AN INTRODUCTION TO SHARPENING • GRINDER-MOUNTED CLEANING BRUSH • A LOOK AT GOUGE GEOMETRY

AMERICAN WOODTURNER

Journal of the American Association of Woodturners
February 2023 vol 38, no 1 • woodturner.org

DECORATIVE CEREMONIAL SHIELD

A FAMILY AFFAIR: THE VICMARC STORY

ADJUSTABLE-HEIGHT SCREW TABLE

THE 2022 VIRTUAL WIT EXCHANGE

Bob Summers Florida

Being an amateur woodworker for most of my adult life, I grew to relish making things from wood. I like the odor of freshly cut lumber and the process of transforming it into a beautiful and functional piece of furniture.

When I retired from a thirty-four-year career in physical education, I decided to learn woodturning, having watched a program about it on TV. Needless to say, I was hooked after I turned my first small bowl. I learned to turn from a book and a video by Richard Raffan. When I was young, my mother told me many times, "If you can read, you can do anything—just follow the directions." However, it was not until I found a woodturning club (some eighty miles from my home) and learned about the AAW that I discovered the fantastic art produced with a lathe. Things really became interesting.

After much trial and error over the years, I decided I needed to find and develop a niche. Since I seemed to turn things very thin, the next step was to try piercing. The pieces seen here are my humble attempts to prompt people to ask, "How did you do that?" ■

Finastocide, 2014, Cherry, 9" × 5" (23cm × 13cm)

The Case of the Curious Cherry Donut, 2015, Cherry, 2" × 8" (5cm × 20cm)

Glass in Wood, I Thought I Could, 2017, Maple, full-size wine bottle and wine glass, 15" × 11" (38cm × 28cm)

Shattered Dreams, 2017, Cherry, 14" × 9" × 9" (36cm × 23cm × 23cm)

Shattered Dreams comprises several old works that did not survive falling on tile floors and careless handling.

Spiral Interlace, 2022, Grapefruit, ebony, 6½" × 2½" (17cm × 6cm)

Wave-Tip Bowl #6, 2019, Cherry, turquoise, 3½" × 8" (9cm × 20cm)

AAW | AMERICAN ASSOCIATION OF WOODTURNERS

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Journal of the American Association of Woodturners

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EDITORIAL

American Woodturner Joshua Friend
editor@woodturner.org

Editorial Advisors Betty Scarpino
Terry Martin
John Kelsey
Jean LeGwin

Journal Production **Albarella Design**
Linnea Overbeck
Art Director
Production Management

Woodturning FUNdamentals Don McIvor
editormcivor@woodturner.org.

EDITORIAL SUBMISSIONS

Send article ideas to: editor@woodturner.org

For tips on article submission and photography requirements, visit tiny.cc/AWsubmissions*.

MEMBER SERVICES

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ADVERTISERS

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Erica Nelson
763-497-1778 • erica@pierreproductions.com
Betsy Pierre
763-295-5420 • betsy@pierreproductions.com

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DIVERSITY STATEMENT

The AAW strives to cultivate an organization built on mentorship, encouragement, tolerance, and mutual respect, thereby engendering a welcoming environment for all. To read AAW's full Diversity Statement, visit tiny.cc/AAWDiversity*

A NOTE ABOUT SAFETY

An accident at the lathe can happen with blinding suddenness; respiratory and other problems can build over years.

Take appropriate precautions when you turn. Safety guidelines are published online at tiny.cc/turnsafe*. Following them will help you continue to enjoy woodturning.

*Web address is case sensitive.

Editor's Note

In my capacity as editor, I often hear about what drew people into woodturning. People will say, "I took a class with [name an instructor] and turned a bowl. I loved making the shavings fly and the feeling of shaping wood so quickly. I was instantly hooked!" But I have never heard anyone say, "Let me tell you, when I put that gouge to the grinder, I knew this was for me!"

The fun of woodturning is at the lathe, not the grinder. And yet, new turners learn early on that sharpening is an essential part of the experience. Dennis Belcher takes a fresh look at sharpening (page 18) and created an accompanying video showing how to sharpen each of the main tools (link at the end of the article).

On our calendar page (15), I'm happy to see so many woodturning events popping up again, after multiple cancellations over the last couple of years. Happy learning, and happy turning!

Joshua Friend

—Joshua Friend

From the President

Transitions

By the time you read this, you may already know that Phil McDonald, who has served as AAW's Executive Director since 2012, has informed the Board of his intent to resign April 1, 2023. During his tenure, Phil stabilized the organization's finances and financial reporting, helped lead the Vision 2020 initiative, worked to expand the online portfolio of digital educational content, and managed the organization through a pandemic, among other notable accomplishments. The Board is sincerely appreciative of Phil's leadership, wisdom, and council over the past eleven years. In Phil's words, "Serving alongside the Saint Paul staff team, together with so many deeply passionate volunteers, has been immeasurably rewarding. Now is the time to look ahead to the next decade and beyond."

Phil's anticipated departure date allows the organization to manage a smooth transition, and the Board plans to appoint Jennifer Newberg, currently our Assistant Executive Director, to the role of ED. Jen was recruited in late 2020 with the intent that she would be a candidate for the ED role when the current ED would eventually leave the organization. Her background includes twenty years of experience in nonprofit organizations, with a particular focus on fundraising, organizational change, and membership development. Those of you who attended our Chattanooga Annual Symposium may have had a chance to meet Jen. Since joining the AAW, she has played a key role in both our virtual and in-person programming. We are all enthusiastic about Jen and the new management approach she will provide. Regarding the upcoming transition, Phil said, "I am both comforted and thrilled knowing the AAW Board is committed to a thoughtful transition plan to usher in a talented, innovative leader so perfectly suited for the rapidly evolving challenges facing our woodturning community."

The Board has decided to treat the change in leadership as an opportunity to move forward from a three-year pandemic-induced change in our environment. Our planned budget for 2023 shows an operating loss for the first time in almost a decade, as we must recognize increased costs for everything from paper, mailing, symposium venues, market-driven salary adjustments, and other unavoidable expenses. The plethora of online events and remote demonstrations, provided by the AAW as well many others, has created a new option for consumption of woodturning content. We believe there is still a strong appetite for in-person events, with the ability to directly interact with other turners, professionals, and vendors, but we need to understand what the future demand for these events will be. Fortunately, during our three-year pandemic experience, we have developed modest surpluses that give us a cushion to weather these challenges.

The Board has taken these few months to engage a consultant experienced in nonprofit membership-based organizations like ours to assist us in taking a fresh look at everything related to how the AAW is organized and how it functions. We have a small team of resolute employees and a cadre of volunteers manning our Board and committees. Over the years, we have evolved organically to meet the needs of our membership and the wider community of woodturners, but our structure and operations, including our finances and sources of revenue, are ready for review from an outside perspective. We anticipate a recommended workplan for the next few years, with new or refocused priorities, and potentially revised relationships and outside contracts.

In the coming months, we will be considering any recommendations and anticipate at least some changes in how the AAW functions. Our basic educational mission will remain unchanged and I trust that you, the membership and interested readers, will support us in this journey.

Stay tuned and keep turning,

MD

Mike Summerer
President, AAW Board of Directors

AAW'S 37TH ANNUAL INTERNATIONAL SYMPOSIUM

Louisville, Kentucky • June 1-4, 2023

THE PLACE TO BE IN 2023!

Whether you are a NEW TURNER or a PROFESSIONAL... you will be challenged and inspired at the 2023 AAW International Symposium.

Registration is now open and available online or by phone. Visit woodturner.org, scan the QR code, or call 877-595-9094.

Register with 10 or more members from your chapter for $40 off registration per person.

Kentucky Exposition Center

Home of the Kentucky State Fair, the Expo Center is conveniently located near the interstate and airport. A great venue for AAW—lots of parking, RV camping available onsite, and the tradeshow and demonstration rooms all on the same level.

Kentucky Exposition Center
937 Phillips Lane
Louisville, KY 40209

WHERE TO STAY

There are several hotels in the surrounding areas. AAW negotiated discounted rooms for $149/night at the closest hotel.

Crowne Plaza Louisville Airport Expo Center
830 Phillips Lane
Louisville, KY 40209

Free parking onsite.
Rooms at $149/night with AAW discounted rate (while supply lasts)

Scan the QR code to make online reservations or call 866-888-0620 (reference group code ZA2 for preferred rate)

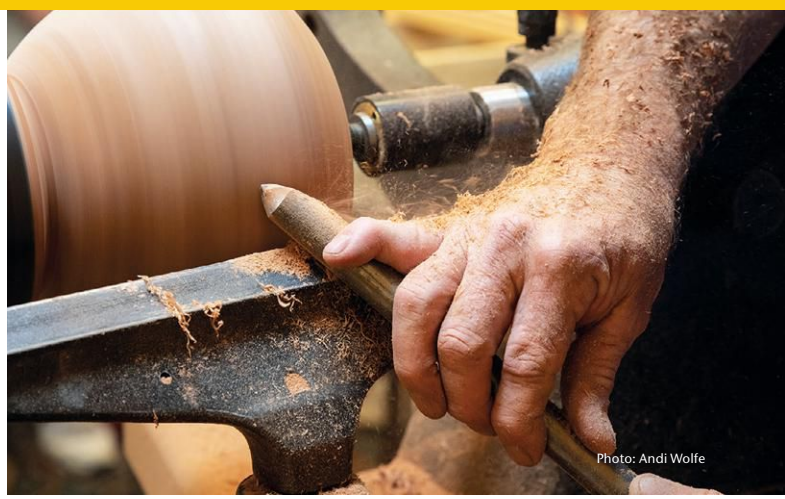


Photo: Andi Wolfe

THE 2023 SYMPOSIUM IS A FAMILY AFFAIR

- Bring the kids **for high-quality woodturning instruction**—at no extra charge! Kids ages 10 and older have choices of 10 project rotations ranging from brushes to yo-yos.
- Plan your all-star experience at the **Louisville Slugger Museum and Factory** with a guided factory tour and see Louisville Slugger bats made on lathes right in the factory.
- Don't forget the Derby! **Churchill Downs** offers unique experiences for all ages.
- For family fun just steps from the Expo Center, the **Kentucky Kingdom** offers theme park roller coasters and water park attractions. A fun outside adventure to add to your vacation.

NEW THIS YEAR!

- A hosted **Hospitality Room** for spouses and partners who come for the friendship rather than the demos. Bring a project to work on or just take it easy and make new friends.
- In the tradeshow, join the International Penturners and Midwest Penturners to **turn a pen of your own**.
- When space is available, join the **Learn to Turn** rotations in the Youth Room.

Continued on next page

A VIRTUAL SYMPOSIUM

If you cannot join us in person, AAW will bring the Symposium to you. Select demonstrations will be broadcast to a live virtual audience during the Symposium so that woodturners at home and around the world can be part of the action. Recordings will be available after the Symposium for virtual and in-person attendees for an extended period of 90 days.

Registration for the virtual component of the Symposium will open in Spring 2023. Visit woodturner.org to register and find the latest details.

VOLUNTEER!

The Symposium is only possible thanks to volunteers like you! Symposium attendees say that their experience is more meaningful when they volunteer. Sign up at woodturner.org to hold your spot for volunteering.


Photo: Andi Wolfe

Local/Regional Volunteer Kickoff Demo

If you live in the region, learn more about volunteering at the Symposium and get a sneak peek of a live AAW demo! **Roberto Ferrer** will demonstrate an extended version of his sculptural wall art at a special session, just for Symposium volunteers! **March 11, 2023, in Louisville, Kentucky**. Visit the Louisville Area Woodturners webpage, lawky.clubexpress.com, for location details, times, and register to save your seat.

YOUR FIRST AAW SYMPOSIUM?

Don't worry, you'll fit right in.

Symposium volunteers work hard to help you feel welcome and right at home. Four of every 10 attendees are brand new to the Symposium and many have been turning wood for less than two years.

TIP!

Register and make your hotel reservations now. Then, you will start getting first-time attendee communications right away!

SYMPOSIUM DEMONSTRATORS

Helen Bailey, U.K.

- Pierced Thin-Wall Bowl
- Textured and Colored Platter
- Three-Piece Natural-Edged Chalice
- Three-Legged Textured Pot

Jason Breach, U.K.

- A Simple Box
- Orbital Arc—the Beginning
- Pagoda Box

Pat Carroll, Ireland

- Square Box
- Beaded Trinket Box
- Brick Illusion
- Jo Sonjas Painting on Turned Items

Jim Echter, New York

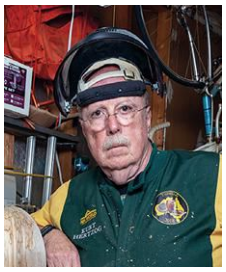
- "Spindling" Your Way to Better Bowls
- The Sensational Skew!
- Turning Duplicates

Roberto Ferrer, Illinois

- Embellishing Wall Sculptures and Conventional Turnings
- Turning and Carving Sculptural Wall Art

Kurt Hertzog, New York

- Penturning From the Ground Up—Basics Through Laser Cuts
- Ornaments
- Upscaling Your Penturning Methods and Sales
- Workholding Methods A-Z

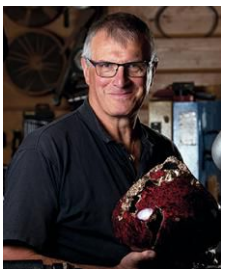


Lynn Hull, Washington State

- Adapting a Woodturning Lathe for Spinning Metal
- Brazing
- Spinning Aluminum, Copper, Brass, Pewter

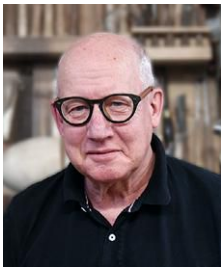
Phil Irons, U.K.

