may find it advantageous to tilt the handle about 5 degrees off square to the outside of the bead. You should get ring-shaped shavings.

As you roll the bead over, the chisel should move slightly along the toolrest. When you have finished the cut and the chisel is on its edge (the cutting edge vertical), lift the handle in a slicing action. The cut will run up the cutting edge to ensure a sharp, clear connection to the next bead. This is called “tucking the bead in”.

Repeat the action on the other side of the bead. If you think this seems a relatively easy task, I can assure you that there are thousands of people who will disagree with you!

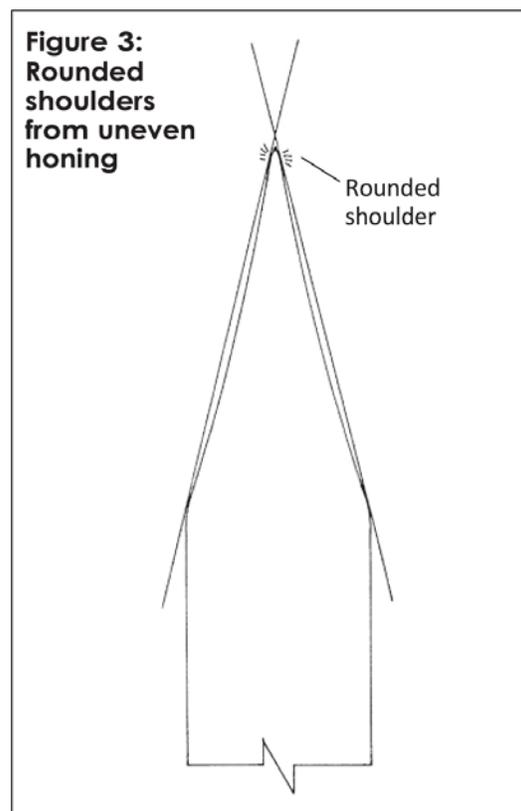
Run-backs (dig-ins) occur when the section of the cutting edge making the cut moves up from the short point (except when the cutting edge is dead vertical). When you are cutting on the short point, the corner of the cutting edge is supported evenly in the cut on both sides. If the cut moves only

minutely up the cutting edge and leaves the corner, pressure is applied only to the bead side of the cut and with the cutting edge tilted in that direction, the chisel becomes uncontrollable and runs toward the center of the bead.

Things to check and watch

If you are experiencing dig-ins and run-backs, there are a number of things you should check and watch:

Sharpness—As stated earlier, the chisel must be sharp. However, a chisel may feel sharp, and you can still have difficulty picking up a shaving. This can happen if you have rocked the chisel when honing.



The cutting edge can be sharp, but the chisel will have a rounded shoulder just behind the cutting edge (Figure 3). This rounded shoulder will prevent the cutting edge from picking up a shaving, and this can cause you to force the cut and lose

control. Or it can cause you to tilt the chisel further on its edge, which will give you the wrong shape.

If you find that you have a slight round behind the cutting edge, it is quick and easy to lightly re-grind the bevel and re-hone the chisel flat.

Tool position—If, when rounding the bead over, you have trouble picking up a shaving on the short point, bring the short point down slightly from the tangential position. (If you bring it down too far, the shaving will be too thick and make it impossible to roll the chisel over.)

Grip—If you are having trouble keeping the chisel square to the axis of the lathe as you roll the chisel over, check where your thumb is on the handle. When cutting to the right side of the bead, your thumb should be on top of the handle and rolled over onto its side. When cutting the left side of the bead, your right thumb should start on the side of the handle and be rolled over onto its top. A couple of ways to confirm that you're cutting on the short point: At left, ring-shaped shavings come from the short point; spiral shavings from just above it. Above, cutting on the short point leaves it clean of shavings (left), not covered with dust (right) of the bead, your thumb should be on top of the handle and rolled over onto its side. Cutting the left side of the bead, your thumb should start on the side of the handle and be rolled over onto its top.

If you start the cut to the left of the bead, with your thumb on the top of the handle, you will find as you roll the cut over that your wrist will force you to pivot the chisel away from its proper angle (square to the axis), making it impossible to keep the cut on the short point. Because of the speed of the lathe and the fast cutting action (though you should be making slow, deliberate cuts), after a dig-in you may find it difficult to know exactly which part of the cutting edge you were using. There are two ways of finding out:

First, look at the shavings. If they are spiral in shape, then you couldn't have been cutting on the short point.

