WOODTURNING FUNdamentals

AAW EDUCATION

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NATURAL WEED POT/CANDLE HOLDER

TOOLING UP WITH ACCESSORIES

SHOP MADE JIG BASE FOR ADAPTABLITY

VIDEO: TURNING MIRROR FRAMES

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Fundamentals

Cover photo: Walt Wager

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Woodturning FUNdamentals

Dedicated to providing education, information, and organization to those interested in woodturning

Introduction

Our enjoyment and excitement with woodturning is very contagious. Admit it, we all have the bug! Part of the enjoyment is working with our hands, but it is also the pleasure of the process. Skill-building is fundamental and watching the development after making the first six can be rewarding. This issue's articles offer skill-building and inspiration for your next projects: A Natural Bark Weed Pot/Candle holder, Exotic Wood Letter Opener, and Firewood Tool Handles. I enjoy the Techniques section; it gives us all inspiration. I hope you enjoy reading this issue.

In this issue of *Woodturning FUNdamentals*, we continue with our Shop Tips. If you would like to submit a question for one of our experts, you can submit it at http://www.woodturner.org/?page=Tips#TipForm2. We'd love to hear from you!

As always, *Woodturning FUNdamentals* invites you to submit your questions, tips, projects, and problems. Every turner develops techniques that work and 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.

Stay Sharp and Turn Safe,
Linda Ferber
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NATURAL BARK WEED POT

Steps to Making a Natural Bark Project From a Tree Limb

By Susan Rathke McCoy

Safety is the most important factor in turning. Use a face mask along with a dust mask or some type of personal air filtering system. Make sure long sleeves are pushed up; I use rubber bands to keep them pushed up and out of the way. Sharp tools are very important, too. My Tormek is within easy reach of my lathe, so it just takes a minute to touch up my tools. If you ignore the signs of a tool getting dull, it takes much longer to get that sharp edge back. Please note–when a tool is labeled as a "spindle gouge," it is designed to be used for spindle turning only.

For the natural bark project, I used a spindle roughing gouge, several sizes of spindle gouges, a teardrop tool, a point tool for detailing, and a flush-cutting saw. I used balloon lights for the candles.

Birch tree limbs were used for the first project, but use any tree branches that have interesting bark.

Step 1: Cut three different lengths; 5 ½", 6 ½" and 7 ½",or whatever lengths you like. This is a fun project; no exact measuring required!

Step 2: Find the centers, decide which end is the top and which end is the bottom. First, put the bottom towards the tailstock. Use a spindle gouge, shape the bottom by giving it a slightly concave shape so only the outside will be sitting on the surface. Then, turn the piece around and do the same thing to the top.

Step 3: Take it to the drill press to drill the hole in the top. I'm using a balloon light which requires a 19/64" drill bit. I have marked the drill bit to the depth I want for the lights. If you drill too deep, just use some wood putty to fill the bottom of the hole so your light is positioned where you want it. Should you want a contrasting color, drill your hole bigger. Turn a contrasting piece of scrap wood or pen blank to fit the hole, glue it in, then drill to the right size.

Step 4: Put the natural bark piece back on the lathe with the drilled hole at the tailstock end. Use your spindle roughing gouge and shape the top and the bottom sections by removing a small section of the bark from each end.

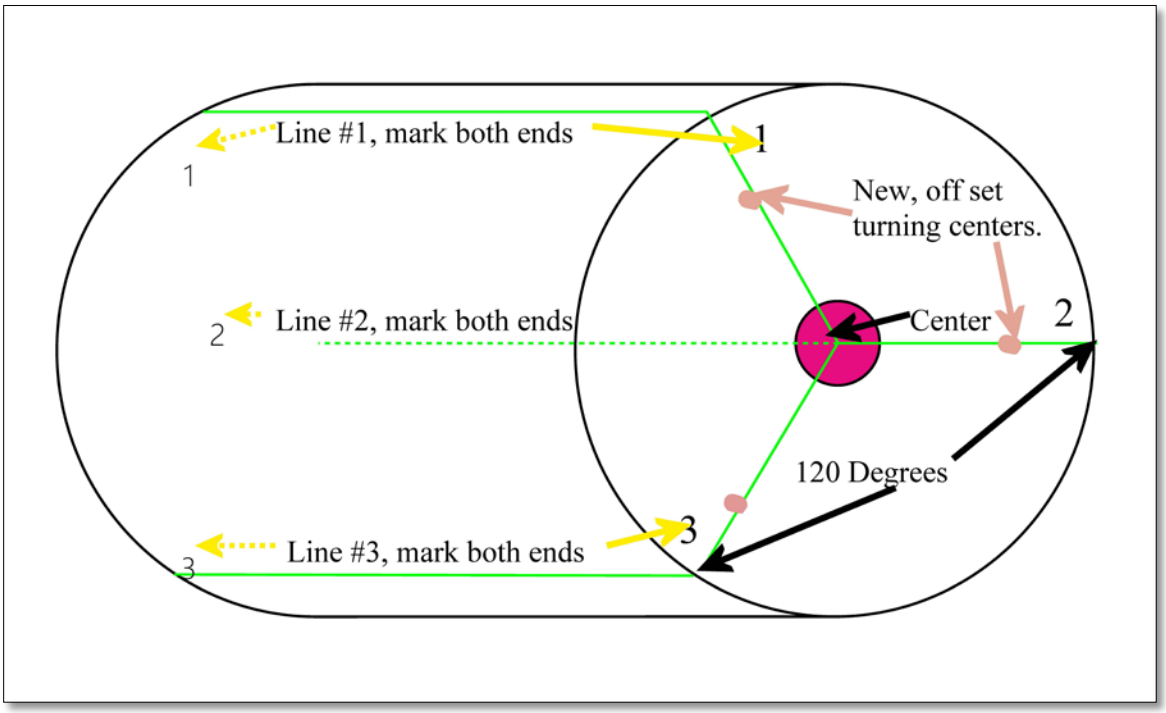
Step 5: Use your spindle gouge to turn some beads and coves to decorate the top of your piece. I like to have the bottom reflect at least one of the elements from the top.

I use a teardrop tool to fine tune my beads and a point tool to highlight the beads. A sharp transition makes your turning pop!

Step 6: Sand your piece, being careful not to flatten your beads. Use a small flush-cut saw to cut the nub off the bottom. Using a parting tool to completely part off the bottom may leave you with tear-out that is impossible to sand out. Sand the little nub off the bottom. Sign your name and apply finish. I like to use natural Danish oil.

Steps to Make a Three-Sided Weed Pot

The three-sided weed pot requires offset turning. It is very easy yet impressive. A protractor is required—mine is small and works great for these small projects.



Step 1: Choose at least two pieces of wood that are approximately 2 ½" – 3" square and 7" – 9" long. These measurements don't have to be exact.

Step 2: Find the centers and mount on the lathe. Use your spindle roughing gouge to turn the piece round. Use a spindle gouge to shape the top and bottoms. Shape the top then turn the piece around so the bottom is towards the tailstock for easier access.

Step 3: With the top towards the tailstock, shape the piece first using the roughing gouge, then spindle gouge. Have fun and create whatever details are pleasing to you. Be sure to highlight those details using a point tool or tool of your choice.

NOTE: I discovered a large crack opening up, so I used T-88 Epoxy mixed with Antique Bronze Pearl Ex pigment. I use the T-88 Epoxy because it will stay fluid longer and run down into the crack. Dry all epoxy over night to obtain a clean finish. For small cracks or repairs, I use five-minute epoxy or medium density cyanoacrylate glue (CA), mixing them with a Pearl Ex pigment. The repair can be colored so it blends with the wood or used as a highlight.

Some turners mix the sawdust from the wood with CA glue to make a great patch and I applaud them. It doesn't work for me, but please give it a try.

Step 4: Turn away the epoxy and sand. I sand the whole piece just so I know that I'm starting the offset turning with a clean, smooth surface.

Step 5: Take the piece off the lathe. Mark one spot on the bottom—anywhere is fine. Then using your small protractor, put the center line on the center point of your candle holder and put the 0 on the line you marked on the bottom.
Mark on the side 120 degrees. Starting from this mark, do the same thing and mark another 120 degrees. Transfer the marks to the bottom and draw lines between them. Mark a spot approximately ¼" – 3/8" in from the edge on each line. Number them 1, 2 and 3.

Step 6: Put the piece back on the lathe with the drive center point on the #1 dot. Make sure the tail stock is tight and hand turn the piece so you can adjust the tool rest to make sure it clears the toolrest.
Check the lathe speed. I turned mine at about 1500 rpm.

Use a speed you are comfortable with, but don't go below 1,000. That is just too slow and doesn't give you a good cut.

Step 7: Using the tool rest, draw a line with a pencil from each of your points on the bottom up to the shoulder. These are very important reference points when turning each section. The objective is to have your cuts meet up with the lines you drew.

Step 8: When you turn the lathe on, it will look like a VERY out-of-round piece of wood. That is exactly what it is! Don't let it scare you. Using your 3/8" spindle gouge, start from the top shoulder moving towards the bottom. Keep a steady even cut. Make a couple of cuts then stop frequently to check the progress. It is amazing how quickly each section is completed. Try to make very clean cuts with a sharp tool. This section is finished when the turned section meets the lines.

Step 9: Move the #2 dot to the drive center point. The same safety steps apply. Make sure the piece clears the toolrest! Use the same cutting techniques as described in Step 8.

Step 10: Move the #3 dot to the drive center point. The same safety steps apply. Make sure the piece clears the toolrest! Proceed in the same way as explained in Step 8. Now you have completed the three-sided weed pot/candle holder!

Step 11: Sand each section with the lathe turned off. I sand up to 600 grit.

Step 12: The bottom needs a final clean-up to remove the points of the drive center. I use a small piece of cut-off to keep the point of my tailstock from going into the wood, while holding it for the final turning. Take it off the lathe. Position the cut-off piece in the middle, draw a circle using the cut-off as the template so you can position it in the center. Change the drive center to the smallest one you own so it will hold the top without doing damage. Re-position Photos by Don McCoy

the piece on the lathe so the bottom faces the tailstock. While holding the small cut-off piece in the center, lock your tailstock in place. Now it's easy to use your spindle gouge to cut away the 3 points the drive center made in the bottom.

