WESTERN CAPE WOODTURNERS ASSOCIATION

NEWSLETTER : October 2025

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

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

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

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

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

Visitors are welcome .

October 2025:

The topic for the general meeting on 15th October will be decided after the symposium.

" NOTHING IS ABSOLUTE, EVERYTHING CHANGES, EVERYTHING MOVES, EVERYTHING REVOLVES, EVERYTING FLIES AND GOES AWAY"
FRIDA KAHLO

Thanks to the American Association of Woodturners, American Woodturner publication, and authors John Lucas, Jimmy Clewes and Greg Conti for their permission to reprint their articles.

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EDITOR'S NOTE :

With the approaching AWSA Symposium, taking place on the 3rd of October, and a panel discussion on galleries, curating and exhibiting work on Sunday 5th,
I thought it appropriate to have some some information on Artificial Intelligence as to how it applies to woodturning.
This also raises the issue of plagiarism, as the Internet is being used more and more to glean information and ideas eg. Pinterest and Instagram. Greg Conti gives a lot of information on AI in his article.

John Wessels is doing a demonstration of using pewter to enhance woodturning.
I suspect Jimmy Clewes learnt from John as this article on using pewter on a Masur Birch box shows John's way of doing it.
We look forward to John's demo and seeing this in person.

John Lucas has a simple method to make a sharpening device using a sanding disc on your lathe. This is a interesting way of getting a sharpening system without a large financial outlay.

ASSOCIATION OF WOODTURNERS OF SA - SYMPOSIUM 3-6 OCTOBER 2025

The symposium this year will again be held at the Northlink College in Plattekloof.

We have the privilege of bringing to our symposium the renowned British woodturner Helen Bailey, as the guest demonstrator. She is from Newcastle-on-Tyne, in North-East England. You can look at her website for more information about her work : www.helenbaileywoodturning.com

NOTE : There is a masterclass to be held by Helen Bailey at the club in Pinelands on 1st of October. The theme is making a 3-legged decorated and coloured pot.

BIRTHDAYS IN OCTOBER :

Best wishes to all the members celebrating their birthdays in October :
Nico Bantjies, Roelof Briers, Chris Florence, Ferdi Frantz, David Gammon, Leon Ginsberg, Peter Morris, Neriya Opert, Ian Rohtbart, Wessel Van Der Westhuizen, and Louis Van Niekerk.

LATHE-MOUNTED SHARPENING STATION

John Lucas

Years ago, when I bought a Shopsmith multipurpose tool, I was excited about its lathe function. To sharpen the turning tools, I used the machine's disk sander and loved the convenience of having an all-in-one setup. Now, like most turners, I use a stand-alone lathe, and after trying just about every sharpening system available, I decided to revisit the disk sander concept and made a lathe-mounted version for convenient sharpening.

One advantage of this setup is that it is an inexpensive and easy way for a new turner to get ready to sharpen. Plus, if you mount the sharpening disk on the lathe's handwheel, on the outboard side of the headstock, your sharpener is always just a step away, so you can quickly touch up your tool and resume turning.

Inboard vs. outboard

When I first learned to use a disk sander for sharpening, I installed the disk on the inboard side of my lathe spindle and used the lathe's toolrest to support the tools. Like many new turners, I thought it was OK to use my tools for a month or so before resharpening. With this mindset, I accepted that the inboard lathe spindle had to do double duty—driving wood during turning and serving as a sharpening station. But soon I learned the truth, that tools need to be sharpened often, and mounted my sharpening disk on the outboard side of the headstock. This meant I wouldn't have to stop my turning project to convert the lathe to sharpening mode, a significant inconvenience.

Another disadvantage of sharpening on the inboard side of the headstock is that it is difficult, if not impossible, to swivel the tool handle without hitting the lathe bed. This is especially true on minilathes. Tool handle interference is not an issue when the disk is mounted on the outboard side of the spindle—as long as the lathe is not mounted on a workbench that would restrict tool handle movement.

Whether sharpening on the inboard or outboard side, one advantage of sharpening on an abrasive disk is that you can use the variations in surface speed to your advantage. The surface speed of a spinning disk gets higher the farther you move away from the center. If you are sharpening a high-speed-steel tool and want to remove metal quickly, just use an area of the disk toward the outer edge (*Photo 1*). If you are sharpening an older tool made of steel with higher carbon content, you can avoid overheating the metal by sharpening it closer to the center, where the surface speed is slower (*Photo 2*). This slower surface speed is also useful for sharpening very small tools, whose edge shape could easily be ruined at higher speeds.

A disk sharpener also gives you the flexibility to sharpen in either direction. One side of the disk is moving downward, and the other side is coming up. For some tools, it is safer to sharpen with the abrasive moving upward. And for some scrapers, the upward rotation raises a better burr (*Photo 3*).

Turn an outboard sharpening disk

Note that your lathe may be different from mine, so you'll need to customize this concept for your own application.