If it is difficult to see which shaving was made by the previous cut, look at the short point of the cutting edge. The type of shaving will tell you if you are cutting on the short point or not. When cutting on the short point, you will make a ring-shaped shaving. If you are cutting just up from the short point, you will make a spiral shaving.

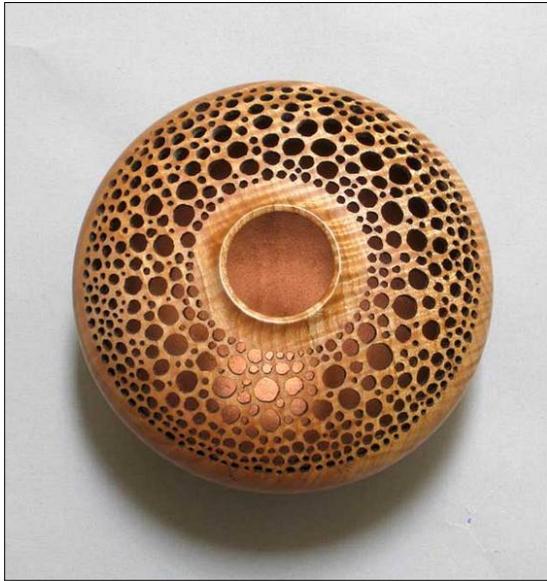
Becoming automatic

Now you will understand what I mean when I say that turning a bead with a skew involves remembering and applying a number of things all at the same time. It is not easy, but learning to turn a bead with a skew is like learning to drive a car. When you begin, it all seems very complicated and difficult. With practice and understanding, you will be able to do it without thinking—it will all become automatic. But as in driving, you still have to watch what you are doing, or you will have an accident.

~ George Hatfield
Sydney, Australia

TIPS & TRICKS

Serious Bowl-Busting Catches and How to Avoid Them



The occasional small catch when turning bowls may be inevitable and usually causes no real problem. It's those big bowl-busting catches that are the bane of many turners' efforts; the piece may be damaged or even broken. This often results in a "design change opportunity."

Why do the serious catches happen? There are many ways that a catch can happen, but nearly always it's because of the way the tool was being handled. A large catch is frequently a result of losing control of the tool when a small catch occurs. Dull tools, which cause the turner to force the cut, are a frequent cause. Turning with tools extended too far off the rest, especially lightweight tools, can cause vibration which usually results in a catch. Catches, when using a gouge or skew, usually occur when the bevel gets away from the wood.

An unsupported cutting edge will dig in, causing a catch. When hollowing a bowl with a scraper, allowing too much of the cutting edge to contact the wood will cause a catch, sometimes a large one. Over-aggressive cutting or scraping against the grain is a common cause of a catch.

A few things you should know to prevent serious catches:

If you know what causes a catch you can eliminate the cause.

- Whenever possible, when using a scraper or a hollowing tool or a bowl gouge, the tool handle should be tucked in against your side. Move your body to move the tool. The larger muscles in your body do a much better job of controlling the tool than the smaller muscles will. Holding the tool out away from your body is an invitation to lose control of the tool if a catch occurs.
- When using scrapers, the handle should be tipped up a little so that the butt end is a bit higher than the blade. Shear scraping is an exception.
- When scraping on the outside of a bowl, cut a little below the centerline.
- When scraping on the inside of a bowl, cut on or a little above the centerline.
- Using a scraper near the rim of a thin-walled bowl almost guarantees a catch, and often a busted bowl. The wood vibrates and the tool digs in.
- Allowing a hollowing tool to rub on the rim of a hollow vessel is a sure way to break the rim if a large catch occurs.

- Some turners grind their gouges with a “hump” at the nose. This can cause a catch when the tool enters a cut. The side-grind edge should be straight or with a small convex surface.

Taking “catches” out of your turning habits will make your turning easier and a lot more fun.

~ Wally Dickerman
Portland, OR

Wally is 93 years old and has been a member of AAW since 03/1/1986.

(Photo at right courtesy of Ron Campbell.)



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SAFETY

Breathing is good, Part 3: Sucking and blowing

Before I give you thoughts on sucking and blowing, I have two safety bits for you from the AAW Symposium in Pittsburgh.

First: the AAW has a safety committee, and it is working on significant upgrades to the safety information that AAW provides on its website. I'm excited about this because I have found it hard to find reliable, quality information about complex safety issues. I hope the AAW's efforts will provide that kind of information.