Make a cut from the outside towards the center. If you aren't comfortable doing that, use a pull cut starting at the center pulling it towards the outside.

Step 13: Drill the hole in the top. Do a final sanding on the top and bottom. Always stop the lathe and sand by hand with the grain to eliminate circular sanding marks.

Step 14: Apply a design or leave the surface plain. On the colored three-sided candle holders, Anna Stark drew Zantangle® designs in two different styles. One contained large designs and the other had lots of small detail. We then decided which one we preferred. I woodburned the designs then colored them with colored pencils. I sprayed a fixative on them, and finished them with natural Danish oil.

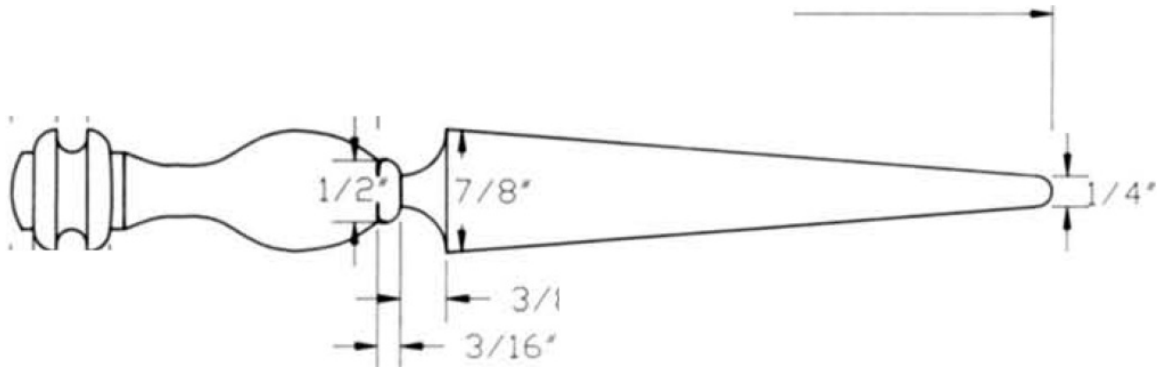
Step 15: Have fun with these projects!

About the Author Susan Rathke McCoy: I became interested in woodturning after receiving a wood pen. I had to know how that was made! Within a week of taking my first pen turning class in 1990, I had a lathe, joined the local woodturning club and have enjoyed it ever since. I help at the area junior high school and high school with their turning projects. I co-sponsor a program for teaching women to turn. We get together prior to the Southwest Idaho Woodturners Association monthly meetings. I have served in many positions within the club and this is my third year serving as president.

EXOTIC WOOD LETTER OPENER

Spindle Turning Project for a Functional Desk Accessory

By Tom Sorensen



In making letter openers, I have found that by working with exotic woods, I have a finished product that has a beautiful and interesting grain. These letter openers are also simple to make and require only very basic tools.

After selecting your wood, cut the blank so that it measures 1" × 1" × 9 ¼". Cut an "X" 1/16" deep into the end of the blank with the bandsaw. Line up the middle of the "X" on the spur drive, bring up the tailstock, and tighten the block securely in place.

Using a spindle gouge, tum the blank to a 7/8" diameter. Measure 5 3/4" from the right side of the blank and mark with a pencil line (Figure 1). This will be the length of the blade, including 1/4" which will need to be cut off for the finished length. From your first mark, measure 3" for the handle and mark with a line. This will be the finished length. Using a parting tool, make a ½"-deep groove at the 5 3/4" mark.

Using a spindle gouge, shape the handle by adding desired beads and coves. Next, turn the blade section to a cone shape, 7/ 8" next to the handle and ¼" at the tip.

Sand the handle until smooth and buff with 0000 steel wool. Use the long point of a skew or a parting tool to part off the letter opener. Catch the turning as it falls from the lathe. Hand sand the end of the handle.

Using safe bandsaw practices for round objects* cut a very small amount at the tip and taper your cut so that you remove about ¼" of thickness when you get to the handle. Do this on both sides of the knife.

Lay the knife blade across a belt sander and sand both sides. Make sure to keep the knife square and flat on the sander. With the blade still on the sander, begin to roll it from side to side. This will sharpen the edges and give it a graceful, curved look. Do this process on both sides, turning the blade over as many times as needed to give the piece a symmetrical look.

Next, sand the blade by hand, with the grain, to eliminate any of the rough areas. You may need to do some hand carving at the junction of the handle and blade so that the two sections will blend together nicely. The finished thickness of the blade will be 3/8" at the handle and 1/16" at the tip. The blade will be thicker in the middle and rolled to a fine edge. Finish with four coats of semi-gloss acrylic spray, sanding lightly between coats.

This article is adapted from *American Woodturner*, December 1990

✱ Reference article by Betty Scarpino, *American Woodturner*, February 2016

Round forms should be held securely in a jig during bandsawing to prevent the workpiece from rolling into the blade. Position your hands at the outer edges of the jig, away from the intended cutline.

A JIG for Bandsawing ROUND OBJECTS

Betty J. Scarpino

Cutting a round workpiece on the bandsaw without proper support is a dangerous proposition. Woodturners often want to cut apart or trim a tenon off of turned spindles, cylinders, cones, and pod-shaped forms. Using a handsaw is always safe, but that can be slow and sometimes not even possible. It's tempting, therefore, to use a bandsaw. But without the aid of a jig or other holding method, fingers can be lost.

I often turn pods using green wood, cut them apart, and then carve out the wood inside or use the two sections to make art objects. Years ago, Chris Weiland, a furniture maker from Pennsylvania, showed me an easy-to-make jig that safely holds a round, cone-shaped, or oval object in order to cut it apart using the bandsaw. Unlike multi-use V-jigs or wooden clamps, this jig is a customized, one-use affair, made from inexpensive materials.

Physics and fingers

The reason it is dangerous to cut round forms on the bandsaw is that the blade will enter the wood at a point above the surface of the bandsaw table—it is always safest to have the wood resting flat on the table, right where the blade starts to cut. If not, the blade will pull the wood down, round objects will spin forward, and a finger could be dragged into the blade.

A dowel as small as ¼" (6mm) diameter could even break a bandsaw blade. I experienced this firsthand years ago, when I was all-too-casually cutting a length off a dowel. It happened instantly, but fortunately my fingers were well to the side of the blade as it pulled the dowel forward, jammed the wood, then broke the blade. The dowel snapped in two and was not cut cleanly.

For cutting straightforward, small objects such as dowels, clamping them into a wooden hand clamp would work just fine, as would a V-jig, both of which should be kept handy near your bandsaw to help you avoid the temptation of making "just a quick cut." For other, more challenging-to-cut objects, the jig described in this article makes the process safer with customized support.

Materials

You will need a hot-melt glue gun, glue, scrap wood such as thin plywood, wedges, and masking tape (*Photo 1*). The size of the plywood and

Bandsaw jig materials

1

Materials needed: scrap wood, wedges, hot-melt glue gun, glue, and masking tape.

Secure mounting

2

3

Workpiece is glued and taped to the wedges and carrier, ready to be cut apart on the bandsaw. Note the intended cut line for this pod form (along the sidegrain). The jig can also be used to cut across the grain to remove a tenon.

Round form safely cut

The author's pod cut in half on a curved line. The tenons at each end can be cut off after the pod is split.

wedges will depend on the size of the object you are cutting.

For your bandsaw, make sure the blade is sharp and is the correct width. For tight curves and small objects, a ¼"-wide blade will generally work. My bandsaw is usually fitted with a ⅜"- (10mm-) wide blade, which works well with most small and large pieces of wood.

Make the jig

Cut the scrap-wood base to just about the length of and slightly wider than the workpiece (in this case, a pod form). The base should be made large enough to accommodate support wedges for your workpiece and allow room for your fingers to safely guide and push the assembly through the cut. The base also should be able to rest flat on the bandsaw table at the start of the cut.

Cut at least six wedges, more for larger, rounder, or odd-shaped objects. At least one wedge will be placed at the front, back, and sides of the pod. The front and back wedges support the pod as the wood enters and exits the bandsaw blade. Support in these areas is essential.

Place the workpiece onto the plywood and determine where you will make the cut, adjusting the position as needed. Hot-melt glue the first wedge into place. I usually start with a wedge on one of the ends. Using plenty of glue, secure the rest of the wedges into place. You will be gluing the wedges to the scrap-wood base *and* to the object itself. Note that if the workpiece is exceptionally wet, hot-melt glue might not adhere to its surface well enough to hold.

For added safety, especially with larger objects, wrap the assembly with masking tape. But be aware the tape alone will not prevent a round workpiece from rolling during a bandsaw cut, so do not rely on it as the only hold-down method (*Photos 2, 3*).

The last step is to mark the cutline onto the workpiece.

Cut the pod

Always keep your hands and fingers well to the side of the bandsaw blade and do not push the jig with your fingers aimed toward the blade (see *opening image*). Let the blade cut at its own speed—there is no need to push the assembly aggressively. Depending on the size of the wood and jig, you might want to use push sticks. I start the cut at the center of the end of the workpiece, which will mean lining up the jig to the correct angle for the curve of the cutline.

With a sharp blade, the cut will be made easily and safely in any direction—whether you are cutting off a tenon or stub or splitting the workpiece in half (*Photos 4–6*). After the object is cut, break the jig away from the workpiece. If the glue stubbornly remains, it can be heated with a hairdryer to ease its removal.

I use these pods in a variety of creative ways. If they are turned from green wood, I carve out the interiors right away to avoid cracking as the wood dries. ■

Betty J. Scarpino lives, works, turns, carves, and writes in Indianapolis. For more, visit bettyscarpino.com.