To make a disk sander, use plywood and/or medium-density fiberboard (MDF) glued in layers for added thickness. Turn a rebate, or recess, that will fit snugly over the lathe's handwheel on the outboard side. Then turn the board around and mount it on a chuck in expansion mode. True up the face of the disk, ensuring it is flat. Check for flatness

Disk surface speed and direction

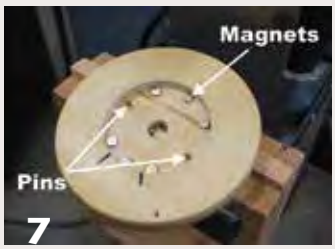
(1-2) Disk surface speed is higher near the outer edge than at center, a useful insight. Tools that are more subject to overheating can be sharpened near the center. Slower speed means less heat.

(3) One half of the disk moves upward, and the other half, downward. An upward-moving abrasive can produce a better burr on scrapers.

Turn the disk

Ensure the wood is dead flat before installing an abrasive disk. The author uses a metal straightedge to confirm flatness.

Mount on outboard handwheel



A turned recess fits snugly over the outboard handwheel and is held in place with inset magnets. Two pins align with holes in the handwheel to prevent the disk from slipping during use.

A versatile outboard toolrest

The author's outboard sharpening toolrest comprises two sections, a lower "box" mounted to the lathe and an upper removeable assembly with angle-adjustable platform.

Split-turned toolrest platform

The toolrest, or platform, is made from a split-turned cylinder. Gluing up a blank with a newspaper glue joint allows you to split the turning and use half of it as an adjustable platform.

with a straightedge and mark any high spots (*Photos 4, 5*). I shear-scrape those areas to fine-tune the disk's surface.

Since this disk will be mounted on the outboard handwheel, I suggest drilling a hole in the center so you can use the knockout bar without having to remove the disk (*Photo 6*). But to make the disk easily removeable as needed, I drilled and inset six magnets, which hold the disk to the handwheel. To keep the disk from slipping during use, I glued in two pins that line up with holes in the handwheel on my lathe (*Photo 7*).

I use pressure-sensitive abrasive disks, which can be peeled off easily when they become worn and need to be replaced. I prefer the blue ceramic disks because they are designed to grind steel and stay sharp much longer. Plus, similar to grinder wheels, abrasive disks come in a variety of grits. For general sharpening, I use a 120-grit disk. A 60-grit disk is useful for grinding a new shape on a tool, as it will remove metal much faster. A 350-grit disk will leave a very fine surface on the tool.

Make a toolrest

I built my outboard toolrest in two parts. The lower section is an open box of sorts that attaches to the lathe itself. The upper toolrest assembly then bolts onto this box using a threaded T-nut and screw knob (*Photos 8, 9*).

The toolrest itself is made from a split-turned cylinder, so it has one flat side and one round side. This allowed me to make the toolrest angle adjustable, which is important for sharpening a variety of tools. The round side of the toolrest can swivel and be locked in place. Glue two boards together with a newspaper joint. Then turn a cylinder with 1½"- (38mm-) diameter tenons on each end. After turning, use a knife and mallet to split the cylinder in half. Clean off the paper and glue using a paint scraper (*Photos 10-12*).

The toolrest sits on two uprights with U-shaped cutouts to match the curve of the toolrest. I made the cutouts by drilling a 1½" hole through the uprights and later cutting away the upper portion of the holes.

A smaller hole in the uprights, below the U-shaped cutout, receives a threaded T-nut, so screw knobs can be used to lock the toolrest at the desired angle. Swivel guides with a curved slot are attached to the ends of the toolrest ▸

and serve as part of the locking mechanism (*Photos 13, 14*).

Sharpening

To sharpen most tools, simply adjust the toolrest to the angle you want and place the tool on the rest. Rotate the tool as needed to grind the edge. I sharpen my spindle gouges using a 35-degree angle for the tip and don't swing the handle very far side to side; I just want to bring the corners of the gouge back a little (*Photos 15, 16*).

For scrapers, it is worth trying the right or left side of the disk to see which direction raises the best burr. This setup is handy when I'm sharpening negative-rake scrapers, as the burr must be refreshed quite frequently. I set the toolrest to the angle of my scraper's bevel and then go to the disk as often as needed. I like to sharpen carving tools or tools that have a very acute angle on the "uphill" side of the disk (where the abrasive is moving upward). Most other tools I sharpen either on the downward side or near the upper middle. Sharpening using only the toolrest without a V-arm jig is also safer, as it is almost impossible to get a catch. This is especially true on tools that have a blunt angle, like the spindle-roughing gouge. If the tool is trapped in a V-arm and you get too close to the centerline of the wheel on a standard grinder, you can get a dangerous catch. This isn't a problem when you are sharpening freehand (*Photo 17*).

To sharpen bowl gouges, I built a shopmade version of the Ellsworth bowl gouge jig. By removing the upper toolrest assembly, I can insert the jig into a hole I drilled in the lower box. This allows me to swing the tool handle as needed to sharpen bowl gouges with an Ellsworth, or Irish grind (*Photo 18*).