- Kintsugi for Wood



Ulf Jansson, Sweden

- Designing the Pattern
- Tools, Sharpening, and Materials
- Postprocessing
- Turning Thin Vessels



Mauricio Kolenc, Uruguay

- The Ogee Curve
- Signature Salt Shaker
- The "Magic Hammer"
- Mastering the Chaser
- The Tube Box

Kristin LeVier, Idaho

- Introduction to Micromotor Power-Carving
- Adding Sculptural Elements to Your Turnings
- Bending Wood Without Steam: Introduction to Compressed Hardwood

Joss Naigeon, France

- Creative Lids
- Sphere and Lace
- Ukibori Technique
- Leftovers Are Treasures!
- Guardian Angel

Laurent Niclot, Colorado

- Spiral Carving and Texturing
- The Sphere: Turning and Hollowing

Seri Robinson, Oregon

- Turning Spalted Wood
- The Science of Woodturning
- Spalting 101 (talk)

Continued on next page

Curt Theobald, Wyoming

- Look Closely: Elements of Design
- Beyond the Round
- Segmented Bowl Construction

Jacques Vesery, Maine

- Concepts in Design and Form; Good Form over Pretty Wood
- How to Critique, Evolve, and Learn from Experience
- Textures for Color Become Second Nature

Derek Weidman, Pennsylvania

- Turn a Human Bust
- Lifespiral, a Love Story: When Chainsaw Meets a Lathe
- Turn Any Animal

2023 POP SHOWCASE ARTISTS

Each year the Professional Outreach Program (POP) showcases two wood artists at the AAW Annual Symposium. They are either experienced artists who have made significant contributions to the woodturning field but have not received appropriate recognition or emerging artists who have the potential for making significant contributions to the field. The two artists each give two demonstrations, and their work is displayed prominently in the instant gallery.

Nicole MacDonald, Quebec, Canada

- Color—Hues and Tints
- Unexpected Texture with Modeling Paste

Elizabeth Weber, Washington State

- Carving a Wave/Leaf Motif onto Your Turned Pieces
- Exploring Colors and Textures

Call for Demonstrators:
AAW Symposium 2024

The AAW's 38th Annual International Symposium will be held in Portland, Oregon, May 23-26, 2024. To apply to be a demonstrator, visit tiny.cc/Calls between May 1 and August 1, 2023. For more information, call the AAW office in Saint Paul, 877-595-9094 or 651-484-9094, or email memberservices@woodturner.org.

Tom Wirsing demonstrating at the 2019 AAW Symposium, Raleigh, North Carolina.

Sponsor a Demonstration Room in Louisville

Express your support of AAW by sponsoring a demonstration room or event activity during the 2023 Louisville Symposium. Whether as an individual member, an AAW vendor, or as a local chapter, visibly display your support of woodturning education, community, and the programs that mean the most to you.

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

Call for Videographers and Streaming Technicians

AAW Symposium 2023

Application deadline: February 15, 2023

The AAW seeks volunteer videographers and streaming technicians for its next International Woodturning Symposium in Louisville, Kentucky, June 1-4, 2023.

We are looking for videographers with experience with video camera equipment, who possess some technical competence and can make decisions regarding how best to capture what is being turned (camera position, shooting angle, etc.).

Streaming technicians should have experience helping AAW chapters with streaming content, such as demos and hybrid meetings. We need volunteers who can switch between cameras and manage streaming hardware.

Those accepted as videographers and/or technicians will be expected to help set up or tear down and cover six rotations at the Louisville Symposium in order to receive a complimentary registration.

Applications will be accepted through February 15, 2023. Those selected will be notified in March 2023. For more information or to apply, visit tiny.cc/CallVideo.

Call for Entries *Out of the Woods*: 2023 AAW Member Exhibition

Submission Period: January 1 to March 15, 2023

The theme for the 2023 AAW member show is Out of the Woods, embracing the versatile and beautiful medium we work in and referring to the many challenges and changes of the past few years. As always, artists are encouraged to interpret the theme for themselves. Our goal is to host a Symposium exhibition that showcases and celebrates the full scope of excellent work being created by our members, from perfect traditional forms to innovative sculptures, and we hope you will apply.

All work exhibited will be selected through a blind jurying process. There are two cash prizes for this exhibition: the $300 Masters' Choice, selected by the jurors or their representatives, and the $200 People's Choice, selected by attendees at the AAW Symposium in Louisville, Kentucky, June 1-4, 2023.

Application details

- Full application/submission details can be found in the October 2022 issue of *American Woodturner* (vol 37, no 5, page 7).
- Apply online at tiny.cc/Calls between January 1 and March 15, 2023, 11:59 p.m. CST. All artists will be notified by March 31, 2023.

For more, check the woodturner.org Calls for Entry page, tiny.cc/Calls, or contact Tib Shaw at gallery@woodturner.org. To see past exhibition catalogs, visit galleryofwoodart.org.

AAW Hires New Marketing and Communications Director

Join us in welcoming Matt Brubaker, AAW's new Marketing and Communications Director. He brings impressive experience as the former Director of Marketing for the National Recreation and Park Association and as a custom furniture builder for his own business, Bear Bark Woodwork. Matt will use his marketing expertise and passion for woodworking to lead promotions to help grow AAW's woodturning community. We look forward to getting him behind a lathe in Louisville this June!

"What I love most about woodworking is the creative process of taking wood from rough-cut lumber to a beautiful, unique piece of art. It's so rewarding to see all the natural character of a beautiful piece of wood come to life in the form of something you build with your own two hands. I'm excited to bring my passion for woodworking to the AAW team and collaborate with the amazing community of woodturners."

Calling All AAW Chapter Newsletter Editors and Webmasters

Each year, the AAW holds the Best Chapter Newsletter and Best Chapter Website contests. **Closing date for applications is April 1.** Winners will be announced at the AAW International Symposium, provided with a follow-up announcement in *American Woodturner*, and receive a certificate of achievement.

How to apply

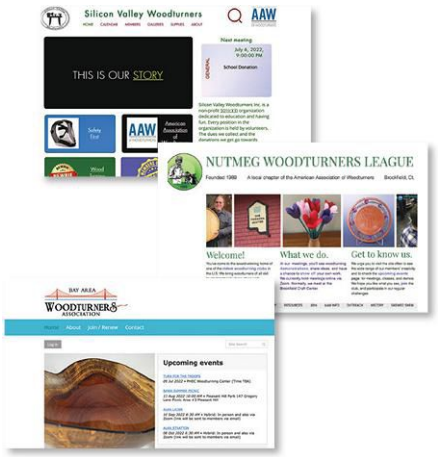
Applications for both contests must be submitted online. Links to rules and guidelines, as well as access to all past winners' newsletters and websites, can be viewed at tiny.cc/ChapterNewsWeb (case sensitive). This is a members-only page.

For the newsletter contest, the judges will be looking for:

- Content that demonstrates partnership with AAW to share, support, and deliver woodturning education
- Visually appealing layout
- Sound writing skills
- Current technical, safety, and news-related content

For the website contest, the judges will be looking for:

- Visually appealing layout/ graphic design
- Personality and good blend of design with appropriate appeal to woodturning audience
- Easily navigated, intuitive menu, working hyperlinks
- Appropriate use of scripting, styles, databases, and search engines
- Site works with different browsers and devices
- Content that demonstrates partnership with AAW to share, support, and deliver woodturning education
- Current technical, safety, and news-related content
- New information upfront, archived material available



Hall of Fame

Past first-place winners of the chapter newsletter and website contests have been inducted into AAW's Hall of Fame and featured on our website. Visit tiny.cc/chapterwinners to view all past winners. In order to recognize the excellent work of the full range of AAW chapters, first-place winners in either category must wait three years before entering the competition again.

Above all, newsletters and websites should be fun to read and provide useful information for the chapter they serve.

Apply for an AAW Grant

AAW Grants are available to individuals, chapters, schools, and non-profit organizations. Examples include but are not limited to outreach programs and/or events to encourage youth and under-represented populations (women, minority, disabled, etc.) to learn and pursue woodturning, support of existing or developing unique woodturning programs, educational workshops or class participation, professional development opportunities, chapter projects, etc. In addition to monetary awards, up to ten mini-lathe packages are available for award each year.

Regular AAW Grants are awarded on an annual basis. To be eligible, applications must be received by December 31 for grants given in the following year. However, Women in Turning (WIT) grants and others for under-represented populations, events, and exhibitions are awarded quarterly.

Find detailed grant descriptions and application information at tiny.cc/aawgrants. If you have questions, please contact the AAW office by calling 877-595-9094 or emailing memberservices@woodturner.org.

Call for Student Work
2023 Turning to the Future Competition

AAW AMERICAN ASSOCIATION OF WOODTURNERS
Turning to the Future

Submission period: March 1 to May 1, 2023

The AAW is pleased to announce the sixth 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 encourages students to reach for and attain high levels of skill in the use of the lathe. It is open to all students in North America, and there is no entry fee.

Any high school student is eligible. Post-secondary students must be enrolled either full- or part-time in a degree- or certificate-awarding woodworking, art, or design program. (Students in apprenticeships or in specialty programs will be considered on a case-by-case basis.)

Prizes include $500 first-place and $100 second-place awards in each division (High School and Post-secondary). Finalists receive a one-year subscription to *American Woodturner* and a certificate for a complimentary AAW Symposium registration.

There are two divisions, High School and Post-Secondary. Up to fifteen finalists in each division will be chosen to have their work displayed at the 2023 AWFS® Fair in Las Vegas, Nevada, July 25-28, 2023. Work will be evaluated on craftsmanship, aesthetic appeal, creativity and/or utility, and process documentation. Submission period opens March 1, 2023. Deadline for submissions is May 1, 2023.

Submission details can be found at tiny.cc/Calls.

AAW Board of Directors

Call for Nominees

Application due date: April 1, 2023

The AAW offers much to its members, and we are looking for a few good people with the passion to contribute something in return. Does the opportunity to innovate interest you? Do you have the leadership experience and energy to be a part of AAW's future, as well as a willingness to help make it a better organization? Be a part of moving the AAW forward—run for a position on the AAW Board of Directors.

How it works

The AAW has a volunteer nine-member Board to represent the membership and move the organization forward. If you have been a member in good standing for the past three years, you are eligible to apply. The Board is most effective with a diversity of skills represented. Members with nonprofit Board experience, especially in the areas of finance, strategic planning, nonprofit governance, and legal matters, are encouraged to apply. After a review of application materials and conducting phone interviews, the Nominating Committee will select six highly qualified candidates from the applicants. From these six, AAW members will elect two candidates, and the Board will appoint the third candidate, to serve a three-year term beginning the following January.

—Linda Britt, Chair, Nominating Committee

Find Out More!

Interested, but still have questions? We would love to talk with you! For information on nomination application requirements and the duties of Board members, email Executive Director Phil McDonald (phil@woodturner.org) or call Phil at 651-484-9094. You can also find the application requirements, as well as contact info for all current Board members, at tiny.cc/Board. **All applications are due no later than April 1, 2023.**

A statement by each of the six candidates, along with photos, will be published in the August 2023 issue of *American Woodturner*. Voting will occur during the month of August. Election results will be announced by mid-September.

FROM THE EDITOR'S INBOX

Send emails to editor@woodturner.org

In November 2022, the Mid-Columbia Woodturners (MCW) celebrated its 25th anniversary as an AAW chapter. At that meeting, we honored four of our founding members, Ron Gerton, Jerry Johnson, John Nichols, and Chuck Madsen, with commemorative platters and Lifetime MCW membership. The MCW is an Eastern Washington State chapter with membership around sixty, ranging from beginners to professional turners. We have adopted three local high schools with woodshops, where we routinely volunteer and provide instruction on turning and safety procedures. We are looking forward to another 25 years!
—Mikki Gaddis, MCW Secretary

From left: John Nichols, Chuck Madsen, and Jerry Johnson (Ron Gerton not shown).

I recently made a modest donation to the AAW in memory of my son Rodney, who died in June 2022 of a seizure-related accident. He was 51 years old. Rodney was an electrical technologist but, through my influence, also developed a strong interest in woodturning. I have been an AAW member for some years and have enjoyed the journal articles, especially seeing what other turners are making. Rodney was also amazed at the different items that could be turned and at the talent of others who produced such beautiful items.

The author's son Rodney, who died in June 2022.

The author with his granddaughter Emma, carrying on the love of woodturning.