Second: the symposium manual had an image of a wonderful sign that pretty much sums up most of the important safety issues related to using a lathe. The bright yellow sign says:



Now for the sucking and blowing. Last issue's safety article (Breathing is Good: Part 2*) talked about how dust gets into our tubes, and noted that the worst dust to have deep in your tubes is the really small stuff. There are two basic ways to keep the really small stuff out of your tubes: sucking and blowing.

* Woodturning FUNdamentals, September 2015, Volume 4, issue 5, p. 25.

This article explains why you may want to suck, why you may want to blow, and why it may be best to do both.

A dust collector for your lathe sucks air away from the lathe, runs the air through a filter, and then blows it back out. If your dust collector is located inside your shop, the quality of the filter is very important, because anything the filter doesn't trap gets blown back out into the shop where you can breathe it. A dust collector located outside your shop blows the particles outside your shop and makes the filter less important.



Different filters filter differently, and, sadly, you will probably have to pay more for a filter that captures really fine particles, like a HEPA (high-efficiency particle arrestance) filter. Because the worst dust is the really small dust, I think

it makes sense to pay up for filters that trap the really small particles.

The location of the dust collection tube or hood and the volume of air the dust collector sucks are also important. If the dust collection tube or hood is close to the spinning wood on the lathe, it has the best chance of sucking the fine dust into the collector before it escapes into the rest of the shop. And the more air the dust collector sucks, the more dust will be drawn away from the lathe and into the dust collector.

You can purchase dust filters that hang on the ceiling of your shop. But those ceiling filters only remove the dust particles after they have floated by your mouth and nose up to the ceiling. That means the ceiling collectors are less effective in keeping you from breathing fine particles of dust in your shop, even if the ceiling filter traps really small particles of dust.

If you are going to invest in dust filtering and collection equipment, I think it makes sense to invest in equipment that sits close to the spinning wood and sucks lots of air away from the lathe into filters that trap really small particles of dust. If getting good filters isn't feasible, see if you can locate the dust collector outside.



You might be wondering whether it is reasonable to just use a dust mask. Simple dust masks are better than nothing.

Most dust masks have you suck air through the mask. If your face is soft and smooth like a baby's bottom, and the curve of the dust mask closely matches the curves of your cheeks and chin, very little air might get sucked in along the edges of the mask. That's what you want, because the air sucked along the edge of the mask carries dust particles. And that is why better dust masks have flexible rubber edges that cover a lot of your face and conform to its curves.

Paper dust masks, and lots of others, really don't conform to the curves of your cheeks and chin, and don't do a good job of keeping the dust out of your tubes - too much dust-laden air slips by the edge of the mask and into your lungs. Beards are also a problem for dust masks, because the hair keeps the mask from sealing against your face.

~ Harvey Rogers
Portland, OR
Safety Officer

Cascade Woodturners Association

AAW

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SHOP TIP

Hands-free spindle lock

The one item missing on my PM 3520 lathe was a hands-free spindle lock. Holding in the lock button with one hand and trying to thread something onto the spindle with the other hand often does not work well. Some turners use the indexing holes and pin as a spindle lock, but that seems tedious.

My solution is easy, inexpensive, and requires only minor modification to the lathe. Buy a light-duty 4" (100 mm) strap hinge, a $\frac{3}{8}$ " (10 mm) rare-earth magnet, and magnetic cup (Rockler and Lee Valley carry these). You will also need to turn a small pull and either thread it for a 6-32 machine screw or just drill it for a close fit for the screw. A 6-32 \times .1" (20 mm) flathead machine screw (and maybe the mating nut) are also required. Hold the hinge in front of the lock button and guard. Mark the hinge so that the barrel is just below the guard so that you will have enough metal to drill a clearance hole for the lower guard screw. Mark a second cut line just below the end hinge hole. Mark and center punch for the two holes centered on the hinge (Photo 1).

Drill a $1\frac{3}{64}$ " (5 mm) clearance hole for the guard screw (you can use a $\frac{3}{16}$ " [4.8 mm] drill and wiggle it around some to open up the hole if you don't have a $1\frac{3}{64}$ " [5 mm] drill bit). Drill a $\frac{9}{64}$ " (3.6 mm) hole (with a #29 bit) if you plan on tapping the hinge, or just drill a clearance hole for the 6-32 screw.

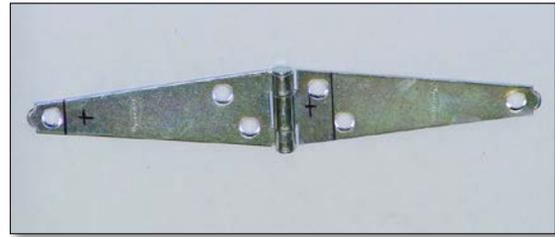


Photo 1

Now is a good time to tap the 6-32 hole.