I hope these ideas help you get started on the road to sharper tools. For me, there is no greater joy than touching the wood with a really sharp tool and feeling it cut with ease. If you have any questions about my disk sharpening setup, feel free to write me (johnclucas45@gmail.com), as I'm happy to help fellow turners find a solution to their workshop challenges. ■

John Lucas, a retired photographer, has been working in wood for more than thirty-five years and also dabbles in metalworking. He enjoys modifying machines, making tools, and sharing his knowledge through articles and videos. He has taught classes at John C. Campbell Folk School, Arrowmont, and The Appalachian Center for Crafts.

Adjustable-angle toolrest


13


14

Threaded T-nuts and screw knobs, along with a creative design, allow the toolrest angle to be adjusted and locked in place.

Sharpening freehand


15


16

With the toolrest angle set to the tool's bevel angle, the author sharpens a spindle gouge, requiring only minimal tool handle swing.

Spindle-roughing gouge


17

The spindle-roughing gouge is sharpened freehand, without a V-arm jig. Set the toolrest angle, and rotate the tool.

Shopmade bowl gouge jig


18

To sharpen bowl gouges with swept-back wings, the author uses his shopmade version of the Ellsworth grinding jig.

Safety Notes!

- Grinding/sharpening tools causes sparks, which could pose a fire hazard. As with any grinder/sharpening setup positioned close to the lathe, be aware of the proximity of wood shavings to the sparks generated by sharpening tools. Clear away wood shavings before sharpening at the lathe.
- Do not use dust collection when sharpening at the lathe. A dust collector could draw in sparks, which could ignite dust collected in the bag.

MASUR BIRCH BOX

WITH PEWTER ACCENTS

Jimmy Clewes

Project materials

Masur birch is in the top five of my favorite woods, not only from a turning point of view, but also aesthetically. This slow-growing tree is harvested in winter from a frozen landscape and originates in Northern Europe. Masur birch is fairly rare now and is expensive to buy. I am fortunate to have purchased several logs over twenty-five years ago.

The pewter I use for accents is called Britannia pewter, which is lead free and contains 97% tin, 2.5% bismuth, and .5% copper. It is made in the United States and is available from online sellers. The price varies depending on the marketplace; at the time of this writing, the cost was $59.99 for a 2-lb. bar (*Photo 1*).

I use a company called Rio Grande jewelry supplies, based in New Mexico, for my gold leaf.

The box will have a textured pewter ring as a joint and a decorative pewter disk as an accent on the lid. When deciding on the diameter of the pewter ring, an important thing to consider is the outside and inside diameter of the jaws of your chuck. Being able to hold the relatively soft pewter in the recesses you will form to hold it accurately when machining and texturing makes a big difference. If the jaws are the wrong size, the pewter will be compressed or expanded out of round. Make the diameter of joints in the ring to fit the outside and inside diameters of the jaws you are using.

Cast the pewter

Chuck a scrap of wood (I used ash) in sidegrain, or faceplate, orientation. With a ⅛" (3mm) parting tool, form the recesses for both the ring and the central disk (*Photos 2-4*). The reason I chose sidegrain orientation is that I have found when using endgrain, even a small amount of moisture can cause air bubbles to form in the pewter while cooling and therefore a less solid disk, which when turning, could reveal air pockets or flaws. I made my ring 3" (8cm) in diameter, 5/16" (8mm) wide, and ¼" (6mm) deep. I used a Vicmarc VM120 chuck.

I use a cast iron casting ladle that belonged to my wife's father. He used it to make fishing weights and lures. These ladles are available online also.

Heat and melt the pewter until it becomes very fluid in the ladle and then carefully pour it into the mold, as shown in the *opening image* of this article and *Photo 5*. As a point of interest, the melting point for pewter is 563°F, and the pouring temperature is 650°F. Don't rush this step, as you have several seconds to pour before the pewter starts to cool, and you can always reheat the pewter with a torch to make it flow again. After several minutes in the form, the pewter will have cooled enough for you to be able to remove the disk in the middle. This should just pop out, as

Project materials

1
Pewter bar and gold leaf.

the pewter will shrink slightly as it cools.

If after pouring the pewter into the mold you see any slight voids, you can run the gas torch over the top of the pewter to make it flow again, as it takes several minutes for it to fully cool in the mold. I pour the pewter disk at the same time as the ring. The size of the mold for the disk was 1¼" (32mm) diameter and 1⁄16" (1.5mm) deep.

Remove the ring

Unlike the central disk, the ring will get tighter in the mold while cooling. As it shrinks it will press firmly against the inside diameter of the mold. You need to true at least two surfaces and form a recess in the pewter ring before it can be cut and released from the mold. First, true up the face of the ring using a long-grind bowl gouge. With the flute almost closed, the tool is basically a sharp negative-rake scraper, and, at a speed of around 800 to 1000 rpm, it will remove the pewter easily (*Photo 6*). Make sure to put a piece of paper towel on the bed of the lathe to catch the pewter shavings so they can be recycled.