Betty J. Scarpino, *Journey,* 2007, Maple, paint, 5" × 14" × 3" (13cm × 36cm × 8cm)
Photo: Shawn Spence
Private Collection

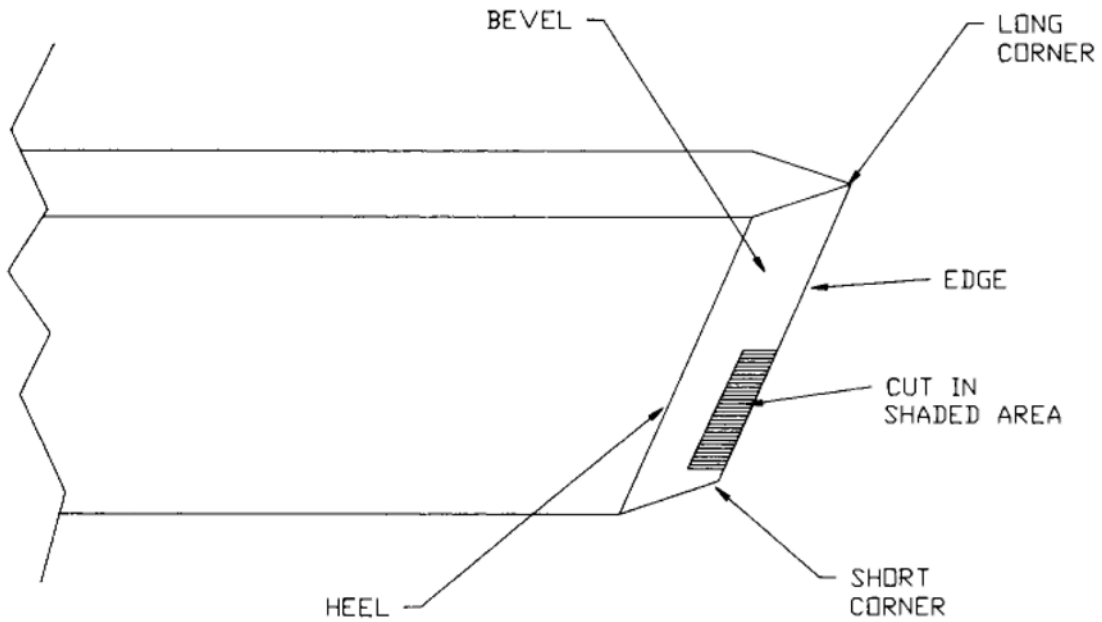
Betty J. Scarpino, *River Rocks,* 2007, Maple, rocks, particle board, paint, 4" × 11" × 14" (10cm × 28cm × 36cm)

FIREWOOD HANDLES WITH A SKEW

A Practice Project Using a Skew

By Andrew Barnum

Figure 1. Profile of skew chisel.



I learned to use the skew by making firewood tool handles and the rejects were burned in our pot-bellied stove. (I did not end up with many handles, but at least we were warm that winter!) I continued practicing and gradually handle-making and using the skew became a little easier for me. Here is a technique I used that may also help you.

Drilling a straight hole for the tool can be the hardest part of making a handle, even for experienced turners. A way to avoid the problem is to drill before turning and to use that bored hole as your centerline. You can do this on a drill press or on the lathe. If you chose to drill the hole using the lathe, mount your piece between centers and turn a tenon to fit in your chuck (you will have to have a chuck with small jaws) Fit a Jacobs chuck and the proper drill bit into the tailstock; then mount your blank in the chuck. To bore, set the lathe speed at about 700 rpm and crank the hand wheel with your right hand. After boring, turn off the lathe with the blank still on the drill. Retract the tail center slightly, and the wood will shift at the headstock end of the piece to reveal the true center line. Remove the piece from the chuck and remount it between centers using the new center of the headstock end and bring the tail stock up to continue the turning.

Over 90% of the turning could be done with a gouge, but doing that would also eliminate 90% of the practice with the skew. So, knock off the corners with your gouge and try to finish only with the skew.

I used to make the mistake of placing the edge immediately on the wood, instead of starting with the heel and gradually tipping the edge into the cutting position (Figure 1). ALWAYS KEEP THE HEEL RUBBING, and try practicing without cutting at all.

Traditionally, the skew is used with the long point up; and cutting is done with the lower half of the edge, just above the short point. In cutting, the handle follows the edge, and both points are kept out of the wood to reduce the chance of catches. The heel acts as a fulcrum to pivot the edge into or out of the wood. Practice on firewood, turn the spindle down to nothing, and then try again on a new piece of wood. The practice is more valuable than the wood. Do not forget–turn from a large diameter to a small diameter, and keep the corners out of the cut.

When you are ready to turn the actual handle, use calipers, wrenches, or plywood gauges to transfer measurements from your favorite handle to the new turning blank. Most people use brass or copper tubing as ferrules. Leave the wood slightly oversized where the ferrule fits. To attach the ferrule, you can have a tight friction fit or use glue. My favorite for this is E6000 which binds two different types of material well.

Firewood is a great material with which to experiment. It has negligible value, and you can take great design risks and not worry about destroying something precious. Apple, ash, and maple tool handles may not sound glamorous, but I have seen some that are almost works of art. Chances are you will use and treasure your handle for many years to come.

Adapted from *American Woodturner* article December 1990

GETTING STARTED IN WOODTURNING

Tooling Up with Accessories

By Walt Wager

In the December 2016 issue of *American Woodturner*, I discussed purchasing turning tools and sharpening equipment. I'm assuming you already have a lathe and that you have a spur drive, face plate, and live center that came with your lathe. These accessories enable you to mount wood on the lathe for turning, and there isn't much you can't do using only these three tools. However, there are other accessories that are illustrated in many of the articles published in the AAW journal and literature that you will soon wish you had. This article will discuss three of these accessories: the scroll chuck, calipers, and a drill chuck on a mandrel.

Photo 1 - Scroll chuck with two sets of jaws and tommy bars

Photo 2 - Scroll chuck with #2 jaws and chuck key

The four-jaw scroll chuck is one of the first accessories that I would recommend. The scroll chuck gets its name because there is a gear inside the chuck that looks like a spiral, and when it is turned (using a chuck key or tommy bars), it opens or closes all of the chuck jaws evenly (*Photos 1, 2*). While I prefer chucks that use a chuck key to open and close the jaws, chucks with tommy bars will also work just fine.

There are several things to consider when buying a chuck. First, what size scroll chuck do you need? There are two size considerations.

One is the diameter and thread size of your lathe's headstock spindle. For most mini and midi lathes, this is 1 × 8, meaning that the spindle is 1" in diameter and it has 8 threads per inch. Since the scroll chuck screws onto the spindle, you need a chuck with a 1 × 8 spindle size. Some chucks come prepared to screw directly onto a specific size spindle. However, many chucks are sold with spindle adapters that allow it to be configured for different spindle sizes. For example, if you have a lathe with a 1-1/4 × 8 spindle, you would buy the chuck and a 1-1/4 × 8 adapter. These adapters are often sold separately from the chuck.

Photo 3 - Scroll chuck with spigot jaws

A second consideration is chuck size which ranges from micro to large. For a mini or midi lathe, a medium sized chuck with #2 jaws is useful. Number 2 jaws hold a tenon that is approximately 2" in diameter. Photo 1 shows a set of #2 jaws that can be attached to this chuck. Photo 1 also shows a chuck with different types of jaws attached. Different jaws are used for different purposes. I commonly use spigot jaws (jaws that are machined long and deep for better grip on small parts), for example, when turning finials (*Photo 3*).

Some chucks are sold as a set or kit and include a number of different types of jaws. However, you can usually purchase different types of jaws at a later time if you decide you need them. My recommendation would be to get as good a quality of chuck as you can afford with a set of #2 jaws and maybe later a set of spigot jaws. Chucks vary in cost depending on their manufacturer, size and the accessories that come with them, but suitable chucks range in price from $100 - $300.

For more detailed information about scroll chucks, refer to the article "Mastering the Four-Jaw Scroll Chuck" by Dick Gerard and Stan Wellborn (http://aawcontentsource.org/aaw_cs1_pdf/AW2501p47-51.pdf).
My second most used accessory is the caliper. There are many kinds of calipers but I find that the vernier caliper is most handy for small spindle projects like boxes, while the bowl caliper is best for bowl projects. The vernier caliper can be used for measuring the outside diameter, the inside diameter or the depth of a piece. There is no need for a machinist quality caliper, and a good vernier caliper can usually be purchased for $35 or less.

Photo 4 - Vernier caliper

Photo 5 - Vernier caliper measuring outside diameter

Photo 6 - Vernier caliper measuring inside diameter

Photo 7 - Vernier caliper measuring the depth of the tenon

For more useful information on these calipers, read "Vernier Calipers Measure Up," by Roger Zimmermann (http://aawcontentsource.org/aaw_cs1_pdf/AW2901p18-19.pdf) (*Photos 4, 5, 6, 7*).

Photo 8 - Double-sided bowl caliper

The bowl caliper is used for measuring the thickness of the sides of the bowl and needs a wide swing to get inside the bowl. There are different types and sizes of bowl calipers, and I recommend that you talk to other woodturners to see what they use (*Photo 8*).

The third accessory that I recommend is a drill chuck with a #2 Morse taper. This accessory allows you to drill holes in the center of pieces that you have mounted on a face plate or in a scroll chuck. It can be used in either the head stock spindle or the tail stock, but is mostly used in the tail stock. The chuck shown in the Photo 10 is a keyless chuck, but it is also manufactured as a keyed chuck. Most turners prefer the keyed chuck because they feel it grips the drill bit more securely. The #2 Morse taper is standard on the drive spindle and tail stock of most lathes, but check the specifications on your lathe before purchasing one. A drill chuck usually costs between $35 and $50 (*Photos 9, 10*).

Photo 9 - Jacobs chuck with key

Photo 10 - Keyless Jacobs chuck in the tail stock

These three accessories will facilitate your turning and help you with projects described in many of the woodturning articles in the AAW journal, *American Woodturner.*

Walt Wager is a 15 year member of AAW and coordinator of Camelot's Woodworking Studio in Tallahassee, where he teaches woodturning and arranges workshops for professional woodturners. His website is waltwager.com.