Rodney and I enjoyed many sessions together at my lathe, making small items like spin tops, wine stoppers, etc., and he actually became hooked on turning. He bought a mini-lathe and some basic tools, and since he was meticulous in anything he did, I'm convinced he would have been a good turner with practice. Naturally, his passing was a tragedy for our family.

A brighter note to the story is that Rodney's daughter Emma (now in medical school) also enjoys the lathe and has done some turning. In grade twelve, she entered a national Skills Canada Competition and chose to do woodturning. We took the small lathe to the auditorium, and she demonstrated turning a spin top, explaining the steps as she went. Rodney and I were delighted with what Emma did that day, and I hope she will always maintain an interest in woodturning.

It is my wish that my small donation, through the good work of the AAW, may in some way help to inspire a young person to pursue woodturning. Young people are just amazing and are of course the future of everything, woodturning included.
—Don Jacobs, Newfoundland and Labrador, Canada

My wife, much to my delight, has opted to add the AAW journals as part of her basement room decor. Instead of having them stacked on the side table or in a box in my shop, I can grab a magazine, sit a spell, and enjoy my choice of editions. I frequently rotate them with newer and older editions.
—Glenn McCullough, Michigan

Detroit Area Woodturners Holds 1st Annual Symposium

If we've learned one thing over the last two years, it's that we still need face-to-face contact. The Detroit Area Woodturners (DAW) embraced this fact on October 8, 2022, when we hosted our first ever symposium. Seven symposium committee members met from April to October and debated every aspect of the event, including whether it was a good idea to launch a new symposium in a world still recovering from Covid. Turns out it was a great idea.

Sixty-five turners and would-be turners attended the event. Most were from Michigan, but others came from as far away as Texas and Ontario. Eight demonstrators showed off their craft across four stations, with two morning and two afternoon sessions, for a total of sixteen demonstrations. Topics included ornaments, goblets, texturing, tool steels, boxes, thread-chasing, and more. We also had several great vendors and door prizes, and an AAW Board member was on hand with giveaways such as an AAW membership and certificates to attend the AAW 2023 Annual Symposium this June in Louisville.

Ed Wilkiemeyer (left photo) and Ron Campbell (right photo) share their expertise at the 1st annual Detroit Area Woodturners symposium.

Photos: Jack Parmenter

None of this would have been possible without a team of volunteers. Besides the committee members, eighteen volunteers helped with set-up, teardown, and various other tasks.

The 2022 event took place at the Central United Methodist Church in Waterford, Michigan, and we are already discussing plans for an event in 2023. Check the DAW website, detroitareawoodturners.com, for the latest information and to register for the 2023 event.

—Ron Estrada, Detroit Area Woodturners

An Enduring Chapter: The Emerald Coast Woodturning Guild

In 2003, a small group of turners in Florida grew tired of traveling sixty miles to attend club meetings. During lunch about halfway home from one meeting, the seed was planted for a new chapter. Bill Stephenson volunteered to do a demo, Jimmy Neilson knew a lawyer who could help with the nonprofit status, and Earnest Nettles had connections for a meeting place. These men started the Emerald Coast Woodturning Guild (ECWG of Freeport, Florida) and held various leadership positions for many years.

The guild prospered and drew about seventy-two members. Most were over 50 and male. As time went on, a substantial number left the area, lost interest or became unable to turn, and some passed away. In 2020, we lost our meeting place in Freeport but quickly found another belonging to a club member. Al Christopher has been very generous with the guild and even allowed us to install wiring and televisions. This allowed us to share video recordings with members at home and to view remote demos as a group.

When Covid struck, we couldn't meet at all but then gradually transitioned to meeting masked and outdoors. Remote learning took off, and we embraced technology as way to increase and maintain membership. Club member John Blackwood accepted the challenge of investigating, purchasing, and testing the necessary equipment and software. This has enabled us to host demonstrators from anywhere in the world and has reduced the cost of expert instruction.

Chapter outreach

Prior to Covid, ECWG provided in-person training to students in two local high schools. We plan to resume when school administrators deem it practical. In the last year, our membership grew dramatically due to several factors. We provided live demos at a senior center, as well as lectures on woodturning for members of the University of West Florida. We participate in local festivals and art shows and support a local children's advocacy center with donations of turned items. We also offer full-day training sessions at no charge for any member who joins the guild. As we picked up new members, they told their friends, which generated even more new members. Best of all, the makeup of our membership has changed to a mixture of men and women, with many new members being younger than the original guild makeup.

—Charles Chaloupka, President, ECWG

ECWG member Al Christopher holds a turned piece during a chapter meeting, visible on screen and recorded for members at home.

Meara Maguire, newest ECWG member, receives expert instruction during one of the club's monthly in-person training sessions.

Guild members pose with their tree of turned ornaments at the Freeport Festival of Trees. The ornaments were sold to benefit a local charity.

The CAW Announces The Mashrabiya Project

New mashrabiya are installed to replace wooden elements destroyed in a fire at a residential building in Cairo.

Lathe-turned components are assembled without glue or fasteners.

A Mashrabiya Exhibition

The CAW's multidisciplinary exhibition, *Seeing Through Space*, will feature newly commissioned, never-before-seen works from six international artists. It will be on view in The Center for Art in Wood's public space, 141 N. 3rd St., Philadelphia, Pennsylvania, ***March 3 to July 23, 2023***.

The Center for Art in Wood (CAW) has announced The Mashrabiya Project. Mashrabiya are lattice screens often comprising thousands of individually lathe-turned components. They are attached to windows or installed in interior spaces, simultaneously offering ventilation and privacy. Traditionally, mashrabiya were set into deep windowsills where jars of water facilitated passive, evaporative cooling in an early form of air conditioning. These screens can be found throughout the Islamic world—from Africa to the Pacific rim.

The CAW's Mashrabiya Project will focus specifically on the woodturned latticework found in Cairo, Egypt. It is believed that woodturning as a craft developed in Cairo over 3,000 years ago, and it is still practiced in the bustling metropolis to this day. The Project will include an international exhibition titled *Seeing Through Space*, interactive programming, a shared making experience, and a publication showcasing and exploring the significance of woodturned mashrabiya. Curated by the CAW's Executive Director and Chief Curator Jennifer-Navva Milliken, this will be the first effort in the U.S. to examine this architectural object and its prominence in Islamic and Egyptian craft, while highlighting its greater cultural significance.

"The Mashrabiya Project centers on the living craft of woodturning and the architectural form of the mashrabiya," said Milliken. "The Center for Art in Wood, whose origin is in international advocacy for woodturning as a contemporary art form, is the ultimate site for this project. Through the language of the mashrabiya, we connect Cairo and Philadelphia—two cities with extraordinary craft histories—and investigate the impact of wood craft on art, space, access, and visibility through this distinctive cultural exchange." ■

The Mashrabiya Project is supported by a grant from The Pew Center for Arts & Heritage. To learn more, visit centerforartinwood.org.

Call for Applications: Scholarship for Entrepreneurial Women Woodturners

Women woodturners are invited to apply for a scholarship opportunity to attend an All-Women Woodturning Week with Glenn Lucas in County Carlow, Ireland. The class will be sponsored by a kind benefactor. This opportunity is suitable for women with frequent access to a woodturning lathe and who have a keen interest in growing their turning skills. The class will focus on improving your techniques, understanding the material, and giving you the foundation to build your own style.

Details:

- Five-day woodturning class worth €1,150. Includes wood and daily lunches. Tools, safety wear, and smocks provided for the class duration.
- Class duration: August 21-25, 2023; exhibition of work August 26, 2023. Participants are encouraged to bring a small selection of finished work for a trunk show exhibition.
- Number of students: eight (8)
- Accommodations: bed and breakfast is provided for August 20-27, 2023, at Osborne's Storehouse in Rathanna. Daily transport to and from the workshop is provided.
- Travel/Flights to Ireland and transport to County Carlow at participants' own expense (we are happy to advise).
- **Application deadline: February 28, 2023.** Successful candidates will be informed by March 13, 2023.

How to apply

To apply for a spot in the All-Women Woodturning Week, please email Glenn Lucas Woodturning at info@glennlucas.com. Tell us why you would like to attend this class with Glenn Lucas and how this week of turning will benefit your career. Limit your statement to one A4 page. Include a short resume/CV and three to six images (jpg/pdf) of recent relevant work. If you have Facebook/Instagram, please also include link. ■

For more, visit glennlucaswoodturning.com.

Calendar of Events

Send event info to editor@woodturner.org. April issue deadline: February 15.

Alaska
April 1, 2, 2023, Alaska Woodturners Association's 18th Annual Symposium, Glass Sash and Door Supply, Anchorage. Featured demonstrators will be Pat Carroll (Ireland) and Emiliano Achaval (Hawai'i), as well as local turners Heather Ashley and Jeff Trotter. Event to include eight demonstrations on Saturday, six on Sunday, an instant gallery, and door prizes. In addition, classes taught by the featured demonstrators will be held the week before and after the symposium. For more, visit akwoodturners.org or email Brian Seitz at seitz.awa@gmail.com.

Colorado
September 15–17, 2023, Rocky Mountain Woodturning Symposium, The Ranch Larimer County Events Center, Loveland. Long-running symposium (since 1998) featuring full-scale demonstrations, hands-on classes, gallery display, banquet, live auction, and a tradeshow. Featured demonstrators to include Graeme Priddle, Melissa Engler, Mark Gardner, Laurent Niclot, Keith Gotschall, and Jean-François Escoulen, with others to be announced. For more, visit rmwoodturningsymposium.com; registration opens March 1.

Florida
February 3–5, 2023, Florida Woodturning Symposium, RP Funding Center, Lakeland. Demonstrators to include David Ellsworth, Mark Gardner, Carol Hall, Avelino Samuel, Kent Harriss, Keith Larrett, Jack Roberts, and Kent Weakley. Event to include an instant gallery, raffle, auctions, shopping spree, and great vendors market. For more, visit floridawoodturningsymposium.com.

Idaho
April 1, 2, 2023, *The Idaho Artistry in Wood 2023 Wood and Gourd Art Show*, JUMP (Jack's Urban Meeting Place,) Boise. Competitors from all skill levels may submit their wood carving, turning, scroll work, fine woodworking, CNC creations, gourd art, and pyrography entries for public display and judging. The show will feature demonstrations, vendors, raffles, an auction, and banquet, as well as the opportunity for artists to sell their work. Full information, entry forms, and discount coupons for admission are available at idahoartistryinwood.org. For specific questions, contact: Doug Rose (208) 856-8856, roseboise@yahoo.com, or Eric Owens, boiseowens@gmail.com.

Illinois
April 21, 22, 2023, The Midwest Pen Turners Gathering (PenMakers International Annual Symposium). Two full days of pen making—from beginner to advanced. Numerous social activities, chance to win a lathe, door prizes, vendor area. For more, visit midwestpenturnersgathering.com.

Ohio
October 13–15, 2023, Turning 2023, Ohio Valley Woodturners Guild's 12th biennial Woodturning Symposium, Higher Ground Conference & Retreat Center, West Harrison, Indiana. Featured demonstrators to include John Jordan, Ashley Harwood, Roberto Ferrer, Nick Cook, and Helen Bailey. The pastoral setting has an onsite lodge, dormitories, and dining hall. Event to feature five stations and eleven rotations, instant gallery, wide range of vendors, and Saturday evening live auction. Registration opens February 15, 2023, at ovwg.org.

Minnesota
Multiple 2023 exhibitions, AAW's Gallery of Wood Art, Landmark Center, Saint Paul:

- January 8–February 5, 2023: *Living with Craft: North House Artist Development Program Exhibition*
- February 26–May 19, 2023: *Form | Content* (2023 POP exhibition)
- July 1–December 31, 2023: *Out of the Woods* (AAW's 2023 member exhibition)
- Ongoing: *Touch This!; Around the Hus—Turning in Scandinavian Domestic Life*; vintage and historic lathes and turned items

For more, visit galleryofwoodart.org or email Tib Shaw at tib@woodturner.org.

New York
March 25, 26, 2023, Totally Turning Symposium, hosted by the Adirondack Woodturners Association, Saratoga Springs City Center, Saratoga Springs. Demonstrators to be announced. For the latest info, visit totallyturning.com.

North Carolina
November 3–5, 2023, Biennial North Carolina Woodturning Symposium, Greensboro Coliseum, Greensboro. For more, visit ncwts.com.

North Dakota
April 21–23, 2023, Hands-on Spring Symposium, Career Center at Bismarck State College. Demonstrators to include Sally Ault and Mark Kielpinski. For more, visit dakotawoodturners.com.

Oregon
March 17–19, 2023, Oregon Woodturning Symposium, Albany Fair and Expo Center, Albany. Demonstrators to include Nick Agar, Sally Ault, Stuart Batty, Trent Bosch, Cynthia Carden, Nick Cook, Rebecca DeGroot, Keith Gotschall, Eric Lofstrom, and Mike Mahoney. Event will feature an instant gallery and vendor booths. For more information, visit oregonwoodturningsymposium.com.