After the face of the pewter ring has been trued up, true up the outside edge of the ring using a ⅛" parting tool (*Photos 7, 8*). You can cut right through and into the wooden mold. Then, cut a recess on the inside of the ring approximately 1⁄16" deep (*Photos 9, 10*). This recess will allow you to hold the ring in the chuck jaws so you can turn the other side, and it will become an attachment surface, or joint, by which you will later glue the pewter ring to the box base.

The last step is to remove, or part, the ring, again using the ⅛" parting ▸

Prepare casting form

A waste block is turned and recesses formed for casting the ring and central disk.

Pour melted pewter

Melt the pewter with a torch, then pour it into the mold.

True up the ring

The disk will fall out as it cools and shrinks, but the ring will get tighter against its inside diameter. The author trues up the surfaces of the soft pewter using a bowl gouge and parting tool. Cutting into the wood on the outside diameter will not release the ring.

tool. True up and cut on the inside edge of the ring at the same time. I turn the speed down to around 500 rpm, as this cut will release the ring from the scrap wood. The ring should gently fall off and catch on the parting tool (*Photos 11, 12*).

Texture the ring and disk

The ring

Remount the pewter ring on the chuck, expanding the jaws into the recess that you just formed (*Photo 13*). Expand the jaws enough to hold the ring, but don't over-tighten it, as the pewter is so soft that you can distort it.

Using the ⅛" parting tool again, cut a recess that the box lid will drop into, about 1/16" deep (*Photo 14*).

To add texture to the pewter ring, I used a Warner knurling tool with a serrated-edge cutter. Turning the speed down to around 400 rpm, I held the tool firmly and made sure the cutter was on the center line. The depth of pattern will depend on how much pressure you apply. The pattern is very reminiscent of the edge of some coins and is simple but attractive (*Photos 15-16*).

The disk

To texture the disk, it is necessary to glue it back into the central recess in the scrap block. I used a gel cyanoacrylate (CA) glue and accelerator. Again, using the wing of the long-grind bowl gouge, I trued up the disk so it was

Form recess #1


9


10

Use a parting tool to form a shallow recess to be used for gluing the ring to the box rim.

Remove ring from waste block


11


12

Cutting on the inside diameter of the ring will free the ring from the waste block.

Mount ring on chuck

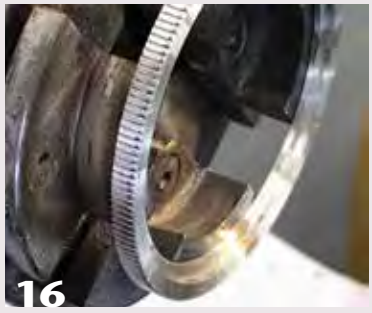

13

Expand your chuck jaws into the recess formed in the pewter ring.

Recess #2, plus texture


14


15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(*14*) Form a second recess in the ring, this one to accept the box lid.

(*15-16*) Texture the rim of the ring.

ready to be textured. I prefer a slight dome shape as opposed to a flat surface (*Photo 17*).

There are three factors that will change the pattern produced when texturing—the speed of the lathe, the pressure, and how quickly or slowly you traverse the tool over the surface. I would advise you to cast the disk a little thicker to begin with, so you can have several practice tries, cleaning up the surface with the wing of the bowl gouge each time.

Using the Sorby texturing tool at an angle of about 45 degrees and the speed set at around 500 rpm, I was happy with the radiating pattern. It is impossible to describe in words the amount of pressure I applied, but you will find the right amount after a couple of tries. I wanted to frame the spiral pattern with the serrated knurling tool, so using the ⅛" parting tool, I turned some of the pattern away from the edge and repeated the same technique as on the pewter ring. Note that changing the angle and the pressure can give different results. I also relieved a little from the middle of the disk (*Photos 18-20*).

Add gold leaf

Leaving the work in the chuck, I removed the chuck from the lathe and prepared the disk's surface to receive gold leaf. I used a fine brush to apply the size, or adhesive, to ensure the size gets into all the textured surfaces (*Photo 21*). When first applied, the size is milky in appearance but will dry clear.

I then applied the gold leaf, which came from Thailand, using a soft sable brush (*Photo 22*). This loose leaf comes in 1½" (38mm) squares and is sold to locals and tourists to adorn Buddha statues. As a point of interest, some of the Buddha statues are reputed to have increased in size by several inches of gold over hundreds of years.

After I applied the gold leaf, I used the soft sable brush to push the leaf into the texture and to remove any excess leaf from the surface. To clean up and sharpen the definition of the leaf, I remounted the chuck on the lathe and, using a homemade fine parting tool, cleaned up the excess leaf.

I removed the disk from the waste block by undercutting the back with a small chisel and a sharp tap. ▸

True up central disk


17

Since the disk will have fallen out of its casting form, you'll have to glue it back in to true it up.

Texture disk

The author uses a variety of tools to add interesting texture to the central disk. If you cast the disk extra thick, you'll be able to have several tries to get the results you like.


18


19


20

Add gold leaf to disk


21


22

The author adds size and gold leaf as an additional highlight.