LEARNIN' N TURNIN'

My Aha Moment

By Mike Porter

In the human performance field, it's said that we don't really learn something until we experience it for ourselves and really make it our own. People can tell us or show us this or that and we can say, "OK, I get it," but only until we actually experience it for ourselves, do we really "get it," or at least, start to get it. I had that experience last Sunday when my woodturning club was hosting a beginner spindle turning class. They were making pipe plugs for the Tualatin Valley Fire and Rescue (TVF&R) Department.

Here I was, an in-between turner, not a beginner but not a journeyman, standing by, helping out where needed.

I listened to Mike Meredith give a basic lathe overview to the eight students, then drifted around and eavesdropped as Mike, Steve Newberry and Roger Crooks demonstrated and coached these new folks. Soon, I found myself also sharing some things at the lathe that I have learned, and that's when I had my "Aha!" moment.
One student was asking me questions, good ones, and I found myself searching for the best helpful response. Then the light bulb went on: In all the things we learn, there are three general categories of turning knowledge and skills (with overlap, of course).

First, there are safety considerations—do or don't do this or that because you or someone else could get hurt. Long hair can pull your face into the spinning chuck.

Splinters from roughing a blank can go flying towards your face. Breathing the dust from spalted wood could harm your lungs. We need to protect ourselves from this powerful spinning machinery and the types of wood we attach to it, or we are taking a big risk. Violate certain safety practices and someday you'll pay for it. As I was told many years ago by my flight instructor, "Gravity respects neither rank nor experience. That ground can come up and bite you if you're careless and think you are invincible."

Second, there are skills, or techniques that we need to learn to get the repeatable and predictable results that we strive for. “Anchor, Bevel, Cut (ABC)” is one of the first rules in proper toolmanship that we all learn. Or, how to roll beads and coves. And, using sharp tools and keeping them sharp is another. If you want to improve, you will need to learn these skills well and practice them often. All the best turners today had to learn them when they started out, and all of them will tell you that they are still learning and practicing.

And finally, third, there are tool and technique preferences. For example, there is more than one way to use the skew: point up or point down, going to the left or to the right, holding it left-handed or right-handed. As long as the lower half of the edge is at a 45 degree angle to the rotation and the bevel is supported, you’ll get a nice planing cut when you move along the tool rest. The planing cut is what I was trying to explain to one of our beginner turners that triggered my “Aha!” moment.

Being able to decide which is a required skill or technique and which is a preferred skill and which skill is a critical safe practice is a helpful distinction. I’m still learning in all three of these areas, but I’m also now starting to figure out which is which, and that, to me, is important and a big step in my learning journey. Good turnin’ to you all.

Mike Porter is Vice President of North West Woodturners of Portland Oregon

TURNING A PROPER TENON

How much wood could a scroll chuck chuck?

By Walt Wager

One of the first accessories turners get is a four-jaw scroll chuck, and these make it much easier to secure wood to the lathe. The jaws clamp onto a tenon turned on the bowl or spindle. Getting the maximum holding power from the chuck requires a tenon of the proper size and profile. There are three considerations when making a tenon: diameter, depth, and profile. The most common jaws are the #2 dovetail jaws or the serrated jaws (*Photo 1*).

Photo 1: Serrated jaws and dovetail jaws

The dovetail jaws require a dovetail-shaped tenon using the dovetail profile, while the serrated jaws use a straight-sided tenon . The diameter of the tenon should be just slightly (1/4") larger than the diameter of the jaws when they are completely closed to best match the profile of the gripping surface (*Photo 2).*

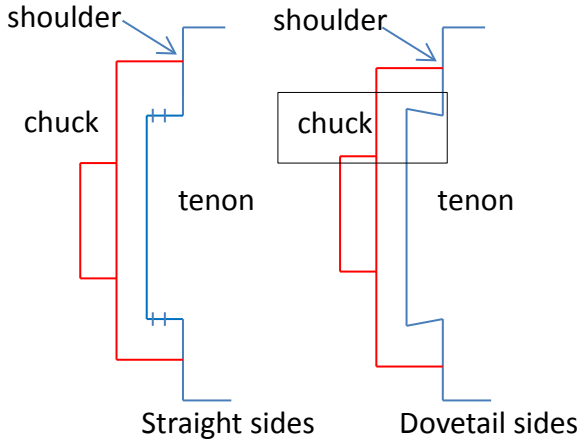


Photo 2

The depth of the tenon should be less than the depth of the jaws so that the tenon does not touch the bottom of the jaws. Also important is the shape of the shoulder next to the tenon that contacts the top of the jaws; it should be square to the jaws or slightly concave (*Photo 3).*

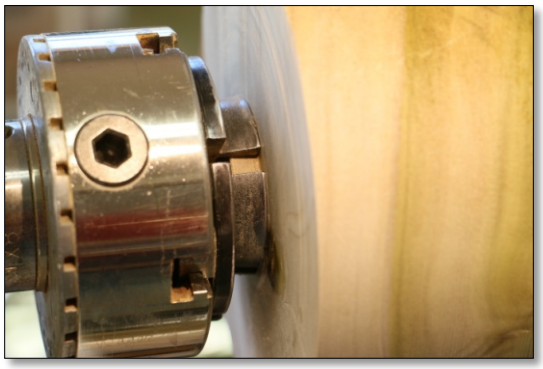


Photo 3

This shoulder provides lateral support to keep the tenon from pulling out of the chuck. Of all considerations, this last step is most crucial. So, let me repeat that the outer edges of the chuck jaws should be square against the shoulder of the tenon as shown in photo 3.

Photo 4

Photo 5

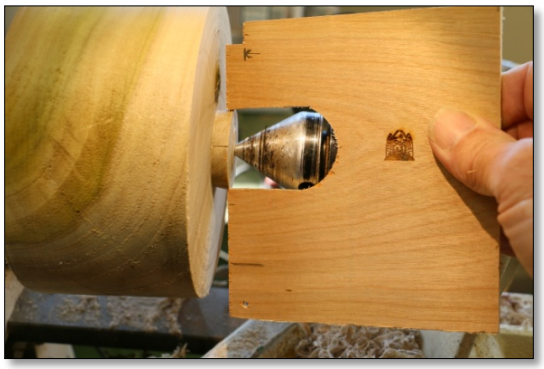


Photo 6

An easy jig to make is a chuck gauge that shows the diameter and depth of the tenon for a particular chuck. Simply set the chuck so there is about 1/8" – 1/4" space between each of the four jaws. Copy this diameter to a piece of thin plywood or heavy cardboard (*Photo 5 & 6*) You can also cut out a corner notch to gauge the depth of the jaws to make sure that the tenon won't be too long (*Photo 7*.)

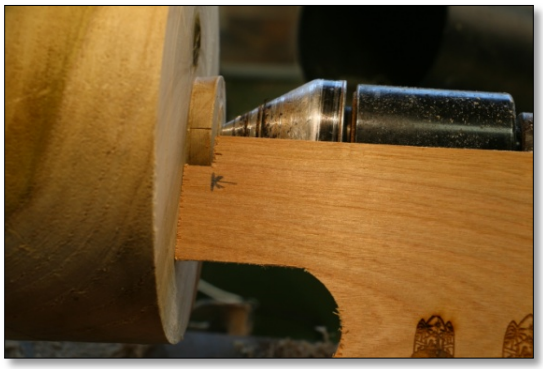


Photo 7

Walt Wager is a 15 year member of AAW and woodturning instructor at Camelot's Woodworking Studio in Tallahassee, FL. His website is waltwager.com, and his email is waltwager@gmail.com

SHOP MADE JIG BASE FOR ADJUSTABILITY

Mounting Wolverine Jig Bases for Adjustability

By Rob Wallace

The "Show and Tell" part of a chapter meeting is often one of the best activities that allows members to present their turned pieces, demonstrate new tools, explain solutions to problems, and give tips and hints that members have come up with to improve their turning. While attending a chapter meeting of the Des Moines (Iowa) Woodturners, one of the recent Show and Tell items seen was an 8" grinder with Oneway Wolverine jig bases installed on a plywood platform–something I had seen dozens of times before in many woodturner's shops. The difference in this case was that the bases of the Wolverine system were adjustable side to side. This idea was developed by Des Moines Woodturners AAW Chapter member LeRoy Monson, a retired aerospace engineer and consummate builder and tinkerer.

In his design, I saw what I thought was an excellent idea for how to mount the Wolverine Jig bases to a grinder platform that provides for lateral adjustability, enabling the re-positioning of the bases when grinder wheels are changed. This assures that the base is properly centered with reference to the wheel. I had to ask for the details about this adjustable mounting system, and LeRoy was kind enough to further explain how he did this, giving more specific information on installation and providing some images to show how it was done.

I think this is a great idea that many turners will find useful. The following instructions will help you in completing a similar installation for your grinder and Wolverine sharpening system.

Photo 1: The dado-routing jig LeRoy Monson used for guiding a straight router bit (pattern bit with ball bearing on top) when cutting the dadoes to fit T-tracks into the wooden grinder platform. The depth of each dado should be the thickness of the T-track, plus about 3/64".

Routing the T-Track Grooves: The heart of this adjustable system is made from six short sections of T-track (4"–6" long, depending on the width of the grinder mounting platform), with 3 tracks on each side that are cut into the surface of the platform. The T-track is designed to work with correctly-sized hex head bolts (machine screws) to provide for adjustable holding at any position along the length of each track.

LeRoy stressed the importance of making sure that the three slots cut into the base on each side are exactly parallel to one another, and that each is centered on the screw holes in the Wolverine bases (approximately 3” on center. Confirm this distance with your bases). To assure the grooves are cut uniformly and are parallel to one another, LeRoy made a jig for his router (*Photo 1*) with a slot to guide the router bit, and a reference fence to position each groove square to the side edge of the platform. The jig can be clamped to the platform while routing the grooves. The depth of each groove is set so that the T-track top surface is approximately 3/64" below the surface of the wooden grinder platform to assure that the Wolverine bases are held firmly against the wooden platform without any interference.