Use a hacksaw to make the two cuts on the hinge and file or grind the edges smooth to make sure corners are not sharp.

Remove the lower guard screw and use that screw to mount the now modified hinge. I use a dab of lipstick on the upper guard screw to locate the clearance hole for it (Photo 2).



Photo 2

Remove the hinge and drill the clearance hole for the upper guard bolt cap head. This hole needs to be about $\frac{3}{8}$ " (10 mm) diameter, so it is a good excuse to buy a step-drill. Of course, you can just use a $\frac{3}{8}$ " (10 mm) drill bit, but be sure to clamp the hinge to a back-up board if you go this route.

The parts should look like the ones in Photo 3.

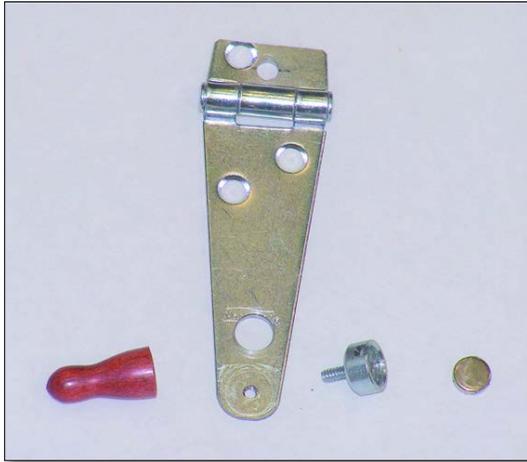


Photo 3

Screw the magnet cup and turned pull onto the hinge (Photo 4). If you did not tap the turned pull, use a nut to hold the 6-32 screw in place and mount the pull to the screw with cyanoacrylate (CA) glue. Also use a drop of medium CA glue to bond the magnet into the magnet cup.



Photo 4



Photo 5

Remount the hinge assembly using the bottom guard screw. Rotate the spindle by hand while pressing the spindle lock button until the button pops in and the spindle is locked. Now, flip up the hinge up and the magnet will keep the button in and the spindle locked (Photo 5).



Photo 6

Flipping the hinge down frees the spindle (Photo 6).

~ Bob Gerenser
Milpitas, CA

SHOP TIPS

Duct tape in the shop



When I remove a natural-edge bowl from the chuck to reverse chuck to finish the bottom, I use a roll of duct tape with the jaws expanded into the inside of the roll. This provides a little cushion inside the bowl and protects the work from marks from the jaws. Align the live center into the center mark of your tenon and secure the tailstock. Continue the flow of the outside bowl curve and make sure the bottom of the bowl has a little concave to it, allowing the bowl to sit flush on a flat surface. Use a saw to remove the final nib and then sand.

*J.P. Neff's article, Natural edge bowl, was featured in Woodturning FUNDamentals, September 2015, volume 4, issue 5, pages 2-5.

Question:

I wanted to ask J.P. Neff* how he maintains an even wall thickness around a natural edge bowl. I have trouble getting the thickness on the wings to match the thickness in the low areas. I would appreciate it if you could pass the question along.

Regards,
Peter Keith
South Haven, MI

Answer:

Here's how to maintain even wall thickness on a Natural Edge Bowl.

1. Establish your desired wall thickness on approximately the first 1" of your bowl.
2. Set your calipers to match that wall thickness.
3. The calipers are set at a known width and slid down the bowl wall, with the lathe off.
4. When it begins to hang you know that more wood needs to be removed at that area.
5. Trimming cuts like this need to be done gently.
6. Continue to check the uniformity of the wall thickness regularly with the calipers.

~ J.P. Neff
San Diego, CA

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PUBLICATIONS INCLUDED WITH MEMBERSHIP

American Woodturner journal, six issues annually, each packed with feature articles, projects, photos, tips, techniques, and news. **New for 2015**, the AAW has introduced online videos to complement selected journal articles. tiny.cc/AWJournal

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Safety for Woodturners, a 66-page digital book to help woodturners build strong skills while learning best practices and safety (non-member price \$14.95 for the printed edition). tiny.cc/WTSafety



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MENTORING RESOURCES INCLUDED WITH MEMBERSHIP

New for 2015: Teacher's Resource and Project Guide: A 76-page digital handbook to help educators develop programs to teach woodturning skills to students. Includes important safety guidelines, best practices, lesson plan tips, and 18 projects to build basic skills (non-member price is \$29.95). tiny.cc/MentorTeach