Turn the box

With the pewter components ready, I started making the box itself. As I mentioned earlier, Masur birch is a delight to turn; it is easy on the tools and sands and finishes very well.

The blank size was 4" (10cm) in diameter and 3" (8cm) long. I much prefer wider than taller boxes. Having mounted the blank between centers, I used a spindle-roughing gouge to turn the blank from square to round and then a ⅛" parting tool to cut a ⅛"-deep tenon on each end to fit my chuck. Finally, I drew a line at approximately one-third of the height of the box and used a thin parting tool to separate the lid from the base (*Photos 23, 24*).

I turned the box base first. After holding the blank in the chuck and truing up the face, the next step was to fit the pewter ring. "Measure twice and cut once," as the old saying goes, was in order to get a good fit of the ring to the box. I find it easier to measure and allow for extra wood to get the right fit. I use dividers with sharp points for accurate measurements (*Photo 25*).

After fitting the ring and looking at the piece, I decided the box needed a simple but effective design detail. Using a homemade bead-forming tool, I turned a bead

Rough-turn box


23

The author uses a spindle-roughing gouge to turn the box to a cylinder.

24

A: The box is marked so that the upper one-third will become the lid. Not shown, the lid is parted on this line. B: Form a tenon on each end of the blank for easy workholding.

Fit ring to box


25

Sneak up on a good fit of the pewter ring to the box rim.


26


27


28

Finish-turn outside of box

The author adds decorative beads, one at the bottom and one just under the pewter ring, and removes material between them.


29


30


31

Hollow the box

The author uses a variety of hollowing tools to excavate material from inside the box.

adjacent to the pewter ring and to balance that bead turned another at the base. The excess wood between the beads was then turned away (*Photos 26-28*).

Having turned the outside of the box base, I used my hollowing tool, the Mate 2, with an 8mm cutter to remove most the wood from the inside of the base. My hollowing tools cut, not scrape. There are several ways of hollowing boxes, so use the technique and tool that suits you best. Then, using my box scraper, I cleaned up the side walls and bottom of the box before sanding the inside and outside to 600 grit (*Photos 29-31*).

The finish I like to use on my boxes is a slightly thinned down shellac, which I find penetrates farther into the wood. The mix I use is 75% shellac and 25% denatured alcohol. After the shellac is dry, I then sand lightly with OOOO steel wool and then apply a light coat of microcrystalline wax, buffed to a satin sheen with a lint-free cloth.

I then removed the completed box base from the chuck and replaced it with the blank for the lid. True up the surface of the lid. I used a parting tool and then with the pewter ring in place on the base, you can now measure and scribe a line on the trued up surface of the lid (*Photos 32, 33*). I always measure a little more than I need and then sneak up on the actual fit of the lid, allowing for a decorative bead to mirror the bead on the box base (*Photos 34, 35*). In this case, the lid just drops nicely into place with only a very small amount of play.

After fitting the lid, I used a small bowl gouge to hollow inside the lid and then sanded and finished the lid (*Photo 36*).

Using my Vicmarc 100 chuck, I attached the 90mm jaws, which almost matched exactly the diameter of the small tenon acting as the joint (*Photo 37*). This meant there was far less chance of any marks being left on the piece from the jaws. For a little extra support, I used the tailstock and revolving center.

Using a ⅜" spindle gouge, I shaped the lid and decided that a simple ogee on the top would be sufficient, as the pewter, texture, and gold leaf-accented disk would be the focal point on top (*Photo 38*). Before fitting the disk, I sanded the top and finished it in the same manner as the box base.

To fit the disk in the lid, I used a set of dividers to measure just less than the diameter of the disk and then scribed the line on the lid to form the recess. You can take wood off, but you can't put it back on, so measuring less gives you a chance to take very small cuts and "sneak up" on the fit. Ideally, the disk should be a snug fit in the recess. I attached it in place using a few small drops of gel CA glue (*Photos 39-41*). ▸

Fit lid to pewter ring, 1


32


33

Use dividers to transfer the target diameter to the lid blank.

Fit lid to pewter ring, 2


34


35

Fine-tune the fit of the lid. The author decides to add a bead on the lid to mirror the one just under the pewter ring.

Hollow the lid


36

Hollowing the lid will lighten it and add a touch of elegance.

The last task is to reverse-mount the base of the box to complete the box bottom. To do this, I turned a jam chuck from a piece of scrap wood to a diameter that will snugly fit inside the box. Be sure to make the tenon on the jam chuck a decent length—mine was about ¾" (19mm) long—which will give more support and lower the risk of the jam chuck failing. A piece of paper tissue over the jam chuck will protect the finish on the inside of the box (*Photos 42-44*).

This is a great little project that I feel most turners could attempt and enjoy trying without a great deal of expense. Be sure to take all the safety precautions when woodturning. And when melting and pouring pewter, always wear safety glasses and gloves at a minimum. I hope you enjoy these ideas and will explore the possibilities of adding pewter accents to your turning. ■

Jimmy Clewes offers woodturning classes, both group and private, at his workshop in Las Vegas, Nevada. For more, visit jimmyclewes.com or email Jimmy at jimmyclewes@gmail.com.