Installing the T-Tracks: When the grooves for the T-track pieces have been routed to the correct length and depth, the T-tracks can be installed with small flat head wood screws using the countersunk screw holes in the bottom groove of each T-track. (Be sure the screw heads are fully seated into the countersinks so the hex heads of the bolts can slide freely.) The T-tracks can also be glued into position using epoxy adhesives, but be sure to avoid contaminating the inner surfaces where the heads of the hex-bolts need to be able to move. Assure that the tracks are set to a uniform depth, are parallel, and will be held in the correct position until the adhesive cures (if used). A completed installation of T-tracks on one side of the grinder platform is shown in Photo 2.

Photo 2. Completed installation of three T-tracks on the right side of the wooden grinder platform (grinder removed). The left side installation is a mirror-image of this.

Modifying the Wolverine Bases: First, the mounting holes in each base need to be bored out with a 1/4” drill bit to accommodate 1/4”-20 hex head bolts, approximately 1-1/2”–2” length. Drill out all 6 holes in both Wolverine base mounts to 1/4” diameter. Second, in order to provide access for a 7/16” socket wrench to slip over 1/4”-20 nylon lock nuts, the aluminum extrusion of the Wolverine bases must be further modified by enlarging the screw holes on the top part of the base extrusions so that each hole is approximately 5/8” in diameter. To do this, LeRoy recommends using step drill bits (*Photo 3*) which are self-piloting and will produce a smooth, concentric larger hole. Two sizes of step drill bits may be needed depending on the drill’s design.

(Note: Use of a twist drill bit may leave a jagged edge as these are prone to "wander" when used for enlarging holes and can result in drilling an out-of-round or oval hole.)

Photo 3. The step drill used to enlarge the top holes in the Wolverine bases to accommodate a 7/16" socket wrench. An enlarged hole can be seen at the right of the Wolverine base and is approximately 5/8" diameter.

Mounting the Wolverine Bases: Install one 1/4"-20 hex bolt into each T-track with the head sliding into the T-slot groove, and then slip the Wolverine base onto the 3 machine screws through the 1/4" holes in each base. A 1/4"-20 nylon lock nut is then threaded onto each machine screw from the top, and then are tightened with a 7/16" socket wrench to adjust each base in the correct position under the wheels of the grinder. A completed installation of the Wolverine base is shown in Photo 4. There should be quite a range of left to right adjustment possible to be able to center the mount carrier tube precisely as needed under each wheel. If grinder wheels are changed, the base can be easily re-positioned by simply loosening the lock nuts and moving the base to the desired position before re-tightening.

The Oneway Wolverine Sharpening Jig is arguably one of the most widely-used grinder sharpening systems within the woodturning community. This T-track mounting system for the bases provides the ability to easily reposition them when new wheels are installed–a useful feature at a time when many turners are transitioning from aluminum oxide grinding wheels to CBN wheels. Adding this kind of adjustability is an improvement over installing the bases in a fixed position. I hope fellow turners can benefit from LeRoy Monson's solution.

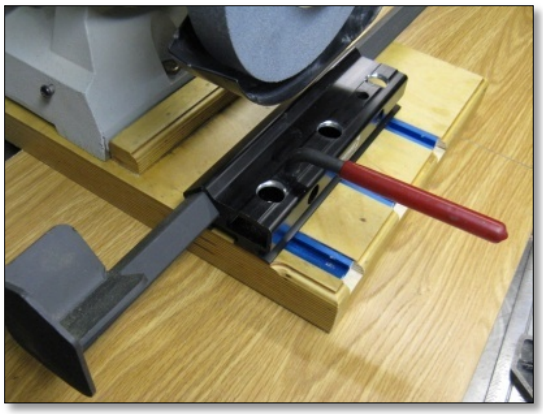


Photo 4: A completed installation of the Wolverine base.

Materials Needed:

- T-track (with slot fitting ¼"-20 hex bolts; a 24" length will yield six 4" pieces with careful cutting) Six (6) ¼"-20 hex head bolts, 1-1/2" to 2" in length
- Six (6) ¼"-20 nylon lock nuts
- Small flat head wood screws to mount T-track; check for appropriate size and length
- Epoxy adhesive (optional).

Acknowledgements: I would like to thank LeRoy Monson for his willingness to share the details of his installation, for providing the images used in this article, and for presenting this idea to the Des Moines Woodturners during Show and Tell.

Rob Wallace is a past member of the AAW's Board of Directors, and serves on the Ethics, and Nominating committees. He is a member of the Des Moines Woodturners and is President of the Ames Area Woodturners Chapter.

SHOP TIP

How to make a “Sanding Club”

When you have turned a nice hollow form but then realized that it needs to be sanded way down in the bottom and your fingers won’t quite reach then the “Sanding Club” may be just what you need.

I turned my club to resemble what we used to call a “Billy club.” The handle or grip was turned to fit comfortably in my hand. I then wrapped adhesive-backed Velcro around the business end of the club and attached Abranet, or any other hook and loop-backed sandpaper, to it.

I have made several of these clubs in diameters varying from 5/8" to 3/4" to 1 1/8". So when my hand or fingers won’t quite get into those hard to reach places, I pick up my sanding club to do the job.

~ Rick Auge
Minnesota Woodturners

SHOP TIP

How to make the barrel trimmer work when making pens.

I don't make a lot of pens so I haven't invested in many of the pen-making gadgets. I use a screw clamp instead of a pen press. I cut a "V"-shaped slot in a hand screw clamp to hold the blank in place while drilling the holes with my drill press. All pretty low-tech stuff.

But one of the problems I've never been able to overcome, until now, is how to actually make the barrel trimmer trim the ends of the pen blanks. I certainly can't do it by hand. I've tried mounting the trimmer in my drill press and holding the blanks up to it manually to be trimmed. No luck.

It finally dawned on me that I needed more muscle power—rather, machine power. So, I mounted the barrel trimmer into my drill press then clamped the pen blank into the "V" cut I had made in my hand screw clamp. After that, it was a simple matter to lightly pull on the drill press handle and watch the shavings fly! After a few light pulls on the handle, the blank was nicely trimmed and ready for the assembly process.

~ Janice Levi
Brazos Valley Woodturners
Gulf Coast Woodturners Association
www.janicelevi.com
jlevi@rightturnonly.net

SHOP TIP

Bugs in Wood: Borax to the Rescue

We all battle those pesky bugs that make their way into the wood before we can manage to turn it. I have a couple of thoughts to add to the excellent points already made in FUNdamentals.

I saw lumber and use my sawmill to cut blanks for turning. A trick used by sawyers is to use plain, off-the-shelf, Borax. Mix it at a ratio of one cup per one gallon of water in a spray bottle and spray the wood while it is still green. If you have a lot of wood, use a pump-up sprayer. If the wood is green when you spray it, the Borax will prevent powderpost beetles from invading.

Although the solution does not soak far into the wood, it will kill any other insects that it reaches.

If the wood is dry and powderpost beetles have already entered deep into the wood, the Borax will crystalize on the surface and as beetles emerge and eat the treated wood, they will die. Any new larvae which emerge from newly laid eggs on the surface will die as they eat their way into the wood. Either way, an infestation is stopped.

If the solution is applied to dried wood, the results will not be as effective. However, spraying with the Borax solution is more effective than doing nothing. Be aware that if applied to woods like oak, serious checking can occur.

Borax is safe for the woodworker when he/she later works or turns the wood. It does not affect the wood's color or machining properties. In addition to killing insects, it also destroys bacteria and fungi.

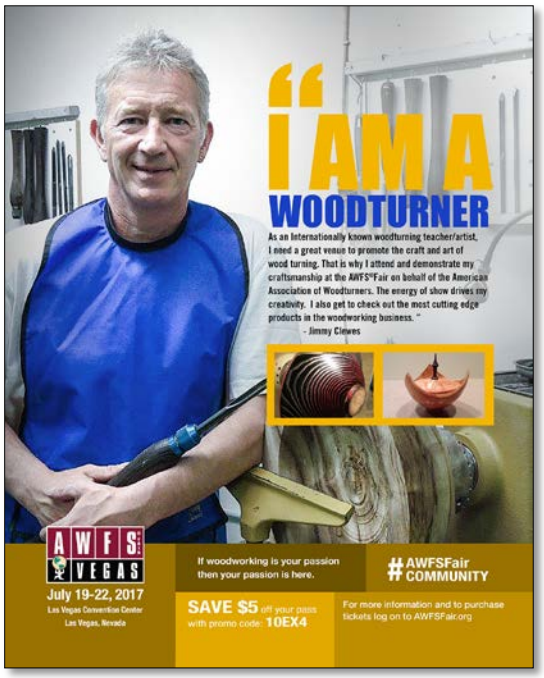
"Cooking the Borers"

Another trick that I use is aimed at getting rid of borers. When borers have hatched and they have begun eating their way through my turning blanks, I put the rough-turned piece into the microwave for 15-45 seconds, depending on the size. It needs to reach "hot potato" temperature. This will kill the adult borers but

supposedly, not the eggs. It also helps speed the drying process. I then let the rough-turned piece dry for several months. After the final turning, I return it to the microwave to ensure that any borers that have hatched will be eliminated.

I have actually reheated badly infested bowls every six months just to make absolutely sure that I get all the little buggers. I had some beautiful crotch walnut that was infested. I used this method to make the wood safe and the result was some beautiful bowls that were accented by the borer holes.

~ William "Bill" Devlin
Centreville, VA
Catoctin Area Turners, Leesburg, VA



Cleaning Buffing Wheels

How do you clean a dirty buffing wheel? Sand it!

I appreciated the tip that S. Gary Roberts from Austin, TX submitted concerning the cleaning of buffing wheels. I would like to share the process that I use and it has proven to be quick and effective. Just hold a piece of coarse sanding abrasive against the spinning buffing wheel. It will quickly remove excessive buildup. I use either 40- or 60-grit sanding material that I get from a friend who is a floor finisher. He saves me some of his used abrasive paper. I use this cleaning process after every second time I use the wheel, especially on the Tripoli wheel. The white diamond compound doesn't seem to build up as badly.

In the event that 40- or 60-grit abrasive is not readily available, you can use 100-grit abrasive, although the procedure may take a bit longer to get a nice clean buffing wheel.