New for 2015: Pen Manufacture Enterprise: A 30-page digital teacher's guide adapted from a manufacturing unit taught by Kip Christensen, Ph.D., to provide students with a brief or extensive pen manufacturing experience (non-member price is \$29.95). tiny.cc/MentorTeach



Let's Go for a Spin: A digital seven-part lesson plan series for instructors, designed to provide beginning and advanced students with a well-rounded set of turning skills (non-member price is \$87.70 for the set). tiny.cc/MentorTeach



Planning and Presenting a Successful Demonstration: A 23-page digital training manual and series of eight online videos, developed by Frank B. Penta and the Chattahoochee Woodturners, to help experienced woodturners build or improve their demonstration skills (not currently available to non-members). tiny.cc/MentorTeach



Teaching Woodturning Basics: A 53-page digital reference to help intermediate and advanced turners learn to teach others (non-member price is \$4.95 for the download). tiny.cc/MentorTeach



SERVICES INCLUDED WITH MEMBERSHIP

New for 2015: AAW Connects is a web-based tool that enables AAW members to search the globe for AAW chapters and woodturning symposia, demonstrations, exhibitions, events, organizations, and schools. tiny.cc/AAWConnects



New for 2015: AAW's Woodturning Marketplace is an online hub that allows AAW members to click-through to sponsor websites for information about woodturning products and services, as well as exclusive deals. tiny.cc/MarketSpace



Directories: AAW's online directories provide contact information for members (tiny.cc/AAWMembers), local chapters, demonstrators, and other woodturning resources (tiny.cc/AAWDirectories).



Events calendar: AAW's Woodturning Calendar lists upcoming chapter and demonstrator events, exhibitions, classes, symposia, and more. Chapters and members may submit woodturning-related items for inclusion in the calendar. tiny.cc/WTCalendar



Video library: AAW's expanding online video collection helps to make the learning process more engaging. tiny.cc/AAWVideo



AAW Forum: This member-moderated online community is ideal for sharing work and ideas, obtaining feedback and assistance, and connecting with other woodturning enthusiasts. Upload photos of your work to the "Gallery" for critique. See your piece selected for the "Turning of the Week." Take part in discussions on topic areas such as tips, techniques, how-to, and more. tiny.cc/AAWForum



Prizes: Each month, AAW members are automatically entered into drawings for sponsored prizes, including lathes, woodturning supplies, jigs, DVDs, classes, gift certificates, etc. Annually, a name is drawn from AAW's membership roster to receive a Powermatic 3520B lathe, and that winner names a local chapter to win either a JET 1642 or five JET mini-lathes. tiny.cc/WTDrawings

EOG program: Members and chapters may apply for AAW's Educational Opportunity Grant (EOG) program, which offers funding to selected applicants for woodturning education projects. tiny.cc/GrantEOG

POP fellowships: Members may apply for Professional Outreach Program (POP) fellowship grants, which offer funding to selected applicants for research and projects that encourage creative growth or provide inspiration for new directions in turned wood art. tiny.cc/GrantPOP

Exhibition opportunities and calls for entry: AAW members may apply and enter work for member exhibitions at the annual international symposium, the Gallery of Wood Art in St. Paul, and other venues. (Some opportunities require an entry fee.) tiny.cc/CallsforEntry

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For members with special interests and needs.

Students: AAW's Young/Student Turners and Turning to the Future programs offer information and resources especially for teachers and students aged 10 to 25. tiny.cc/Students

Disabilities: AAW's Woodturning Beyond Barriers offers techniques and adaptations to help people with disabilities and other obstacles turn safely. tiny.cc/WBB

Global outreach: AAW's Turners Without Borders delivers woodturning information and services to the wider woodturning world. tiny.cc/TWBorders



Professionals: AAW's Professional Outreach Program (POP) fosters and promotes high standards of professionalism in woodturning through a variety of activities. tiny.cc/POPProgram

Women: **New for 2015,** AAW's Women in Turning brings together women worldwide who share a passion for woodturning to help further their skills and increase their participation in the field. tiny.cc/WomenWT

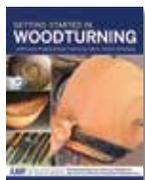


ADDITIONAL LEARNING RESOURCES

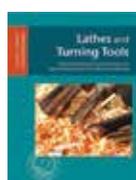
Resource books

AAW's entire collection of resource books may be viewed at tiny.cc/AAWResourceBooks.