Turn top of lid

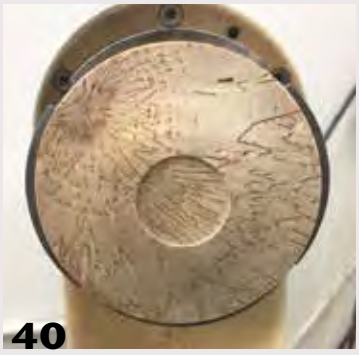

37


38

With the lid now reverse-mounted in the chuck, shape the top. Here, a simple ogee shape is used.

Fit central disk in lid


39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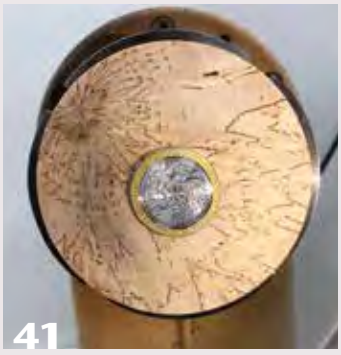
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Dividers are used to gauge and transfer the disk's diameter to the lid. Form a recess and glue in the disk.

Reverse-mount box, complete bottom


42


43


44

A jam chuck is used to reverse-mount the box so its bottom can be completed.

THESE BOWLS DON'T EXIST

AI-generated "Wooden Bowl" (Style: Sinister).

USING [AI] TO ELEVATE YOUR WOODTURNING

Gregory Conti

The idea of an article on artificial intelligence, or AI, in *American Woodturner* may seem odd. In fact, woodturning and AI may seem miles apart. However, you probably have heard all the buzz around AI over the past year or two. This is for good reason. Powerful AI text and image generating tools emerged from research labs and became available online at low or no cost. As woodturners, we can use these tools to explore new ideas and prototype concepts, gain inspiration, and push the limits of our technical execution. To prove the point, you'll see examples of woodturning inspired by AI-generated images later in the article.

I've been a woodturner for about twenty years, but when I'm not turning wood, I'm a technologist and like to stay up to date on new technologies. For fun, I tried using an AI image generation tool to make images of wooden bowls, and several bowls appeared. After a few attempts, an amazing bowl appeared and I thought, "Wow, that bowl could be on the cover of *American Woodturner*. A little later, I found another bowl that I could envision in the journal, and then another and another (*Photos 1-3*).

I continued generating more images of AI bowls. Some were amazing, some simple, others complex, and some patently absurd. I realized that one could create a vibrant and differentiated career as a woodturner by incorporating AI into the creative process.

This article will show you how to use these tools and, I hope, inspire you to give AI image generation a try. You may be surprised that you don't have to be an expert to use these tools. AI has have certainly inspired my woodturning, and I believe it can do the same for you.

How AI image generation works

AI image generation tools are made by training an AI system with massive numbers of images. With sufficiently large training image input, the system finds patterns in the data. By using

increasingly sophisticated AI techniques, these tools differentiate between various objects, such as a bowl, table, painting, or person. When fed images of human creativity on this scale, the tools can generate new objects as well as mix and match disparate objects and styles to create entirely new combinations.

Tool users generate new images by providing prompts, such as "wooden bowl in the style of Picasso" to the system. You will see several AI-generated images in this article, and each image is captioned with the prompt that generated it.

Are such tools truly creative? Do they create entirely new forms of art? Technically no. However, given the diverse range of human creativity used to train these systems and the near infinite ways these creations may be morphed, there is an endless well of possibilities. Herein lies opportunity and inspiration for the woodturner.

There are certainly limits to AI image-generating technology. Sometimes the system gets it right, and sometimes it gets it wrong. And sometimes "wrong" works to our advantage when seeking new ideas.

How to get started

To generate the images in this article, I used a tool called NightCafe (creator.nightcafe.studio), as shown in *Photo 4*. However, there are many alternatives. Just search the web for "AI image generation tool" and you'll receive a host of free or low-cost options. When using an image generation tool, you'll encounter options like the following:

"Wooden Bowl in the Style of Picasso" (Style: NightCafe). AI image generation tools allow you to combine physical objects with many artistic styles.

A cohesive theme

"Wooden Bowls" (Style: Pop Art). You are not limited to generating a single bowl per attempt. Here are nine colorful bowls generated at one time. Each bowl is unique but united by a cohesive theme.

Model

AI systems are trained to perform tasks, and the result is called a model. I've used the default model which is for general-purpose image generation. You can also use other models optimized for things like art, people, and photorealism.

Text prompt

Here is where you describe what you want to generate. For example, "large wooden bowls."

Style

From an inspiration perspective, the style setting is where things get interesting. You can choose from a wide variety of styles, like: Pop Art, Neo Impressionist, Steampunk, Cyberpunk, Vibrant, Striking, Epic, Photo, and many others.