Pennsylvania
September 22–24, 2023, The Mid Atlantic Woodturning Symposium, Lancaster Marriott Hotel and Convention Center, Lancaster. Featured demonstrators to be announced. For more, visit mawts.com.

Texas
March 17-19, 2023, Gulf Coast Woodturners Hands-On Retreat, Jimmy Burke Activity Center, Deer Park (Houston). Members teach a variety of courses for all skill levels. Two three-hour classes on Saturday and a three-hour class on Sunday. Each class of six turners have eight choices per session. Membership ($35) required due to insurance. For more, visit gulfcoastwoodturners.org.

August 25–27, 2023, SWAT (Southwest Association of Turners) annual symposium, Waco Convention Center, Waco. This year will be the 31st SWAT symposium. Demonstrators to be announced. For more, visit swaturners.org.

Washington
March 11, 2023, Northwest Washington Woodturners' 11th annual all-day demo, A Day with Nick Agar, Anacortes First Baptist Church, Anacortes. Nick will spend the day demonstrating the many techniques of turning, texturing, and coloring that he is internationally known for, including his Viking Sunset Bowl. For more, visit nwwwt.org. Questions, email info@nwwwt.org or call Phil Kezele at 206-372-5123.

AAW'S REMOTE DEMONSTRATION EVENT CALENDAR

Learn about upcoming non-AAW-sponsored interactive remote demonstrations (IRDs) at tiny.cc/IRDCalendar. Demonstrators can also submit entries to this online calendar at this link.

Tips

Gluing jig improves efficiency

I sometimes add inlays or segments to some of my turning blanks for items like pens, bottle stoppers, kaleidoscopes, and others. To make it easier to glue several items at the same time, I built a small gluing press. The press is made from scrap wood and uses two Wonder Dogs (made by Veritas) to provide the clamping pressure.

In use, I cover the surfaces with freezer paper to prevent gluing the items to the press. The Wonder Dogs fit a round dog hole and are designed to be elevated by using either rubber O-rings or shopmade spacer blocks of the desired height. To accommodate different thicknesses of items, I made the back, or fixed jaw, high enough to hold the thickest item I might glue. I make different thicknesses of front jaws to match the thickness of the item being segmented, and the Wonder Dogs are elevated to the proper height for clamping the item.

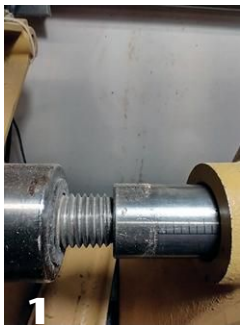
There is a reason for the additional items in the photo. The pieces of card are used as shims to make up minor discrepancies in the items' length to provide even clamping pressure. The rawhide mallet is used to tap all the pieces down to the bottom surface of the jig for alignment. The epoxy is what I use for gluing the blanks.

I have used the press completely full by placing pieces of wax paper between each item to prevent gluing them together.

—John Tarpley, Tennessee

No-Jig Depth Gauge

There have been lots of great tips published offering methods of gauging the thickness of a bowl's bottom. Here is how I do it, without the use of a jig.



First, extend the tailstock quill until it touches the drive spindle (*Photo 1*). Note the scale reading on the quill. Then retract the quill so you'll have space to insert the bowl, bottom facing the tailstock, between the quill and drive spindle. (Note: Do not move the tailstock; just retract the quill.) With the bowl in place, extend the quill to press the bowl against the drive spindle (*Photo 2*). Read the quill scale and subtract this reading from the initial position to determine the bottom thickness.

—Bill Kram, Arizona

Fill ambrosia holes

It is exciting to turn ambrosia maple and see the character of the wood unfold. But it is not surprising when the wood reveals the common pin-size holes associated with it. I've learned to make the holes disappear by filling them with cyanoacrylate (CA) glue, white glue, or two-part epoxy, then rubbing sawdust into them. When the glue is dry, I sand away any squeeze-out. After the finish is applied, the holes disappear like magic.

—Tim Heil, Minnesota

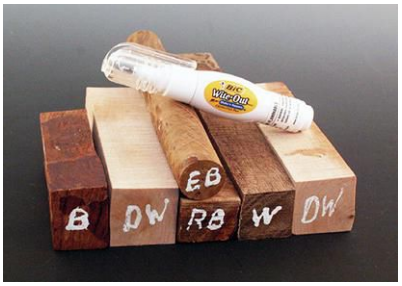
Make large compass from paint stir sticks

I made a simple compass for drawing large circles when preparing bowl and platter blanks. The legs of the compass are paint stir sticks, which are free at most hardware stores. I taped a 16-penny nail to one leg and a permanent marker to the other leg. The legs are joined with a screw and nut that act as a pivot point.

—Tim Heil, Minnesota

Correction fluid as labeling pen

I find it important to label the wood I store in my shop. Some years ago, I attended a presentation by Dick Sing. He said he used white type-correction fluid, such as Wite-Out, and found it especially useful for labeling darker woods. When I started stabilizing wood, I found the markers, pens, and pencils I had been using dissolved in the stabilizing resin. I decided to try white correction fluid, and it worked well. I use one with a ballpoint tip, rather than a brush applicator. Correction fluid can also be used to label wood that has already been stabilized.



—John Tarpley, Tennessee

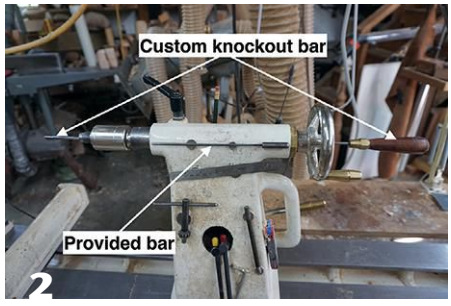
Improved live center knockout bar

Like other live centers on the market, the one that came with my Oneway lathe has a removable center point (*Photo 1*). Oneway provides a thin rod with a small handle that works well to lock the spindle of the live center when attaching and removing threaded accessories. It also works as a knockout bar for the center point, but only when the live center is removed from the tailstock. Also, if the center point is overly tight due to infrequent removal or corroded from turning green wood, the provided rod is inadequate and may bend.

I grew tired of both situations and made a longer, sturdier knockout bar. It had to be long enough to go all the way through the tailstock quill and live center, be stiff enough not to bend, and be heavy enough to work as an actual knockout bar, rather than requiring striking force from a hammer. My original intent was to hunt down some ¼" (6mm) rod in my shop, but I was only able to find 3⁄16" (5mm) rod at the time. I decided it would be at least a good "proof of concept," so I went ahead and made a wood handle for added mass and to indicate it was more than just a random piece of 3⁄16" rod laying around. It worked so well, I never upgraded to the thicker ¼" rod.

Use it like any other knockout bar. Safety hint: wear a glove or clump a rag in your hand to catch the center point.

—Ed Pretty, Canada



Share your turning ideas!

If we publish your tip, we'll pay you $35. Email your tips along with relevant photos or illustrations to editor@woodturner.org.

—Joshua Friend, Editor

Mallet-and-awl marking kit

As I get older, I try to be more careful with my hands. I don't want to develop arthritis, which could end my woodturning days. So I avoid the temptation of using my hands as a hammer. One example was when using an awl to make centered indents on spindle blanks. I now use a shop-made mallet to tap the awl instead of using my palm (*Photo 1*).

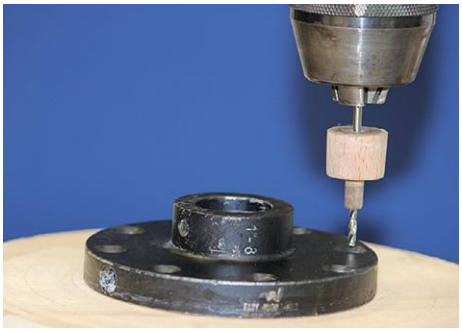
I cut the mallet out of a scrap of ash. It measures 9½" × 3" × 2" (24cm × 8cm × 5cm). I added holes to my mallet that hold an awl and a marker. This makes it into a one-stop center-marking kit (*Photo 2*). I use the marker to highlight the centered indents, which makes them easier to see when mounting work on the lathe between centers.

—Carl Ford, New York

Jig centers faceplate screw holes

I always drill pilot holes when attaching a faceplate. But they are often not centered properly within the screw openings in the faceplate. I fixed that problem by making a simple self-centering drill bit jig. It is sized for the ¼" (6mm) openings in my faceplate and drills 3⁄32" (2mm) pilot holes.

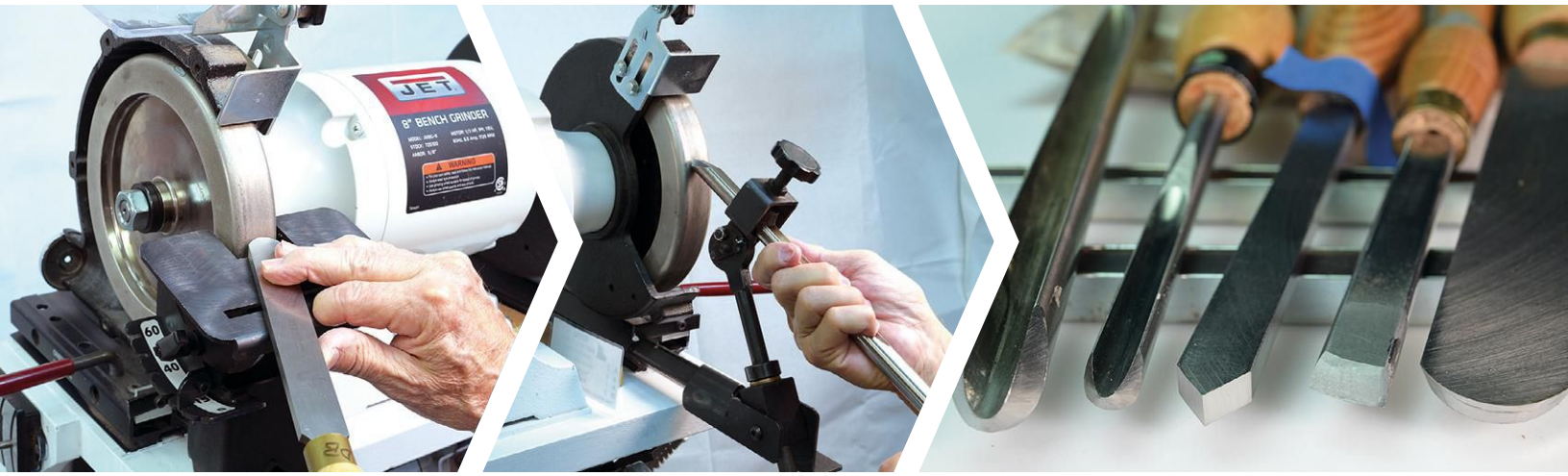
—Bill Wells, Washington



An Introduction to SHARPENING

Photos by Denise Freitag.

Dennis Belcher

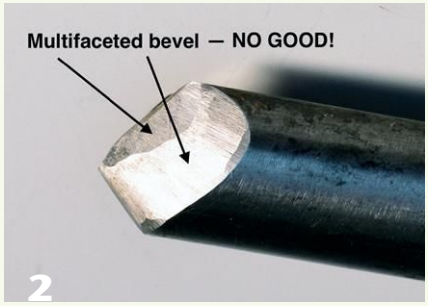


Dull tools steal the joy out of working with wood. New turners quickly understand that in addition to turning wood, they need to learn how to sharpen their tools. Sharpening turning tools can be broken down into two parts. The first is a potentially overwhelming range of peripheral information about grinding wheels, motor speeds, sharpening systems, grind angles, etc., and the second includes the physical hand and body movements used while sharpening. This article covers the first part, peripheral issues, with a goal of simplifying concepts. A video that accompanies this article helps to illustrate the actual process of sharpening each of the main turning tools. *See the video reference sidebar at the end of this article.*

Sharpening systems improve tool grinds

1

Some of the commercial sharpening jigs available today. They all have subtle differences but can achieve the same result—a consistent and repeatable grind.



2

This gouge has multiple facets on its bevel, which can make it difficult to bring the cutting edge to the wood. This problem is easily avoided by using a sharpening system with appropriate jigs.

Sharpening systems

Back when a turner's primary tool was a scraper, sharpening was done by hand, without any special jigs or fixtures. The turner steadied the tool on a platform while advancing the tool against a grinding wheel. This was okay for a scraper, but as scrapers gave way to the more complex curves of spindle and bowl gouges, sharpening by hand consistently became more difficult. The amount of practice needed to achieve success gave rise to multiple sharpening systems and jigs, which hold the tool for you and limit its movement on the grinder to just what is needed.

There are several sharpening systems available commercially (*Photo 1*), but it is beyond the scope of this article to list and compare them. The purpose here is to convey the underlying concepts. All of the sharpening systems work by removing metal from the tool by way of an abrasive. The abrasive can be mixed with a bonding agent and formed into a wheel (friable wheel),

it can be a coating adhered to a metal wheel (CBN wheel), or it can be on a flexible belt. Regardless of the configuration, each approach achieves the same end: the removal of metal from a turning tool in a controlled manner, leaving the edge sharper.