~ Alan Leach
Bay City, OR
Tillamook County Woodturners
Photo taken of Tom Levi by Janice Levi

SAFETY FIRST

Touch. Bang! Crash!

By Harvey Rogers

I managed to get my hands on a large piece of light-colored wood. It was about 22" long on the longest side, about 18" long on the other side, about 7" deep at the deepest part, and very irregular. I thought it might be some sort of maple and that I would use it to make a platter to practice woodburning.

I was able to cut about a 16" circle out of it. I screwed a faceplate onto it, mounted it on my lathe, and started turning the bottom. It smelled wonderful! The blank was clearly a testament to my wood identification skills because it was definitely from a conifer. It was dry and very hard. After a bit of shaping, I could see prominent grain lines with large spaces between the growth rings. Because of the smell, the spaces, and the hardness, I decided it was probably a piece of fir.

After I smoothed the blank, I noticed bands of darker color in the wood about an inch wide and in the middle of each band, was a hairline crack. I doused the cracks with CA glue.

Because it was a large, irregular blank with hairline cracks, I kept the speed pretty slow, wore my face shield, and made sure I stayed out of the line of fire. I turned the backside to a deep, platter shape.

Last year I took Soren Berger's hands-on class, and I remember Soren saying that chucks grip better in expansion mode than in contraction mode, if there is enough wood outside the groove. I took Soren's statement as gospel and have been only gripping in expansion mode since then.

So I cut a groove on the backside, leaving almost two inches outside of it to support the expansion of the chuck. To make double sure this large, heavy, irregular blank would stay on, I clamped down hard on the chuck wrench to force the jaws into the groove.

I was pleasantly surprised how well this rather crummy blank was turning. I was getting a finish on the wood that would hardly need sanding by using a freshly sharpened scraper and taking light cuts.

Feathery shavings were coming off the tool just like I read they are supposed to.

I was nearly finished when I realized I had a small ripple near the center of the platter. I turned the speed up a bit because I was only going to cut near the center. I may have noticed a slight whine and as I lightly touched the scraper to the blank about an inch away from dead center, “Touch. Bang! Crash!”

The bang came from the platter splitting right down the middle where there were no stains or hairline cracks. The crash came from half of the 16" platter flying off the backside of my lathe and almost through the window in front of my lathe. The half platter did not shatter the window but it ripped off the window latch.

Thankfully, all I got was a whack on a knuckle from the smallest piece of the platter.

At first I couldn’t figure out why the platter split the way it did. I was prepared for it to split along the hairline cracks near the edge that I had patched with CA glue. But the center was sound wood with no visible cracks, and it was more than half an inch thick. I think this happened because I was using my chuck in expansion mode on a dry wood that splits easily. I suspect the whine I might have heard may have been the wood becoming unstable from the combination of the extra centrifugal force of the increased speed and the pressure from the chuck expanding into the groove.

I think there are a couple of safety lessons learned from this experience:

1. I can’t just rely on things other turners tell me, even if the teller is a great turner. I have to think about the advice and see if it makes sense for what I’m doing. I’m going back to thinking about whether I should expand or contract my chuck jaws, depending on the blank I’m turning.

2. If my lathe starts making an unexpected sound, I’m going to stop the lathe and figure out why I’m hearing a new sound. Doing both of those things should reduce my shop window latch replacement expense and perhaps save me from serious injury.

~Harvey Rogers
HarveyRogers@gmail.com.
Cascade Woodturners Safety Officer
AAW Safety Committee

VIDEO TIP

Turned Mirrors

VIDEO: Making and decorating a simple platter or bowl to frame a mirror with Jennifer Shirley (TRT 1:45:22)

If you have trouble accessing the video, copy the following link and paste it into your browser: https://vimeo.com/195910456

A Note About Safety
An accident at the lathe can happen with blinding suddenness. Respiratory and other problems can build over years. Take the appropriate precautions when you turn. Among the most important of these is the use of face shields, safety glasses, and dust masks. It is important to observe all manufacturers' safety guidelines. Following manufacturer's safety guidelines and information will help you continue to enjoy woodturning years into the future.

MEMBER GALLERY

AAW Forum: "Turning of the Week"

Cherry Platter
Bob Good

Mesquite Steps
Michael Alguire

Wheat and Lady Bug Bowl
Turned by Mark Hall.
Pyrography and paint by Carol Hall.

Sunburst Maple
James Seyfried

Bloodwood Mirror
John Lucas

Low Tide
Jim McLain

Engage with the AAW Forum Community!

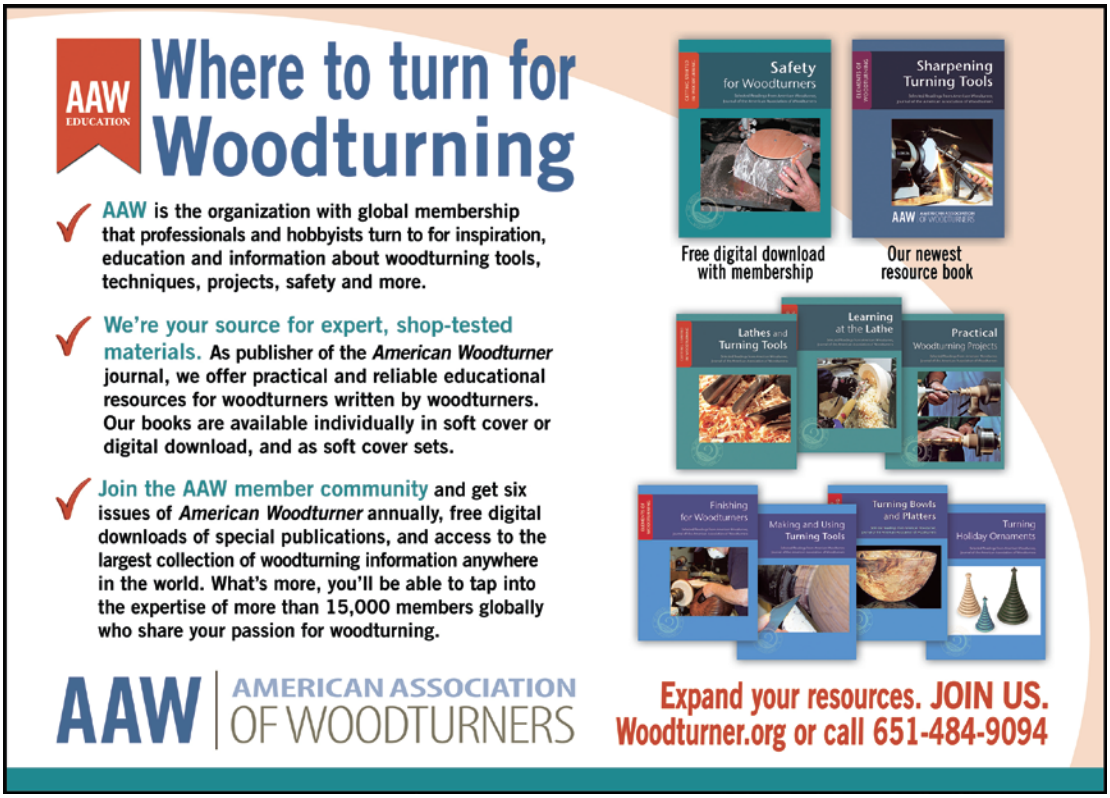
The AAW Forum is a volunteer member-moderated community ideal for sharing work and ideas, obtaining feedback, and connecting with other woodturning enthusiasts.

We encourage you to register for the AAW Forum, ask questions, seek advice, and submit photos of your work. Your work could be the next "Turning of the Week!" Click here to visit the AAW Forum.

Submissions

Want to share your work in *Woodturning FUNdamentals*? Please send your high-resolution images along with title, size, and materials used to linda@woodturner.org.

Want to "pay it forward?" *Woodturning FUNdamentals* welcomes other content including tips, projects, and informational articles. Please send your content ideas to linda@woodturner.org. The deadline for submissions for the May issue of *Woodturning FUNdamentals* is April 12, 2017. Please note: All content submitted may be subject to edit.



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DEMONSTRATORS AND PANELISTS

See the December 2016 and February 2017 journals for more detailed listings of the Symposium demonstrators, including rotation topics. The latest symposium information can be found on AAW's website, woodturner.org.

SAM ANGELO
SALLY AULT
STUART BATTY
JOHN BEAVER
BRUCE BERGER
JEFFREY BERNSTEIN
DIXIE BIGGS
TRENT BOSCH
JEFF BROCKETT
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Photo: Andi Wolfe

MOBILE APP

The Guidebook app for mobile devices will again be available for use at this year's Symposium. With this free app, you'll have all the rotations, demonstrators, tradeshow exhibitors, floor plans, and messaging at your fingertips. Save time by installing the app before the Symposium. Visit woodturner.org.

DONATE TOOLS TO THE AAW TOOL BANK

AAW's Tool Bank is a success story. In each of the last six years, members have brought unwanted (new and lightly used) tools to the Annual Symposium for donation to help AAW programs such as Woodturning Beyond Barriers, Turning to the Future, and Turners Without Borders. Please bring your lightly used tools to the Kansas City Symposium. Bowl, spindle, and roughing gouges are most needed; chucks and other equipment are also welcome. Tool donations will be accepted at the registration desk.

SYMPOSIUM HOTEL

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Kansas City, MO 64105
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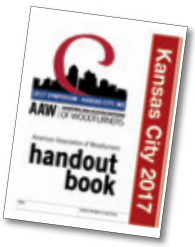
Visit woodturner.org for updated hotel and group rate information.

FREE SYMPOSIUM HANDOUT BOOK

Symposium registration includes this comprehensive symposium book, which features all the demonstrators, images of their work, and valuable how-to information on topics covered in demonstrations. Buy an extra copy for $25 to share with your woodturning friends back home!



PROFESSIONAL OUTREACH PROGRAM PANEL DISCUSSIONS

Panel discussions open to all symposium attendees.