Getting Started in Woodturning: 224 pages of shop-tested insights and detailed, practical advice for a great start in woodturning. Member price: \$18.95 tiny.cc/GettingStartedWT



Lathes and Turning Tools: Learn how to select a lathe, what turning tools to buy, and what chucks and other accessories you'll need to get started. Member price: \$14.95 tiny.cc/LathesTurning



Learning at the Lathe: 65 pages of useful articles for beginning woodturners, featuring expert, shop-tested insights and advice. Member price: \$14.95 tiny.cc/LatheLearn



Continued on next page

ADDITIONAL LEARNING RESOURCES CONT.

Practical Woodturning Projects:

64 pages of woodturning projects that build skills with shop-tested instructions and illustrations.

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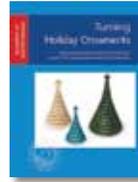
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Turning Holiday Ornaments:

19 fun holiday projects to help build turning skills and create great gifts. Member price: \$14.95

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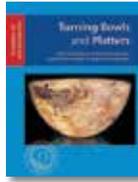


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CHAPTER SERVICES

The AAW offers a variety of resources and services to help chapters be successful.

Officer information kit: **New for 2015**, a digital toolbox for chapter officers, which includes job descriptions, operational information, tips, and best practices to help prepare new officers for their roles. tiny.cc/ChapterOfficers

Chapter Bulletin: **New for 2015**, a monthly digital chapter update, which includes announcements, board news, new educational resources and information, and more, to help chapters communicate more effectively with their members about the AAW. tiny.cc/ChapterOfficers

Best practices library: Includes topics such as programming, demonstrations, scheduling, mentoring, meeting protocols, youth education, financial guidance, charitable initiatives, and more, shared by successful AAW chapters. tiny.cc/AAWBestPractice

Grants and scholarships: Chapters can apply for Educational Opportunity Grants (EOGs) to help fund educational projects. They can also apply for annual chapter scholarships for members to attend woodturning schools, such as Arrowmont School of Arts and Crafts and John C. Campbell Folk School. tiny.cc/GrantEOG

Insurance: AAW offers two affordable general-liability insurance options designed especially for U.S. chapters. AAW's "Group Plan" enables chapters to be named in the AAW nonprofit commercial general-liability policy for a \$95 contribution. The "Private Plan" is a private general-liability policy available for purchase by chapters for a premium of \$425. As is typical of any insurance policy, there may be restrictions on chapter eligibility and coverage. tiny.cc/InsChapters

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Your interest in woodturning and membership in the AAW are key elements in promoting woodturning worldwide. The AAW board and staff are grateful for your continued commitment to preserving this wonderful art and craft for future generations and are eager to support you in your woodturning endeavors. If you have questions or thoughts to share, please contact us at 651-484-9094, toll-free 877-595-9094, or by email at memberservices@woodturner.org. ■

MEMBER GALLERY

Wally Dickerman

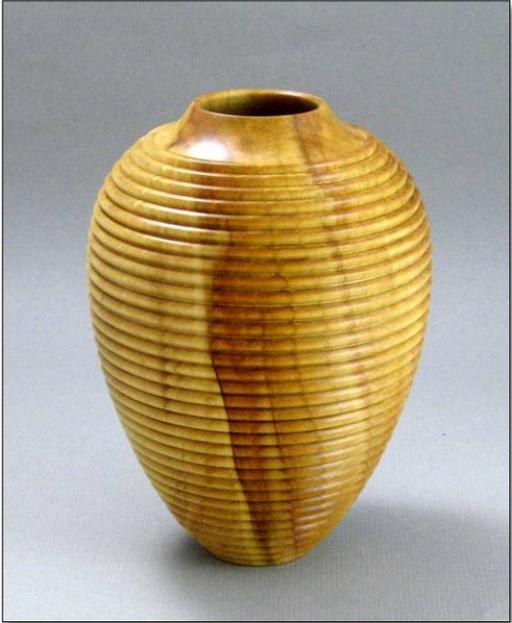
Wally Dickerman Portland, OR, is 93 years old and has been a member of AAW since March 1986.



Pierced with copper inside



Beaded Madrone and Ebony vessel
7" without the finial



Vessel 8"
Beaded with Wally's shopmade beading tool

Submissions

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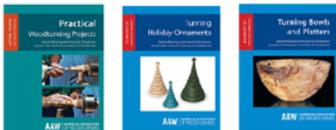
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