When you consider purchasing a sharpening system, here are some factors to weigh:

Safety

Sharpening accidents, or catches, most frequently happen when the tool moves past the edge of the wheel. This can cause the tool edge to dig into the wheel. Catches on a sharpening wheel are much scarier than on wood, but more recent sharpening systems limit the tool's traverse, making it impossible for the tool to go off the edge of the wheel.

Consistency of grind/bevel

The bevel of a tool should be one continuous surface, not have multiple facets. This allows the tool to ride against the wood and the cutting edge to be advanced into the wood in a controlled fashion. Having multiple flats on a tool's bevel (*Photo 2*) makes this difficult.

The goal of sharpening is to remove as little metal as possible to achieve a sharp cutting edge with a single, continuous bevel. When a tool is placed on the wheel, or belt, at exactly the same angle every time, less metal has to be removed and sharpening happens quickly. If you change the angle of approach, even by the smallest amount, more metal has to be removed in order to get that one flat bevel. When you couple this with the fact that the diameter of friable wheels reduces as it wears away, there is a need for jigs, setup gauges, and sharpening systems that ensure consistency and repeatability.

So a key question is, will the sharpening system produce a consistent grind each time? How easily and accurately does each system return to the same angle each time it is used?

Learning curve

New turners might feel impatient to make something. Curls flying and a form taking shape in front of our eyes is what we crave. Learning to sharpen our tools might feel like a distraction. It is necessary, but the faster you can learn how to put an edge on a tool, the better.

As you compare sharpening systems, look closely at the instructions that come with them. Are they clear and understandable? Are there supporting diagrams and videos specific to the turning tools that you normally use? Does the system seem intuitive to you? Talk with members of your turning club and see their sharpening systems in use. It is best to see a range of systems, not just one. Keep in mind that sharpening has changed in recent times and many turners are set in their ways.

Value

Evaluating sharpening systems also involves weighing their cost. The initial cost is not the total cost. Include the add-ons that are sold to support the core system and the longevity of the wheel or belt.

Motor speed

A little background in metalworking helps in understanding which motor speed should be used. Often in a metal shop, the goal is to remove metal rapidly. That is achieved by using a high-speed grinder with a coarse wheel—typically 3450 rpm coupled with a 36- to 80-grit wheel. But the goal with woodturning tools is to *sharpen*, not to grind away a lot of metal fast. This is why many turners opt for a slow-speed grinder, sharpening at 1750 rpm, with a finer-grit wheel. This makes it easier to control the removal of metal, which means you can remove less of the expensive high-speed steel (HSS).

Belt-based sharpening systems also use a moderate speed. The measuring unit for a belt is not revolutions per minute (rpm), but lineal feet per minute (lfm). Typically, the lfm for belt systems is 1440 (440 meters per minute). To put this in context, a typical belt sander for wood at its highest setting runs at 3000 lfm.

At the other end of the spectrum are the ultra-slow, water-cooled sharpening systems, which run at 90 rpm. These systems excel at producing surgically sharp edges, while minimizing heat. They are great for carving tools and bench chisels, but are agonizingly slow when attempting to modify a grind on a turning tool. ▸


3

Sharpening wheel types

The author uses a double-decker sharpening station, set close to his lathe. The grinder on top is equipped with two grits of CBN wheels, and the grinder on the bottom has two friable wheels. It is highly efficient to have a setup with both coarse and fine wheels.

Grinding wheel type

There are two main categories of grinding wheels—friable and cubic boron nitride (CBN). My sharpening station comprises both types, as shown in *Photo 3*.

Friable wheels

As the name suggests, friable grinding wheels are made of materials (often aluminum oxide) that wear away as tool metal is ground. These wheels have been the standard in metal shops for years. They come in a range of colors, grits, abrasive materials, and binders (*Photo 4*). There is as much to learn in the world of abrasives as there is in the world of woodturning. Grit type, grit size, wheel hardness, grain spacing, and bond type all should be considered when selecting the correct wheels for use on HSS turning tools. It can be a bit overwhelming, but the decision is important. Bill Neddow provides some excellent distinguishing information in his April 2011 *AW* article, "Grinder Wheels." A practical solution is to purchase your grinder and wheels from a retailer that specializes in woodturning equipment.

Friable wheels wear with usage. As you can see in *Photo 4*, this wear reduces the diameter of the wheel. All of the wheels pictured started with an 8" (20cm) diameter; the one on top now measures 7" (18cm). The fact that friable wheels wear away has driven the design of some sharpening systems that need to be flexible enough to continue producing a consistent bevel angle.

As they are used, friable wheels will develop grooves. They can also wobble side to side as they wear from density variations within the wheel. Friable wheels will also glaze over as metal loads the wheel, essentially burying the cutting grit. Supporting tools and gadgets are needed to address these issues (*Photo 5*). The primary advantage of friable wheels is their low initial cost. But when the cost of the needed supporting tools is added, most of the initial cost advantage is lost.

CBN wheels

In recent times, CBN wheels have become common in woodturning (*Photo 6*). CBN is second only to diamonds in hardness and has high abrasion resistance. Abrasive particles are bound to either a steel or aluminum wheel. With their hardness and abrasion resistance, CBN wheels can sharpen HSS easily without wearing away or losing diameter. Plus, the metal wheels retain their factory balancing over their entire life. The constancy of CBN wheels has led to a redesign of sharpening systems; for example, workarounds are no longer needed to account for a diminishing wheel size.

CBN wheels are designed for high-speed steel and the newer metals used in

Friable wheels

4

Colors are one indication of a wheel's material and coarseness. All of these friable wheels started at 8" diameter, showing that they wear away with use.

5

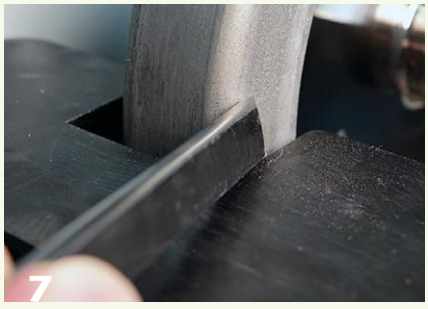
Friable wheels require supporting accessories to keep them in good shape. These tools are used to expose fresh grit, remove any unwanted grooves, and to true up the wheel.

Safety Note

Never grind a tool on the side of a friable grinding wheel. Friable wheels are not made to withstand pressure applied from the side and are susceptible to fracturing and becoming a projectile safety hazard. It is especially important that guards be in place when using a friable wheel.

CBN wheels

6



7

CBN wheels come in a range of grits and configurations. Some have a side flange that allows for sharpening on the side of the wheel—something you should never do with a friable wheel.

turning tools. Soft metals such as carbon steel, used in older turning tools, will clog and glaze the wheel, reducing its cutting action. Do not use CBN wheels with other soft metals such as aluminum, brass, or copper. If a CBN wheel becomes loaded, it can be cleaned by hand, but it is a slow and laborious task.

While the side of a friable wheel should *never* be used for grinding or sharpening a tool, CBN wheels with side grit *can* be used for this purpose (*Photo 7*).

Belt sharpeners

Belt-based sharpening systems are similar to belt sanders used in woodworking—they have a belt that moves across a flat platen. Specially designed jigs hold the turning tools and control tool movement across the belt to sharpen the tool. Belts come in a range of grits and materials suitable for a range of metals.

The flat platen means that the sharpened tool bevel will be flat, rather than having a slight hollow-ground curve that comes from the shape of a grinding wheel. The advantage of a belt sharpener is that grits are easily changed by removing one belt and installing another with a different grit. Belts do wear with usage and will need to be replaced.

Abrasive grits

Turners use grinders or belts to either sharpen a tool or reshape it to a new grind. Abrasive grits above 220 remove less material and leave a sharper edge. Grits in the 60 to 180 range are a better choice when reshaping a grind. Changing the grind of a tool with a fine-grit wheel is agonizingly slow. Use coarser wheels to reshape a tool or to raise a burr on a scraper, and finer wheels to achieve a sharp edge. Having a combination of wheels—a coarse 80- to 180-grit and a fine 350- to 600-grit—is suitable for woodturners.

Which grind for my gouge?

You are likely to come across many names for gouge grinds: traditional grind, fingernail grind, Irish grind, swept-back wings, Ellsworth grind, bottom-bowl grind, and the list goes on. The number of grinds and the opinions about which is best can be overwhelming and confusing. The confusion increases when you survey a group of experienced turners. Ask a dozen turners what grind they use, and you will receive fifteen answers.

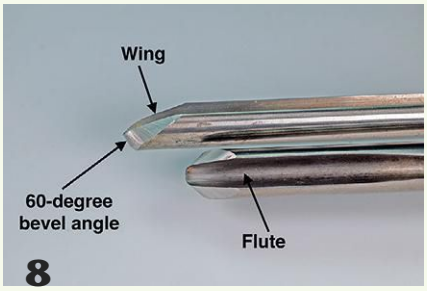
The single most important thing about grinds is consistency (*Photos 8, 9*). Once I found a grind angle that works for me, I took a picture of it for future reference at my grinding station. Your mind and body learn what a tool will accomplish when there is consistency of how the tool is sharpened. It is normal for new turners to try one tool for a given cut, then try another, and yet another until the tool is achieving what is in their minds. The correct grind makes a given cut flow easily from a tool. It takes time, experimentation, and repetition for muscle memory to learn the most efficient tool and grind to achieve a cut that flows and needs little sanding.

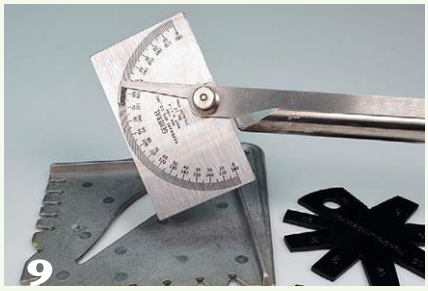
Over time, grinds will reflect the type of forms that a turner makes most frequently. The tools of a production turner of large bowls are different than those of someone who specializes in miniature hollow forms.

Your stance at the lathe and the bevel angle on your tool are interrelated. Picture your stance with a bowl blank mounted in a scroll chuck on a tenon. As you ride the bevel of your bowl gouge down the outside of the bowl, your body leans in and to the left further and further. You might even end up straddling the leg of the lathe trying to maintain bevel contact to the end of the cut. A blunt grind angle worsens this issue. One way to resolve it is to switch your grip to your left side and switch hand positions to complete the cut. Turning from your left side also allows you to direct the path of the shavings away from your body. It is helpful to develop some ambidexterity at the lathe. Changing to a low angle grind can also allow the cut to be completed.

While there is no "correct" or "best" bevel angle and grinds vary widely with user preference and application, below ▸

Tool grind consistency





Keep a visual reference of your grinds near the grinder as an aid to avoiding grind drift over time. A protractor or other angle jig are used to confirm the bevel angle.

A Few Rules of Thumb

Here are some general rules of thumb when it comes to tool shapes, or grinds:

- Tools with a steeper grind (above 45 degrees) and a rounded nose are more friendly.
- Tools with a low angle grind (less than 30 degrees) are "grabbier" and more difficult to use.
- Rounded tool tips tool are easier to control than pointy tips.
- Tools with a low angle grind (less than 30 degrees) and a pointy tip may be useful for getting into tight places.

are some generally accepted ranges that will serve as a good starting point:

Tool	Bevel angle
Bowl Gouge	60°-65°
Bottom Bowl Gouge	50°-55°
Spindle-Roughing Gouge	45°
Spindle Gouge	45°-55°
Detail Gouge	30°-35°
Scraper	70°-80°
Parting Tool	35°-40°
Skew	22°

The cutting burr on scrapers of all types are formed with the use of a platform. A grit between 120 and 350 works well. Again, the consistency of the angle when presenting the scraper is critically important. Some platforms have markings that allow the platform to return to a desired position. An angle finder or jig can also be used to return the platform to a specific angle (*Photo 10*).

Sharpening without a grinder

Often it is not necessary to put the tool back on the grinder to refresh the cutting edge. With a little practice, you can quickly bring an edge back to sharp by passing a diamond card or sharpening stone over it.

Skew chisels

Skews can be honed to a razor-sharp edge easily with a diamond card (*Photo 11*). It has been years since my skews have touched a grinding wheel. Diamond cards also eliminate the need for special jigs when sharpening skews on a wheel. A diamond card or sharpening stone can be used wet or dry. Lubrication with water, or a lapping fluid, increases the life of the diamond card but is not necessary.

Scrapers

The cutting burr on a scraper can be refreshed with a bench stone, a diamond card, or a handheld CBN hone (*Photo 12*). Scrapers lose their cutting edge quickly in use. A few upward swipes with a stone or card raises the edge. The burr on a scraper can also be raised with a burnisher (*Photo 13*). The burnisher can be as simple as the shank of a high-speed steel gouge or a hardened drill bit.

High-speed steel teardrop cutters

Teardrop cutters can be sharpened with either a diamond card or on a wheel. With a diamond card, place the cutter flat on the card or stone, and move it across the surface (*Photo 14*). Lapping oil will improve the results and increase the longevity of the cutter. This simple procedure should be done with a light touch and often.