- **Artist Showcase—Evolution of an Artist:** Keith Holt, Jim Sannerud, David Ellsworth (moderator)
- **Collaboration—Demo and Discussion:** Nathaniel Chambers, Michael Hosaluk, Mark Sfirri (moderator)
- **Digital Photography:** Rudolph Lopez, Kurt Herzog, John Beaver (moderator)
- **The Ego and the Soul: Why Makers Make:** Kristin LeVier, Sally Ault, Jennifer Shirley, David Ellsworth (moderator)
- **All About Craft Shows:** Mark Waninger, Chris Pytik, Keith Holt, John Beaver (moderator)
- **Plagiarism: Where is the Fine Line? Finding Your Own Voice:** Barbara Dill, Miriam Carpenter, Jennifer Shirley, David Ellsworth (moderator)
- **How to Become a Demonstrator—From Application Process Through Presenting an Effective Demonstration:** Andy Cole, Curt Theobald, Sally Ault, Jeff Brockett (moderator)
- **Gallery/Museum Curator's Prospective:** Michael McMillan, Derek Weidman, David Ellsworth (moderator)
- **Direct or Internet Sales: Tips, Tricks, and Traps:** Mike Mahoney, Cindy Drozda, Keith Holt, J. Paul Fennell (moderator)
- **Cultural Appropriation/Misappropriation?** Graeme Priddle, Derek Weidman, Clay Foster, J. Paul Fennell (moderator)
- **Where to Buy and Sell Wood Art in the Current Market:** Jeffrey Bernstein, Stephen Weinroth, Joe Seltzer, John Beaver (moderator)
- **Understanding Tool Steels and Grinders – A Technology Update:** Tom Wirsing, Stuart Batty
- **Woodturning with Disabilities:** Andi Sullivan, Gil Malave, Alan Zenreich
- **Intimate Critique:** An opportunity to receive valuable feedback on your work through one-on-one discussion with an expert. Expect encouragement, tips, suggestions, and a positive experience. Judy Chernoff, Alan Stirt, Michael McMillan

CELEBRATION DINNER AND BENEFIT AUCTIONS

Join us the evening of Friday, June 23rd for good company and the AAW live auction. Refreshments will be provided and a cash bar will be available. Over the past ten years alone, the Educational Opportunity Grant (EOG) benefit auctions have raised more than $500,000 for woodturning education.

Also, don't miss the bidding at the Professional Outreach Program (POP) live auction Saturday afternoon!

Can't make it? Don't miss out! Both live auctions will allow you to participate via live, remote, online bidding. Auction items will be published online for advance viewing on May 26. To sign up for a reminder, go to tiny.cc/NotifyMe.

On Saturday evening, enjoy a celebration dinner and a slower-paced silent auction, where you can bid on a variety of turned works and other items. Funds raised will be used by the AAW to continue to develop and deliver woodturning education and service programs for our member community worldwide.

RETURN TO THE COMMUNITY

Each year, local chapter organizers select a project for fundraising during the Symposium. This year, we have two. Bring a turned bowl or other object for the Empty Bowls fundraiser, which benefits Variety, the Children's Charity of Greater Kansas City. You can also donate boxes to support Beads of Courage. For information on both, visit tiny.cc/2017Return.

YOUTH TURNING ROOM

Youth ages 10 to 18 are eligible to register for free hands-on woodturning instruction. Each registered youth must be accompanied by an adult who is registered for the Symposium. Students will make a variety of projects.

Volunteer teachers this year will include Steve Cook, Jim Rodgers, Rex Burningham, and Kailee Bosch.

On Sunday, fifteen young turners will win a complete turning package, including a lathe, tools, and faceshield.

- Powermatic/JET: JET mini lathes and stands
- Teknatool USA: chucks and revolving drive centers
- Crown Tools: sets of turning tools
- Craft Supplies USA: project supplies
- Hunter Tools: project supplies
- Vince's WoodNWonders: abrasives
- Robust Tools: toolrests and safety drives
- Easy Wood Tools: Easy Roughers and Easy Finishers
- Woodcraft: faceshields

Dennis Fuge instructing a young turner during the 2016 AAW Symposium, Atlanta, Georgia.

Photo: Andi Wolfe

Donor list current as of time of publication. See tiny.cc/AAW2017KC for updated information.

Our heartfelt thanks to those who generously donated in support of this program. These vendors have also agreed to furnish a complete turning package for the visually impaired program and ten additional turning packages for EOG grants.

SPECIAL INTERESTS

AAW's International Symposium encompasses many special interest groups that are all part of our woodturning community. At no other event will you be able to sample such a broad range of interests. You will want to attend this year's Special Interest Night (SIN) activities on Thursday evening.

Come and meet Australian turner Richard Raffan at the AAW Symposium in Kansas City.

A special event will feature Richard Raffan presenting a retrospective of his work.

SIN activities are organized by AAW members to share common interests. Past SIN sessions have included Women in Turning, Segmented Woodturners, Principally Pens, Ornamental Turners, a teachers forum, and a remote video demonstration. If you are interested in organizing a SIN session at the Kansas City Symposium, contact Al Hockenbery at al@woodturner.org.

POWERMATIC LATHE RAFFLE!

A winning ticket will be drawn at AAW's International Symposium, in Kansas City, June 24, 2017.

Proceeds to support activates of the local AAW chapters in Missouri and Kansas.

POP SHOWCASE ARTISTS

This year's Professional Outreach Program (POP) Artist Showcase will feature Keith Holt and Jim Sannerud. In addition to their individual rotations noted below, Keith and Jim will participate in a POP panel discussion, "Evolution of an Artist."

Keith Holt

A Decade of Inspirations

A journey of images showing the past decade of Keith Holt's and others' work, revealing key influences and inspirations.

Sweet Spot, 2015, Ebonized cherry, 4½" (11cm) diameter

Jim Sannerud

Production Green Woodturning: From Log to Lager

Learn the fundamentals of green woodturning, from looking at logs to choosing grain orientation to turning and drying.

Inspiration and Perspiration: Learning and Making

Learn how Jim Sannerud continually cultivates his creative voice.

Bowl Stack, 2012, Birch, milk paint, linseed oil, 23" × 14" (58cm × 36cm)

Photo: Tib Shaw/AAW

COMPANION PROGRAM

We are excited about the 2017 AAW Companion Program/Craft Activities—offering participants an outstanding mix of options, including tours and DIY projects. Craft projects include arm knitting, pressed flower cards, bracelets in copper and silver, and rings and earrings. Watch AAW website for class schedules and registration.

WOODTURNING EXHIBITIONS

Instant Gallery

The AAW Symposium Instant Gallery is the largest display of turned-wood objects under one roof. It is a great opportunity for any and all registered attendees to sell or just show off their work. There are no requirements: just bring up to three of your turnings to participate in this incredible display. To preregister your display pieces online prior to arrival, visit tiny.cc/AAW2017KC.

Special Exhibitions

Waves of Grain

This year's title theme honors Missouri's rich agricultural history. The *Waves of Grain* title was also chosen to provide a catalyst for other interpretations: from ancient grain goddesses to the amber waves of wood grain, it is a theme rich in possibilities. Two artist awards will be given during the Symposium: a Masters' Choice Award of $300 and a People's Choice Award of $200.

The Sphere – Second Round

Now in its eleventh year, the Professional Outreach Program (POP) exhibition series presents small-scale works by an international roster of emerging and established artists. This year, the exhibit will feature works by forty-eight artists from twelve countries and seventeen states. The creative thinking is big, yet the work is small, with a maximum size of 6" × 6" × 6" (15cm × 15cm × 15cm).

The work from this show will be auctioned live at the Symposium. Can't make it? Bid online! Proceeds support POP initiatives and programs, including panels, Instant Gallery awards, grants, and the Artist Showcase.

Pat Carroll, *Beauty in Decay,* 2016, Rippled sycamore, rust-finish paint, 6" × 6" × 6" (15cm × 15cm × 15cm)

Photo: Tib Shaw/AAW

Ron Fleming, *Echinacea,* 2000, Dogwood burl, maple tooth picks, 16" × 8" (41cm × 20cm)

2017 POP Merit Award – Ron Fleming

This year, POP honors Oklahoma artist Ron Fleming, a founding member of the AAW and a gifted sculptor, turner, and graphic artist.

The POP Merit Award is given to an artist whose body of work and career have contributed significantly to the growth of woodturning as an art form. Previous recipients: Giles Gilson, Stephen Hogbin, Mark Lindquist, Merryll Saylan, David Ellsworth, Richard Raffan, Clay Foster, and Jacques Vesery.

Visit the Special Exhibitions Area at the Symposium to see all of these shows, as well as the EOG live/online auction items and work by Artist Showcase presenters Jim Sannerud and Keith Holt.

The Special Exhibitions opening, including light appetizers and a cash bar, will be held Thursday, June 22, at 5:30 p.m.

WOODTURNING TRADESHOW

You'll see the latest and greatest woodturning products up close and in action. AAW's enormous tradeshow will be jam-packed with the newest woodturning products, tool and lathe manufacturers, and supplies. Following is a partial list of tradeshow vendors. Visit woodturner.org for updated information.