With these core settings in place, you then hit the Create button and see the ▸

"Wooden Bowls" (Style: Epic). Sometimes AI tools generate exquisite work that would require an expert woodturner and woodcarver to execute well.

An AI interface

Example of an AI image-generation tool interface (NightCafe). On the left are the settings for model, text prompt, and style. The prompt here is for "wooden stool," and the resulting image is in the center. On the right are previously generated images.

results. If an image is close but not quite what you want, the Evolve option will create similar images. Or you can hit Create again and you'll see varied images. You won't see the same image twice.

Prototyping strategies

Now that we've seen examples and had an overview of the interface, let's look at potential woodturning applications.

People, embellishments


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Two images using the NightCafe style: "Young Woodturner Holding a Giant Wooden Vase Painted by Warhol" (left) and "Young Woodturner Holding a Large Wooden Vase Inspired by Kusama Against a Gray Background." These tools have the powerful capability to include realistic humans in the images and allow you to explore variations of embellishment, scale, and backgrounds.

Variations on a theme


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"Wooden Bowls With Many Small Holes" (Style: Striking).


8

"Wooden Bowls With Many Small Holes" (Style: Pop Art).

There are virtually endless possibilities to explore. A key takeaway is that virtual prototyping can be easier and more efficient than making a physical prototype.

Experimenting with different prompts

The easiest approach is simply to use the same prompt repeatedly, as the system will generate varied results each time. As you proceed, you will naturally start refining your prompts to home in on desired results. You can explore scale, backgrounds, human models, and embellishment inspired by desired artists. You might try "young woodturner holding a giant wooden vase painted by Warhol," see *Photo 5*, and then try pivoting to a different model and artist, *Photo 6*.

Experimenting with different styles

You can explore a new theme and test it using a variety of styles to see if you like the results. I tried using the prompt "wooden bowls with many small holes" using the Striking and Pop Art styles (*Photos 7, 8*). I liked how some of the bowls mixed a single larger hole and numerous smaller holes in an asymmetric pattern.

Experimenting with different objects

Much more is possible. You can generate just about any woodturned object, from mortar and pestle sets to lidded boxes and candleholders (*Photos 9, 10*). Notice the elegant shapes and compelling presentation. You might try wig stands, or even an art gallery complete with paintings of bowls *(Photos 11, 12*).

You can use the same style choice for diverse objects. For example, you might try the Pop Art style with bowls, vases, pepper mills, and bracelets to create a cohesive theme across a body of work.

Note, however, there are some woodturned objects the image generation system doesn't seem to understand, yet. In my testing, magic wands, rolling pins, wooden staffs, and even lathes yielded poor results. These failures could have been due to an incorrect prompt on my part, or more likely, the system hadn't been adequately trained on these objects.

There are virtually endless possibilities to explore. A key takeaway is that virtual prototyping can be easier and more efficient than making a physical prototype.

Overcoming implementation challenges

We all have limits to our ability as woodturners. AI image generation will produce turned objects that are beyond our ability. I see these as challenges rather than obstacles. It pushes us to seek out innovative solutions to achieve the design we wish.

When faced with a compelling object we wish to create but don't exactly know how, what can we do? Could we fashion a new jig or tool, or employ an off-lathe shaping technique? Maybe we modify the design to something we can create, yet still capture that interesting essence. We might find a collaborator with the needed skill. Regardless of the approach, this exercise stretches and grows our skillsets, making us better turners. Consider the beads inside the bowl in *Photo 13*. How might you make those beads in practice?

Hallucinations as design inspiration

With image generation, sometimes the details are off. I found the AI frequently violated norms of design and sometimes the laws of physics. Hallucination is the term of art for this behavior, when an AI generates results that are inaccurate but presented as fact. If you were a lawyer using AI to research legal precedent and the AI hallucinated, that would be bad. For the woodturner, however, hallucinations provide design inspiration. It is that close but imperfect understanding by the AI that provides opportunity.

If you study the images, you'll see both subtle and egregious errors. The woodgrain doesn't match any known woods. Rims may not be continuous, and the wood warped in improbable ways. In some cases, the object couldn't be created using any known woodturning method. Image-generation tools can reduce hallucinations using a technique called negative prompts, but hallucinations aren't always bad. When something is "wrong" but we find the result compelling, we should take that on as a challenge.

Here is an example. I wanted to explore funeral urns. I used the query "large woodturned funeral urn" with the Pop Art style (*Photo 14*). Typically, funeral urns are somber objects, but these results were not. However, a vibrant urn might be a fitting way to celebrate the life of a vibrant person. Unexpectedly, the system hallucinated and created tall urns with constricted middles. Such urns would be difficult to turn and not really fit for purpose. Thinking laterally though, what if we considered the object as two urns, ▸

Exploring boxes

"Woodturned Lidded Boxes" (Style: Bon Voyage).

AI pepper grinders

"Tall Wooden Pepper Grinders" (Style: Epic). Oftentimes image generation will present the object in a compelling way, such as the spice in the foreground.

Wig stands

"Wooden Wig Stands" (Style: Bon Voyage). AI image generation works well with a wide variety of turned objects.