Carbide cutters

Carbide cutters can simply be replaced when they become dull, but you can also sharpen them by hand with a diamond card. Friable wheels are too soft to cut carbide, and CBN wheels will glaze over with the carbide and be ruined. Remove the cutter from its holder and place the top of the cutter face down on a diamond card or diamond hone. With light pressure, make a series of figure eights across the

Angle finders for your grinder

10

When setting platform angles on your grinder, it is helpful to have an angle finder, or jig, to help you return to your desired angle accurately. The newest generation of grinder toolrests features positive stops and angle markings.

Hand-sharpen a skew

11

Skews can be sharpened to a razor-sharp edge by hand with a diamond card. A rod-shaped sharpener can be used inside the flute of a gouge to freshen the edge.

Hand-sharpen a scraper

12

An edge is raised on a scraper when a diamond card is placed on the bevel and then swept upwards and repeated along the entire edge.

13

The burr of a scraper can be refreshed with a burnisher or even the shank of a HSS tool.

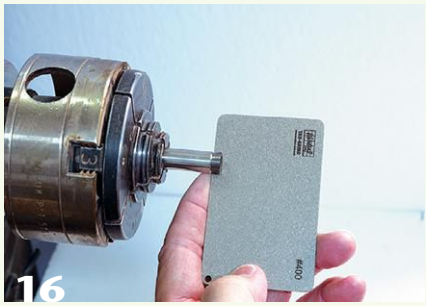
Hand-sharpen a HSS cutter

14

HSS teardrop cutters can be sharpened on a diamond card or CBN hone.

Hand-sharpen a carbide cutter

15



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Carbide cutters are too hard for a CBN wheel or hone. They can only be sharpened by a diamond card. Flat cutters can be moved across the card on a flat surface, while round cutters can be mounted in a jig in your chuck.

diamond surface to refresh the edge (*Photo 15*).

Round carbide cutters can be dressed by mounting them on a jig held in a chuck on your lathe, as shown in *Photo 16*. Use the lowest speed setting on your lathe, align a diamond card with the plane of the cutter's bevel, and lightly touch the diamond card to the cutter as it rotates.

Conclusion

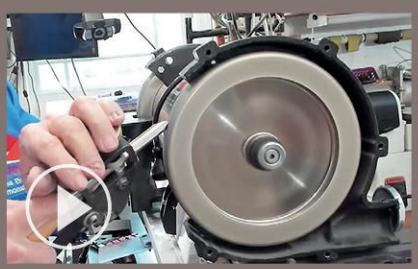
Writing this article has been eye-opening for me. I learned how to sharpen as I learned to turn, but then I focused my attention on other aspects of the craft and never came back to sharpening. Meanwhile, things had changed. The steel in turning tools improved, grinding wheels went through several generations of advances, and manufacturers have evolved sharpening jig designs. I found that I had closed my mind to sharpening and just stuck to what I knew.

I hope this article helps new turners to understand the many aspects of sharpening. But I would also challenge experienced turners to take another look at your sharpening skills. A second motivation for updating your approach is that experienced turners are the teachers of new turners. Today's sharpening systems are safer and more easily learned. You owe it to your students to have evaluated today's choices. ■

Dennis Belcher retired from a career in the investment world to his lifelong passion of working with wood. He is a frequent contributor to American Woodturner *and was a demonstrator at the 2022 Symposium in Chattanooga. Dennis is a member of the Wilmington Area Woodturners Association (North Carolina). You can contact him at dennis.m.belcher@gmail.com or visit his website, dennisbelcher.com.*

You Read the Article – Now See the Video!

Dennis Belcher has created a helpful video as a companion to this article. The video teaches sharpening concepts and *illustrates* in live action what a written article can't—*how* to sharpen each of the primary turning tools. It also includes lots of great sharpening tips to help you stay sharp! View the video at tiny.cc/sharpen or scan the QR code with your mobile device.



MORE SHARPENING RESOURCES

EXPLORE!

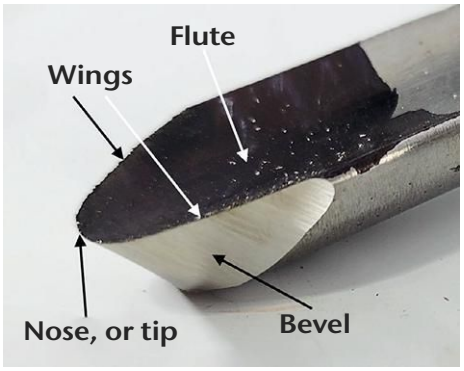
Log on at woodturner.org and use the Explore! search tool to find these and other *American Woodturner* articles covering various aspects of tool sharpening. Other resources can be found at tiny.cc/SharpenTools (URL is case sensitive).

- "Sharpening Demystified: A Better Way to Sharpen Gouges," by Kirk DeHeer, Winter 2006 (vol 21, no 4, page 32)
- "Grinder Wheels," by Bill Neddow, April 2011 (vol 26, no 2, page 23)
- "Sharpener Alternatives: The Joy of Sharp Tools," by Jim Echter, October 2012 (vol 27, no 5, page 27)
- "DIY Belt Sharpening System," by Jim Echter, December 2012 (vol 27, no 6, page 20)
- "Tuning Up a Bench Grinder," by Don Geiger, December 2016 (vol 31, no 6, page 24)
- "Modern Tool Steels and Grinders," by Tom Wirsing June 2018 (vol 33, no 3, page 38)
- "Lathe-Mounted Sharpening Station," by John Lucas, August 2021 (vol 36, no 4, page 34)

A Look at GOUGE GEOMETRY

Lyndal Anthony

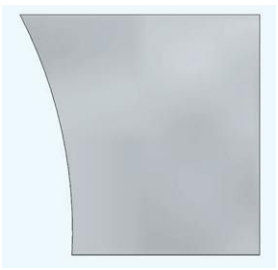
Beginners understandably struggle when learning to sharpen their tools. I hear students say that even when they *can* get a sharp edge on a gouge, it won't cut or it digs into the wood with a catch. *The edge feels and looks sharp, so why am I having trouble with it?* This is where gouge geometry comes in. Bevel shape, wing shape, and bevel angle all play important roles in how a gouge will perform. In this article, I will describe these factors and explain some of the benefits of certain shapes and the pitfalls of others.

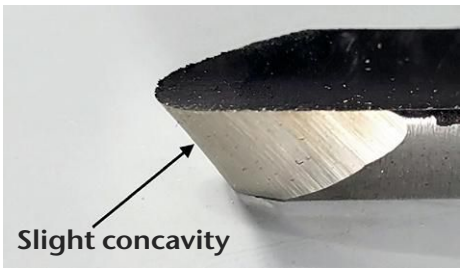


Bevel Shapes

Concave, or hollow-ground, bevel

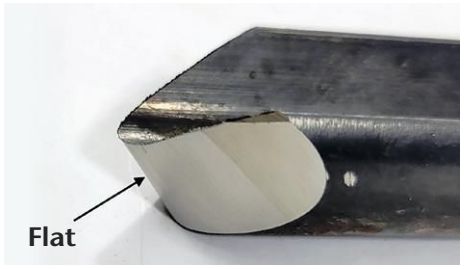
This drawing exaggerates a convex bevel, or hollow grind. How does this happen? In practice, an 8"-(20cm-) diameter grinding wheel naturally creates a hollow grind, but on such a short bevel, you have to look closely to see it. A gouge with a hollow-ground bevel will cut easily since the cutting edge is the most prominent point.





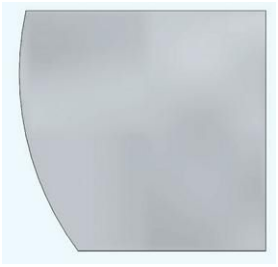
Flat bevel

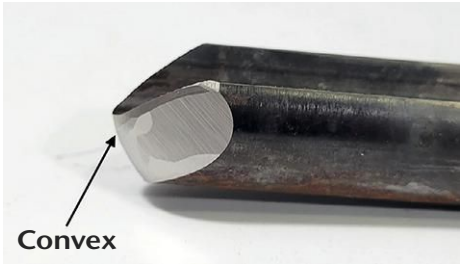
A truly flat bevel is the natural result of sharpening with a belt system, which has a dead flat platen supporting the tool. A flat bevel works just as well as a hollow-ground bevel because both shapes provide the proper clearance under the cutting edge.



Convex bevel

A convex bevel can result from sharpening by hand—i.e., without a jig or system to guide the tool accurately. Sharpening jigs keep the gouge's bevel on one plane. A convex bevel is problematic. For a sharp edge to cut, it has to be the proudest (most prominent) point of contact. A convex roll, or bulge, will contact the wood first, preventing the cutting edge from even engaging the wood. A good way to understand this dynamic is to intentionally sharpen a skew with a convex bevel; it will take some of the aggressiveness out of the skew cut.

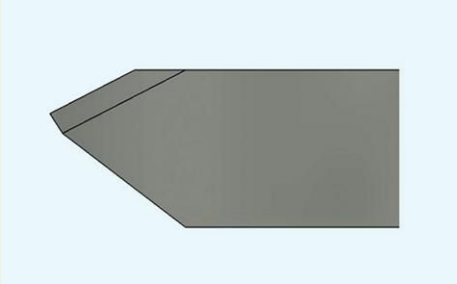


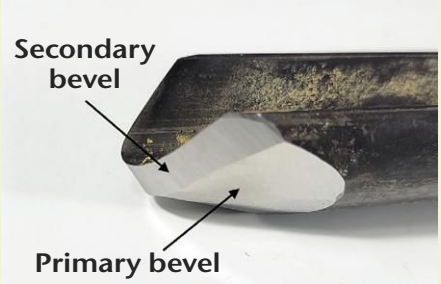


Try a Micro Bevel

Rather than having just one continuous bevel, a micro bevel is a smaller, secondary plane on the tool's bevel leading up to the cutting edge. You can add a micro bevel by adjusting certain factors/angles on your sharpening system.

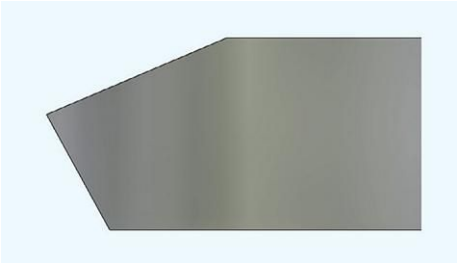
A micro bevel is helpful for the turner because it reduces the "bounce" caused by out-of-round wood or other irregularities. With a single long bevel, when the heel bounces, it causes the cutting edge to also bounce. Another advantage of the micro bevel is that it makes it much easier to go around a tight (short/small) radius.

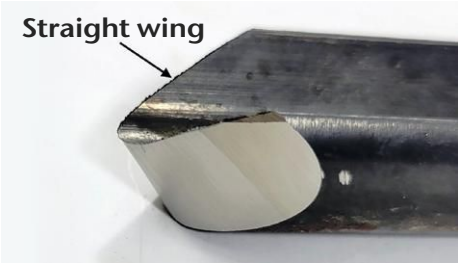




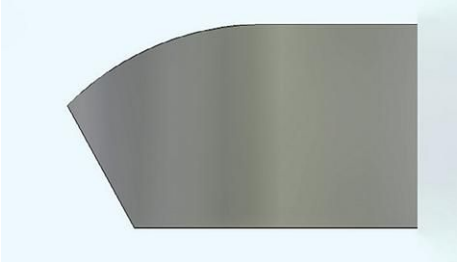
Wing Shapes

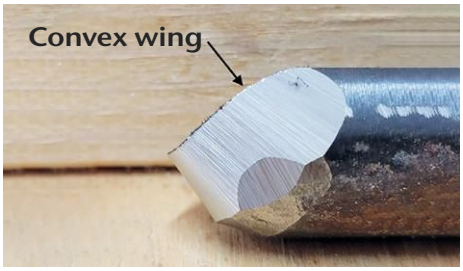
Straight wing
A flat, or straight, wing is my preferred wing shape.



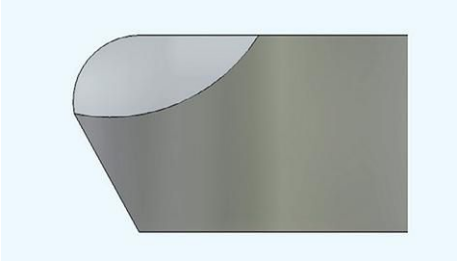


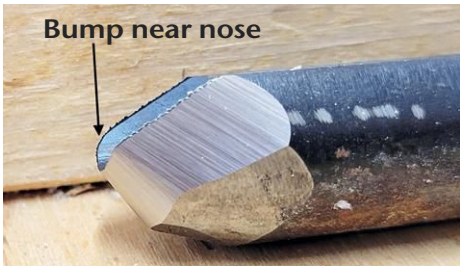
Convex wing
A wing with a slight convex shape works fine also.