- 2 Tree Boyz Wood
- Advanced Lathe Tools, LLC
- Advantage Lumber
- Airbrushing Wood
- Arrowmont School of Arts & Crafts
- Carter and Son Toolworks
- Carter Products Company
- Chefwarekits / EZ Jigs
- Chroma Craft
- Cindy Drozda Signature Woodturning Tools
- CPH International
- Craft Supplies USA
- Curt Theobald Studios
- Cuttermasters - Tradesman
- Designs by Gjovaag
- Earth's Watch Wooden Watches
- Easy Wood Tools
- Frugal Vacuum Chuck
- Graeme Priddle
- Hannes Tool LLC
- Hunter Tool Company
- John Jordan Woodturning
- JPW Industries JET/ Powermatic
- JT Turning Tools, LLC
- Kallenshaan Woods
- Lyle Jamieson Woodturning, LLC
- MDI Woodcarvers Supply
- Nave's Sawmill & Woodworks
- Niles Bottle Stoppers
- Oneway Manufacturing
- Parson Adhesives, Inc.
- Reed's Woodworking, LLC
- Robust Tools, LLC
- Stockroom Supply
- Teknatool USA
- Ten Seconds Studio
- The Studios of Bradley R.M.
- The Walnut Log Studio and Supply
- Thompson Lathe Tools
- Tom's Tools
- Trent Bosch Studios, Inc.
- TSDr. LLC - The Spin Doctor
- Turningwood.com
- TurnTex Woodworks
- Uneeda Enterprizes, Inc.
- Vince's WoodNWonders
- West Penn Hardwoods, Inc.
- WildWood Design
- Woodturner PRO
- Wood Turners Wonders
- Woodturning with Tim Yoder
- Woodworker West
- Woodworker's Emporium

Glenn Lucas, Ireland

- Dublin Viking Thin Wall Bowl
- Traditional Irish Platter
- The Utility Bowl

Photo: Rory Moore

Bowls, 2015, Ash, beech, largest is 6" × 15" (15cm × 38cm)

Andrew Potocnik, Australia

- Organic Forms Bent Beyond the Straight and Narrow
- Cheat's Guide to Creating a Hollow Form

Pod X, 2014, Pin oak, 21½" × 7" × 4" (55cm × 18cm × 10cm)

Tania Radda, Arizona

- The Traveling Woodturner
- Tea Time in Wonderland

Tea in Ipanema, 2016, Basswood, compressed ash, acrylics, 7" × 8" × 5" (18cm × 20cm × 13cm)

Mark Sanger, England

- Lidded Form with Carved Finial
- Textured and Colored Sculptural Form
- Offset Lidded Form with Carved Finial

Balance, 2010, Sycamore, acrylics, 7½" × 7" (19cm × 18cm)

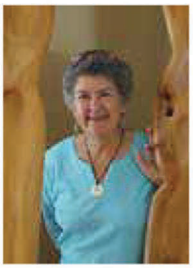
Merryll Saylan, California

- Working with Milk Paint
- Multiples and Series—Or Is it Production Turning?

Tower of Bowls, 2001, Various polychromed woods, 77" × 17" × 15" (196cm × 43cm × 38cm)

Betty Scarpino, Indiana

- Turn! Cut! Carve!
- Embellished Wood Design
- A Journey from Bowls to Sculpture



Be Seeded, 2016, Cherry, Acrylic paint, 3" × 19" × 3" (8cm × 48cm × 8cm)

Photo: Wilbur Montgomery

Richard Raffan, Australia

- Centerwork and Endgrain Hollowing
- Lidded Bowl
- Endgrain Box with Suction-Fit Lid

Rusty Verdigris Pot, 2015, Unknown wood, rust and verdigris faux finishes, acrylic, 8" (20cm) diameter

Alan Stirt, Vermont

- Open Bowl Turning
- Sgraffito Platter
- Turned, Carved, and Painted Square Platter

Waves, 2015, Cherry, milk paint, 15" × 11" × 2¼" (38cm × 28cm × 6cm)

Derek Weidman, Pennsylvania

- Drawing with the Lathe
- Musings of a Wood Sculptor
- Life Moves (lathe-based sculptural performance)

Woodpecker, 2015, Holly, pigments, 12" × 12" × 4" (30cm × 30cm × 10cm)

John Wessels, South Africa

- Embellishing Woodturnings with Sheet Pewter
- Embellishing Woodturnings with Pewter Casting
- Embellishing Woodturnings with Solder, Wire, and Rod

Jewelry, boxes, and bowl, 2011, Red and pink ivory wood, cast and sheet pewter, silver, silver rod, square box is 4¼" × 4¾" × 4¾" (11cm × 12cm × 12cm)

Photo: Tib Shaw

Dixie Biggs, Florida

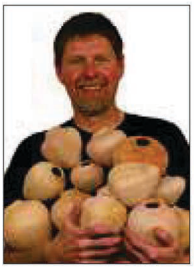
- Simple Surface Treatments
- Need Some Relief?
- Adding Detail to Relief with Woodburning and Color


A Break in the Pattern, 2016, Cherry, brass rod, 8" × 8" × 2" (20cm × 20cm × 5cm)

Photo: Randy Batista

Trent Bosch, Colorado

- Revelations in Hollowing
- Vessels of Illusion
- Sunburst Platter




Facets Series (green), 2015, Maple, 6" × 6" (15cm × 15cm)

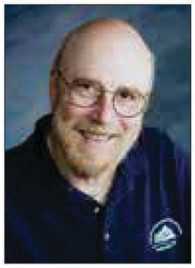
Jimmy Clewes, Nevada

- Drinking Flask
- Colored Lidded Bowl
- Tri-Cornered Box with Lid


Drinking Flask, 2016, Maple, 7" × 5" (18cm × 13cm)

Kurt Hertzog, New York

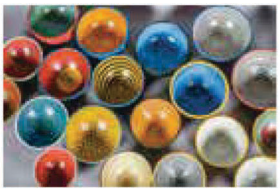
- Penturning Tips and Tricks
- Afterturning Opportunities for Pen Makers
- Presentation Is Everything




Various designs, 2015 and 2016

Michael Hosaluk, Canada

- Endgrain Bowl with Decoration and Carved Feet
- Having Fun with Spindles
- Surface Design

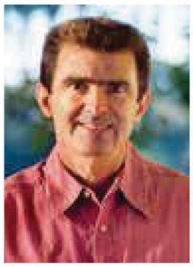



Various bowls, 2015 and 2016, Maple, birch, milk paint, largest is 7" × 5" (18cm × 13cm)

Photo: Trent Watts

Rudolph Lopez, Florida

- Natural Edge Wing Bowl from a Crotch
- Square to Round Bowls, Vases, and Hollow Forms
- Thin Stem Natural Edge Goblet




Bent Stem Goblets, 2015, Sycamore, ambrosia maple, taller is 13" (33cm)

Harvey Meyer, Georgia

- Basket Illusion Demystified (Parts 1 and 2)


Lattice Weave Basket Illusion, 2015, Maple, India ink, 13" (33cm) diam.

Thomas Stegall, Illinois

- Thin-Walled Endgrain Bowls and Hollow Forms


Spalted Porcupine, 2011, Unknown spalted wood, 14" × 6" (36cm × 15cm)

Jason Swanson, Wisconsin

- Polychromatic Peppercorn Pulverizer (Stave Segmented Peppermill)


10" Salt/Peppermill Set, 2016, Leopardwood, sycamore, each is 10" × 2⅝" (25cm × 7cm)

Photo: Cathie Swanson

Sam Angelo, Wyoming

- Fundamentals of Chasing Threads by Hand

Untitled, 2014, Acrylic, 4½" (11cm) long

Bruce Berger, California

- Tangential Twists

Classic Teapot, 2016, Box elder, holly, ebony, 9¾" × 9" × 6" (25cm × 23cm × 15cm)

Jason Clark, Illinois

- Offset Saturn Bowls

Torus VII, 2014, Oak burl, 3" × 8" (8cm × 20cm)

Janet Collins, Vermont

- Spindle Turning Basics w/focus on Spindle Duplication
- Inlay Techniques for Woodturners

Newel post caps, Cherry, each is 8" × 5" (20cm × 13cm)

Anthony Harris, Kansas

- Threaded, Eccentric Rocker Box

Off-Center Rocker Box, 2016, Walnut, boxwood, 3" × 3¼" (8cm × 8.25cm)

Michael Kehs, Pennsylvania

- Celtic Drinking Horn

Scaithian Leathair, 2014, Pine, copper, cherry, steel nails, 12" × 11" × 3" (30cm × 28cm × 8cm)

Janice Levi, Texas

- Barrel-Shaped Purse

On the Prowl, 2015, Mimosa, fabric lining, 6¾" × 4¾" (17cm × 12cm)

David Lindow, Pennsylvania

- History of Ornamental Turning
- The Curvilinear, Using a Mini-Lathe for Finials and Other Forms
- Guilloché Using Metal and Wood

Pendant, 2014, African blackwood, silver, enamel (enameling by Ron McGuire), 2" (5cm) diam.

Photo: Eric Spatt

CALL FOR STUDENT SUBMISSIONS 2017 Turning to the Future Competition

AAW | AMERICAN ASSOCIATION OF WOODTURNERS
Turning to the Future

The AAW is pleased to announce the third-annual Turning to the Future competition, an opportunity for woodturning students and schools to show off their best work. The exhibition will be held in conjunction with FreshWood, one of North America's largest student furniture-making and woodworking competitions.

The competition is intended to encourage and support students in reaching for and attaining the highest levels of skill in the use of the lathe. The contest is open to students in North America, and there is no entry fee.

Prizes include $500 first-place and $100 second-place awards in each division and category, and two lathes for the Best in Show piece in each division.

There are two divisions, High School and Post-Secondary, with three categories each: Functional, Small Turnings, and Open. Five finalists in each division category will be chosen to have their work displayed at the 2017 AWFS® (Association of Woodworking & Furnishings Suppliers®) Fair in Las Vegas, Nevada. Work will be evaluated on craftsmanship, aesthetic appeal, creativity and/or utility, and process documentation. Application period opens March 1, 2017. Deadline for submissions is May 1, 2017.

If you know a student woodturner, encourage him or her to apply! Submission details can be found at tiny.cc/Calls.

Sponsor a Demonstration Room in Kansas City

We are offering the opportunity to express your support of AAW by sponsoring a demonstration room during the Kansas City Symposium. Whether as an individual member, an AAW vendor, or as a local chapter, this is a way to visibly display your support of the AAW and our programs. We especially want to thank all the individuals and organizations that have sponsored rooms in previous years.

Opportunities to participate in this fundraising program still remain. For more information, please contact Phil McDonald, Executive Director, at 877-595-9094 or phil@woodturner.org.

Call for Demonstrators AAW Symposium 2018

The AAW's 32nd Annual International Symposium will be held in Portland, Oregon, June 14–17, 2018. To apply to be a demonstrator, visit tiny.cc/CallsforEntry (case sensitive) between May 1 and August 1, 2017. For more information, call the AAW office in Saint Paul, 877-595-9094 or 651-484-9094, or email inquiries@woodturner.org.