Art gallery

"Art Gallery with People Looking at Paintings of Bowls" (Style: NightCafe). AI image generation can do more than just simple objects and people. Here the author has used it to envision an art gallery.

Woodturning challenges

"Wooden Bowls" (Style: Striking). Note the delicate interior beading in the central bowl. How might this be achieved in practice? Also note the double bowl hallucination in the top right.

"Large Woodturned Funeral Urn" (Style: Pop Art).

Using a "seed"

You can upload an image to the AI image generator to use as a starting point, or seed, such as these three roleplaying game dice cups.

"Woodturned Cups in the Style of Picasso" (Style: NightCafe). Note the image generator understood the basic objects in the original seed image as cups, modified the shapes, and added Picasso-like paintings.

which could be turned, used independently, and later attached? This might be a way to honor a married couple or lifetime partners.

Exploring variations of your own work

By default, image-generation tools generate a random result. For example, a prompt of a "wooden bowl" generates a random wooden bowl. If you try the same prompt again, you get a quite different bowl. This occurs because the AI chooses a random starting point out of all possible wooden bowls. However, you can use an uploaded image as a starting point, known as a seed. This capability affords interesting possibilities.

As an example, I uploaded an image of three roleplaying dice cups that I made and set this as the seed *(Photo 15)*. This means the system will generate results similar to the uploaded image. Then I generated a series of images using the prompt "woodturned cups in the style of Picasso." Each resulting image was different but similar to my seed image. This allowed me to choose the result I liked best (*Photo 16*). As you consider the picture, notice that the lighting, horizon line, number of cups, and general arrangement are all similar to the original, but the Picasso-like paintings are new additions.

You may use any image as a starting point, which opens a wide range of possibilities. Note, however, the system does not authorize copyrighted seed images without permission.

Creating objects that do exist

To complete this article, I wanted to turn objects inspired by an AI image. Of the 1,000+ images I generated, "Young woodturner holding a giant pepper mill designed by Picasso" is my favorite (*Photo 17*). I like how the viewer's eyes are first drawn to the eyes of the model and then to the elegant pepper mill that indeed looks like it was made by Picasso.

As this isn't a how-to article on turning a pepper mill, I'll skip the basics and instead highlight my thought process. The narrow middle of the mill was the biggest challenge. Many pepper mill mechanisms require a large-diameter hole through the entire body, which isn't feasible given this mill's narrow mid-section.

I looked for an alternative mill mechanism and found a variety, CrushGrind, that used a friction fit to hold the top in place, which avoided the need for a rod through the entire length of the mill. My mill rotates by holding the red base and twisting the top. Effectively, I flipped the typical large body and small grip pepper mill to a small body and large-grip design.

This approach works but left little space to store pepper. To overcome this challenge, I made a hollow tenon for the base which fits into a mortise in the top (*Photo 18*). Now the mill holds a larger supply of peppercorns while allowing the base to nest neatly into the top.

I wanted to emulate but not exactly duplicate the AI mill. I took measurements of key dimensions from the

From AI to reality

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"Young Woodturner Holding a Giant Pepper Mill Designed by Picasso" (Style: NightCafe).

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(*18-19*) The author's actual turned mill flips the traditional large body and small twist grip paradigm. Here you can see the small red body and large top grip. The body's tenon provides stability and extra peppercorn storage. *Picasso's Pepper Mill*, Poplar, 18" × 2¾" (46cm × 7cm).

image and created a spreadsheet to scale these dimensions to pepper mills of any desired height and fashioned a story stick to serve as a general guide when turning. You can see the finished mill in *Photo 19*. Note the larger-diameter mid-section which provides added strength for practical use.

I then continued with the theme and turned two more mills based on the image. For me, the hardest part of the AI mill was the narrow mid-section and devising a turning approach to work around that constraint. For these new mills, I tried a different approach and created one inspired by the top half of the AI mill and another inspired by the bottom. See *Photo 20* for the result.

Were these pepper mills a success? This exercise pushed me out of my comfort zone and into areas of turning that I had not explored before. It helped me grow as a woodturner. So yes, I'd call that a success.

Conclusions

We often turn to the world around us for inspiration. AI image generation tools provide a complementary space to explore, offering a near endless font of inspiration from the virtual world. We can mix and match objects and artistic styles in ways never before possible. We can quickly prototype concepts, investigate evolution of our current work, and identify new avenues to explore. Yes, today's generative AI has flaws, but the flaws themselves can be sources of inspiration.

Generative AI systems are game changing and disruptive but are a reality today and will continue to get better. It is worth our time to investigate this emerging technology and consider how such tools might support our work.

I've saved the most important question for last, though. Will AI replace woodturners? No. Not as long as human consumers and art collectors value handmade creations. Not as long as humans continue to innovate. Not as long as we woodturners enjoy the art and craft of woodturning. ■

Another interpretation

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The author's second take: two separate mills, one inspired by the top half of the AI mill and another inspired by the bottom. Each is about 11" × 3" (28cm × 8cm).

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