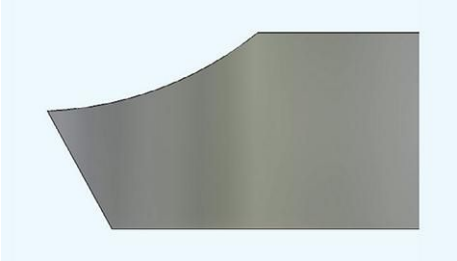


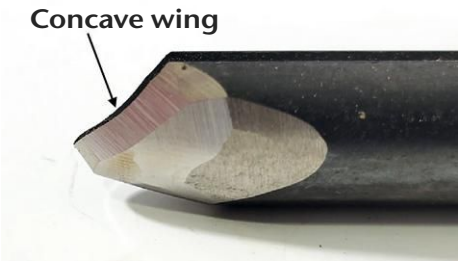
Bump near nose
A pronounced bulge on the gouge's wing close to the nose tends to contact the wood first, causing a catch. That part of the tool is off-axis of the centerline of the tool and will "lever" it over, causing a dig-in.





Concave wing
A concave wing is problematic. The rear tip of the wing, being the highest point, can catch the wood, causing the cutting edge to lever over and dig in. ▸

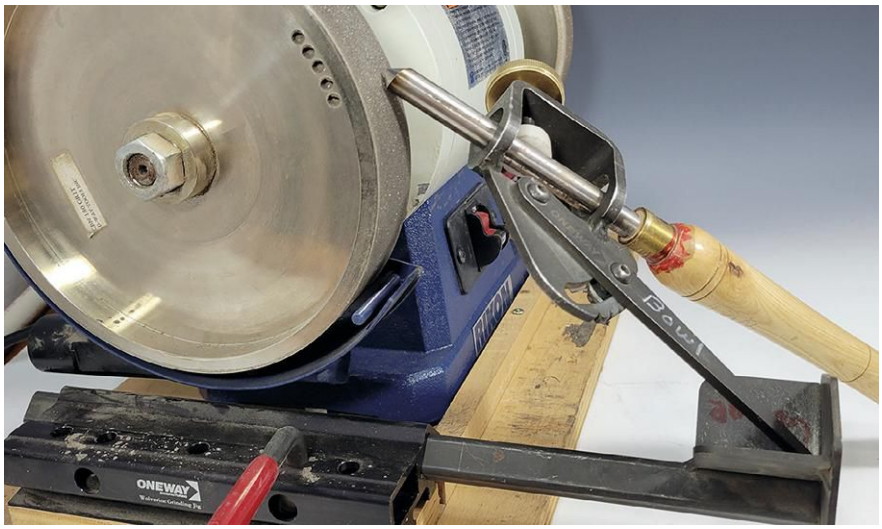




Wing Shapes continued

Rolled-over wing

Sharpening systems provide accurate, repeatable grinds. But it is all too easy to roll the gouge too far to the sides, causing the bevel to round over near the top of the wings. This is a problem similar to having a convex bevel; even if the edge at the wing is sharp, it won't be the first point of contact and won't engage the wood. Don't be tempted to roll the gouge all the way over to sharpen the wings. Instead, grind away the metal lower down from the cutting edge, on the side of the wing. ■

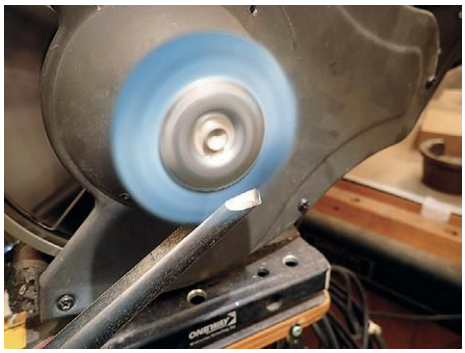


Lyndal Anthony worked as a machinist before becoming a high school industrial/technology education teacher. Already well versed in metalworking, he learned woodturning so he could teach his students to use the one wood lathe in the school's shop. After taking a one-day course on turning a wooden bowl, he was hooked and has since evolved his skills with the help of world-class woodturners and mentors. Visit his website, midwestwoodart.com.

What About Bevel Angles?

The angle of the bevel on your tool is an important choice. But turners do not easily agree on what the ideal angle is. In many cases, it depends on the job at hand. Generally, the blunter the angle, the less it tends to cut, or slice, whereas the more acute an angle is, the more aggressively it cuts. A simple comparison is the difference between a butcher knife and a fillet knife. The butcher knife, designed for chopping, has a blunt bevel angle, whereas the fillet knife, better for slicing, has a slim body with an acute angle. For a lumberjack, the similar comparison is between a splitting maul and an axe.

With turning tools, compare the angles on a spindle-roughing gouge (*l*) and a skew (*r*) in the photo *below*. The roughing gouge, with its a blunt angle, plows through a square spindle blank to bring it to round. The skew, with an acute angle, is ideal for slicing wood fibers to achieve a very smooth surface off the tool.



Brush guard removed for illustration purposes.

Grinder-Mounted CLEANING BRUSH

Carl Ford

When turning green wood, the shavings and dust can get clogged up in a bowl gouge's flute. Before sharpening the gouge, I like to clean out the flute with a 3" (8cm) nylon wheel brush attached to the side of my grinder. Sometimes you can clean the shavings out with just your finger, but other times there is gunk built up in there that just won't come out. A quick touch of the gouge's flute on the underside of the wheel brush readies the gouge for the grinding wheel.

Attaching the nylon wheel brush to my grinder was a good time saver. I used to walk over to my drill press, mount the nylon wheel in the drill press, clean the gouge flute, and then walk back to the grinder to sharpen the tool. Very inefficient. Here is how I added the wheel brush directly on my grinder.

Mount the wheel brush

I purchased my nylon wheel brush from my local hardware store. I have found that nylon works better than a wire wheel, and it lasts longer.

Attaching the nylon wheel to the end of my grinder required a bit of ingenuity. Most grinders have a ⅝" (16mm) threaded shaft on the right side. It is a standard ⅝" SAE right-hand thread. I purchased a ⅝" coupling nut and a short ⅝" bolt. I drilled a ¼"- (6mm-) diameter hole in the end of the bolt head. This allowed me to insert the shaft of the nylon wheel into the top of the bolt. I also drilled and tapped a hole for a ¼" set screw. The set screw holds the nylon brush wheel in place (*Photo 1*).

Then I was able to screw the coupling nut onto the grinder's shaft (*Photo 2*).

Note: The thread on most grinders is left-handed on the left side and right-handed on the right side. This configuration naturally tightens the nuts when the wheels spin, which lessens the chance of them unthreading during use. Left-hand coupling nuts are hard to find and/or more expensive. So I recommend going with a cheap right-hand coupling nut on the right side of your grinder.

I drilled a hole in the grinding wheel cover with a hole saw. This allowed me to install the cover with the adapter installed (*Photo 3*).

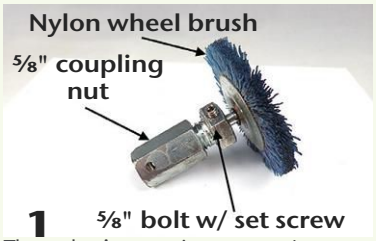
For added safety, I turned a wood cover that goes over the top of the nylon wheel. It is essentially a tall-sided wooden bowl with one-third of it cut off. The rim on the wood cover has a flange that allowed me to attach it to the grinder cover with some sheet metal screws (*Photo 4*).

In use

Before sharpening, apply the gouge's flute to the *underside* of the spinning wheel brush. Applying it to the top of the wheel could result in the tool catching and being thrown toward you. My added safety cover makes it impossible for me to do that, as the opening is at the bottom of the wheel brush. ■

A member of the Kaatskill Woodturners (New York), Carl Ford is an accomplished woodturner who loves teaching people how to turn. His website is carlford.us.

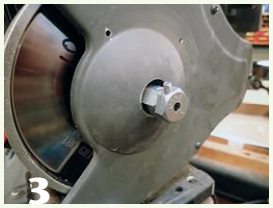
Brush and mounting components



1 The author's mounting system. A coupling nut threads onto the grinder shaft. A bolt outfitted to hold the wheel brush then threads into the coupling nut.

At the grinder

2 The wheel brush is threaded onto the grinder's shaft.



3 A hole is drilled in the grinder's guard to accommodate the fixture.

Shopmade safety guard

4 A shopmade guard is simply two-thirds of a tall-sided bowl. A rim flange enables mounting.

DECORATIVE CEREMONIAL SHIELD

Jimmy Clewes

I turned my first shield, made from English burr elm, over twenty-five years ago. At that time, I ran my own tree-felling business and had access to some amazingly figured woods. The shield used to illustrate this article was turned from a piece of walnut with beautiful feather crotch figure on one side. Like many woodturners, I have special pieces of wood stashed and ready to be used when the opportunity arises. This blank had been tucked away in a corner of my workshop for more than six months. Here's how I transformed it into a decorative shield worthy of prominent display.

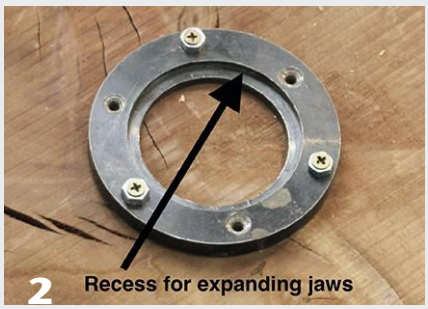
Mount and turn the back

The blank I started with measured 20" (51cm) in diameter and 2½" (6cm) thick, with runout of about ½" (13mm) on each side. I like the faceplate ring method of holding the blank (*Photo 1*), as I feel it is safer than other holding methods. The faceplate ring serves as a recess for mounting the work on a chuck in expansion mode (*Photo 2*). You could also use a typical faceplate. Either way, the holes from the mounting screws will be turned away later, but be careful not to allow the screw holes to go too deep, as this could limit your design options. One way to prevent the screws from going in too deep is to use nuts under the screw heads; the nuts act as a spacer, limiting the depth.

Prior to mounting the piece on my chuck, I moved the drive belt on the lathe to a lower speed ratio—50 to 1300 rpm. Remember that lathe speed refers to spindle rotations, or revolutions, per minute, but the peripheral speed is a lot faster, especially on larger-diameter pieces, which should be turned at a slower speed. I do often turn at faster speeds for ease of execution but not on large-diameter pieces.

With the lathe speed set at its lowest rpm, I switched on the lathe and slowly increased the speed to about 500 rpm. I started truing up the back of the shield using a bowl gouge to make draw, or pull, cuts (*Photos 3, 4*). As the back of the blank was about ½" out of round toward the outside edge, I felt it better to turn the high points down first and work towards the middle. The draw cut feels natural to me, as I

Mount the work



The author uses a faceplate ring to mount the shield blank on the lathe. A regular faceplate could also be used, but be aware of the screw-hole depth. The faceplate is mounted on the front of the shield, providing access to turn the back.

am drawing the tool towards me, just like the action of a Japanese saw or plane. Another benefit is that you have a good view of the profile during the cutting. This piece was never turned faster than 800 rpm.

This blank did have a split in it, which can be a safety issue but wasn't in this case. I knew that the design of the shield, being thicker in the middle, would provide the structural integrity needed to turn it to completion. When turning wood that has faults, always use extra caution and try to assess what might happen as you get further into the piece. A faceshield is always a wise consideration, but especially when turning flawed wood.

True up the back

A bowl gouge is used to make draw, or pull, cuts to true up the back.

Measure and mark for a chucking recess

With the chuck jaws nearly closed, the outer diameter is gauged using dividers.

Use the dividers to mark the size of a chucking recess. Line up the middle of the divider's legs with the middle of the blank. Be sure to scribe very lightly with the *left leg only*; if the scribed line matches up with the right leg, you've got it centered.

Turn a chucking recess

After truing up the back of the shield, I measured the outside edge of the jaws of my chuck with dividers and then scribed a line to mark for a chucking recess (*Photos 5, 6*). If you decide to try this method of marking the recess, remember to hold the dividers in a downward position and don't let the right leg touch the surface of the blank. If you do, the dividers will flick out of your fingers and could become a projectile safety hazard.

To establish the recess, I used a parting tool to make straight-in cuts about ¼" (6mm) deep (*Photos 7, 8*). I then used the waste wood in the center to turn a decorative bead within the recess (*Photo 9*), which would eventually be reflected in the design on the front of the shield. From a design perspective, this is an easy way to add a nice detail, rather than simply turning a plain recess.

Complete the back

The initial blank was cut to a circle on the band saw and therefore required some truing up at the outside edge (*Photo 10*).

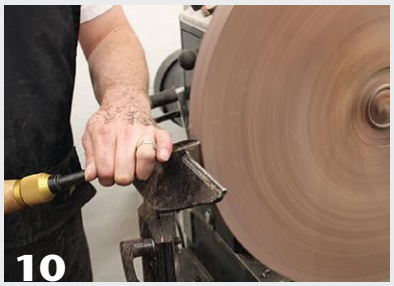
I then power-sanded the back of the shield, going through the grits from ▸

Form a chucking recess

The author uses a parting tool to create a chucking recess on the back of the shield.

The waste wood in the center of the recess is turned into a decorative bead.

True up outer edge



True up the outer edge of the shield.

Sand and finish the back

The author uses a drill to power-sand the back.

Apply a finish to the back before reverse-mounting the work. Here, Danish oil makes the wood's crotch grain pop.

180, 240, 320, and 400 (*Photo 11*). Prior to using 600-grit sandpaper, I raised the grain with denatured alcohol. After final sanding, I sealed the back with a slightly thinned mix of shellac with a ratio of 75% clear premixed shellac and 25% denatured alcohol. This slightly thinned down mix penetrates farther into the wood, and I prefer to apply several thin coats rather than one thick coat.

After the shellac was completely dry, I used some superfine steel wool to cut back the surface slightly and then applied a coat of Danish oil (*Photo 12*), which really makes the wood's grain and figure pop.

Reverse-mount, turn front

After completing and applying a finish to the back, I then flipped and remounted the shield, using the chucking recess I had turned on the back. I trued up the face in exactly the same way as I did the back, using draw cuts and starting at the outside of the blank and working toward the middle.

After truing up the front face, I then marked with a pencil the location of the screw holes from the faceplate ring. I then used a spindle gouge to form the domed center boss, cutting deep enough to just remove the screw holes (*Photo 13*). The next cuts, again using the spindle gouge, were to form a soft cove leading away from the domed center with a fillet to separate the dome from the cove *(Photo 14*). You may wonder about the specific measurements of the dome and cove, but I tend to make aesthetic decisions based on proportion. With turnings like these, you can go to town and do whatever you like.

In order to plan the execution of this piece and to give myself a point at which to aim, I marked the outside edge of the shield with a pencil (*Photo 15*). I then began to remove wood from the edge of the cove toward the outside of the shield using draw cuts (*Photo 16*).

Another nice detail is a bead at the edge of the cove to define the transition. I formed this bead using a shop-made beading tool I had made from a small spindle gouge (*Photo 17*).

Using a parting tool, I then cut to the line I had marked on the outer edge of the shield, representing the depth I wanted for the detail on the rim (*Photo 18*). The detail on the rim, an area proud of the adjacent surface, provided a place for the decorative hammered studs. This detail also served as a guide for where to stop cutting when shaping a soft curve from the bead (*Photo 19*). While I was shaping this curve, which tapers down to the rim detail, I noticed that if I left a little flat area to the left of the bead, it would also act as a frame and give me the opportunity to introduce some texture.

Surface embellishment

Having completed the turning aspect of the shield, I sanded it using the same process as before and paid particular attention to the center boss.

Reverse-mount, turn center boss

Remount the work on a chuck in expansion mode, using the recess you turned on the back. Turn a convex shape in the center of the front to form the shield's boss.

The author turns a fillet and cove just outside the boss to frame this decorative element.

Any remaining scratches would show through the 24k gold leaf that I planned to use as an embellishment. The shield was then sealed with the thinned mix of shellac and then very lightly sanded with steel wool.

I remember that when I was studying for my design degree many years ago, I was advised, "Good design is knowing when to stop." It is very easy to go over the top with embellishments. In this case, as the walnut was so beautiful in its own right, that old advice applied here. I decided the bead should be highlighted and chose a quality black artist's pen to color it (*Photo 20*). I knew that the 24k gold center boss would be a dominant statement and the black ring would frame it nicely.

I have expressed many times in demonstrations that I *feel* some woodturnings should feel as good as they *look*. Of course, this depends on the design and intentions of the turner. Texturing would bring a tactile as well as visual aspect to the shield. I used an electric rotary engraving tool with a broken ⅛" (3mm) drill shaft ground to a dome at the end (*Photos 21, 22*). You can try grinding different shaped ends on a few drill shafts to get different textured effects. This process was quite time-consuming, but I felt the final effect was worth it. The texture is fine and quite subtle. In fact, unless the shield is in the right light at the right distance from the viewer, it is not easily visible. I would advise you to practice your texturing on a scrap of the same kind of wood before applying it to the real project.

The studs in the shield's rim have a hammered finish, which I decided would be the perfect accent. I predrilled for the studs, then snipped them to length to ensure they would not penetrate the back of the shield. The studs were gently tapped in place ▸

Mark and rough-shape shield


15


16

Mark your desired rim thickness at the edge, and shape the profile of the shield. Pull cuts with a bowl gouge offer a controlled approach to waste removal.

Form a transitional bead


17

The author uses a shopmade beading tool to add a bead as a transition from the cove to the body. The tool is presented at centerline and works essentially as a negative-rake scraper.

Turn rim detail and final shape


18


19

A parting tool is used to create a flat rim detail, which helps to define the endpoint of the gentle curve from the center.

Color the bead


20

The author decides to accentuate the bead using an archive-quality artist's pen. Hold the pen on the toolrest and rotate the work by hand for a controlled application.

Add texture

A rotary tool is used to add texture. A band of subtle texture next to the darkened bead leads the viewer from center outward.

Add rim studs

The author first drills holes at the rim, then taps in decorative studs.

with a small brass and nylon hammer (*Photos 23, 24*).

I chose 24k loose leaf gold for the center boss. When buying gold leaf, you will find that the price may vary from day to day, along with the price of gold on the stock market. When I am not teaching woodturning, one of my hobbies is gold prospecting in the desert, so I do keep an eye on the price of gold. Prior to applying the gold leaf, you will need to use an adhesive (also called *size*). I use the Mona Lisa brand, as it's easy to use and relatively inexpensive.

Using a fine nylon brush, I applied a thin coat of the adhesive to the parts of the shield that would be leafed (*Photo 25*). Loose leaf can be tricky to use, as it is so fine and delicate, it literally crumbles in your fingers. So you may want to consider transfer gold instead, which is attached to a backing sheet using static electricity. These sheets can be cut to any shape with sharp scissors. You would apply it with gold face down on the adhesive, and then simply peel away the backing sheet—much easier than loose leaf.

Be sure to apply the leaf in a draft-free area, a sneeze will send it to the other side of the room! To pick up the leaf, I used a soft sable brush that had been brushed up and down a piece of clothing quickly to create static electricity. The static electricity on the brush will pick up the loose leaf, enabling you to carefully position and apply it where you want (*Photos 26, 27*). This takes a steady hand. After you have applied the gold leaf, use a soft sable brush over the surface of the gold to give the leaf a beautiful luster. I tend not to apply any finish over the gold leaf and leave it in its natural form.

The turning and execution of a decorative shield is not too complicated for most woodturners to have a go. From an embellishment point of view, it is wide open; you can do whatever you want and add whatever materials you want. Just enjoy it and have fun! ■

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.

Embellish with gold leaf

The center boss is adorned with 24k gold leaf. First, adhesive is applied carefully by turning the lathe by hand and keeping the brush still.

Gold leaf is applied onto the adhesive.

A JOURNEY THROUGH TIME

Ed Pretty

Western red cedar trees.
Photo: Tim Bray, via Wikimedia Commons

I often collaborate with my friend Steve Smith (Dla'kwagila Oweekeno), a First Nation artist living in Vancouver, BC. Steve asked me to turn vessels from old growth red cedar he had acquired from Vancouver Island. Per our usual process, he would then paint the vessels in his signature style.

Whenever I teach new turners, I try to instill the value of honoring the wood being turned. In the past, wood was so prevalent, it was considered by many to be disposable. In this collaboration with Steve, I encountered wood that took me to the opposite end of the spectrum—reverence.

Reflections on the life of a tree

I turned several vessels for Steve and let them dry for a couple of months before final sanding. The forms were turned endgrain, so the bottoms inside were rough and hard to reach. During the days-long sanding process, I had lots of time to reflect on this special material.

I first observed that in its lifetime the tree had undergone both good times and bad, repeated over several cycles. There were bands of wider grain about a millimeter apart but also bands that were so tight I couldn't distinguish their edges without a jeweler's loupe, and this added mystery to the tree's story.

I decided to try to determine the age of the tree. Even though much of the heartwood was not present, the arc of the innermost rings offered a clue to the missing years. I knew my counting would not be completely accurate, but it still provided a decent order of magnitude. I estimated the tree was about 1000 years old.

I pondered that estimate in a broader context. The sapwood had been laid down around 2005, during my retirement years. My whole adult career took place in the 1½" (38mm) of wood adjacent to the sapwood, and I was born ½" (13mm) inside of that. Captain James Cook first sighted the island where this tree grew in 1778, when it was about 3' (1m) in diameter. It was a pretty decent-sized tree at the time of the signing of the Magna Carta in 1215, and the tree probably started growing somewhere around the time of the Battle of Hastings in 1066.

Then I realized that these event markers provided only a modern-era perspective. The events seemed *way* back in time. But relative to other markers, this tree's life was a mere blink of an eye. Steve's Kwakwaka'wakw ancestors called the northern end of Vancouver Island (and the adjacent mainland) home thousands of years before the tree ever sprouted. And, importantly, those thousands of years coincided with a defined culture that truly honored natural resources like the mighty cedar. In another age, this tree might have yielded a seagoing dugout canoe, a house post or posts in a longhouse, countless utility items like blanket boxes, or possibly a massive totem greeting visitors to a long-established village.

Honoring the tree

I always do my best to honor the tree that provided the wood I am using. Any unused pieces that could yield small carvings were returned to Steve. I kept other scraps, and what I couldn't use went to heat the shop at the BC Farm Museum in Fort Langley. The shavings will one day provide a beginning for new plant life. I didn't know how to fully honor this tree other than to use every part of it and to acknowledge how insignificant my small role played in its long life. ■

Ed Pretty is a professional woodturner specializing in gallery work, commercial turning, teaching, and demonstrating. For more, visit edswoodturning.com.

Bowls turned by the author from Western red cedar.

Ed Pretty/Steve Smith Collaboration,
A Time for Love, 2021, Western red cedar, acrylic paint, 24" × 11" (61cm × 28cm)

Photos: Lattimer Gallery, Vancouver, BC, Canada

First Nation artist Steve Smith (Dla'kwagila Oweekeno) at work in his Vancouver studio. For more, visit stevesmithnativeart.com.

ADJUSTABLE-HEIGHT SCREW TABLE

Silas Wareham

Silas Wareham and James Huleatt,
Screw Table, 2021, Walnut, slippery elm, 29" × 13½" (74cm × 34cm)

Over the last couple of years, my neighbor James Huleatt and I have enjoyed showing each other our latest woodworking projects. James is always coming up with ideas that he thinks have never been seen before. So when he approached me with a new concept and asked me to help with the woodturning, I agreed to it immediately.

Design

James's idea was to build an adjustable-height end table comprising a wood-turned screw and nut. The flathead screw would have a head diameter of around 14" (36cm) and a shank about 5" (13cm) in diameter. The thread pitch would be one thread per inch. The total height of the table would be approximately 29" (74cm).

One question was how to form the threads on such a large piece. James has always had a fascination with cutting threads and often wondered how he could incorporate them into wood projects without being limited by taps and thread-chasing tools. An early attempt—wrapping a paper template around the stock and cutting with hand saw, file, and chisel—led to the idea of this screw table. For this project, the threads were made from flat-grooved boards cut into strips at the correct angles and then glued together, forming a spiraling straight-sided "thread."

We wanted to find two local wood species that contrasted significantly and settled on black walnut for the nut and spalted slippery elm for the screw and table legs. To achieve a more realistic look, we decided to add a Phillips drive recess in the top of the screw and fill it with clear epoxy. The screw head and threaded shank would be turned on the lathe separately and then glued together.

James started by making a computer-aided design (CAD) model. Although the thread angle used for metal machine screws is normally 60 degrees, he chose 90 degrees, which is more appropriate for wood and more straightforward for cutting the grooves on the table saw. The nut would of course be hexagonal, and the screw shank would comprise eight

staves, so that it would be closer to a circle and require less chisel work on the threads after turning.

Assemble nut

Begin by planing wood for the nut, and cut it to width. The stock we used was 2" (5cm) thick after planing. The thread was designed to be ⅛" (3mm) wide at the crest, adjacent to a 90-degree V-groove that is ⅞" (22mm) wide. We reasoned that if the stock were cut to exactly 6⅛" (16cm) wide, for every positioning of the table saw fence, we could make two 45-degree cuts, flipping the board end for end between passes. Each pass represents half of the 90-degree V-groove. Test your depth of cut on scrap wood. It's better to leave a small amount uncut at the bottom of the V than to try to be perfect and risk overcutting (*Photos 1, 2*).

Use a miter gauge to cut the nut sides to length at an angle, which we determined to be 3.8 degrees. Before cutting, confirm that the angle is oriented correctly; a miter in the wrong direction would create left-handed threads. Keep the blade vertical for this step. Fasten a long fence to the miter gauge, extending far enough past the blade so you can make a mark for the length cut. Number the pieces as you cut them so you can easily put them back in order with matched grain as you prepare for gluing (*Photo 3*).

When all six nut sides are cut to length, set the saw blade angle to 30 degrees. Set the fence so that the 30-degree cut leaves a 1/32" (1mm) flat on the outer surface. This will serve as a good reference point against the fence when the part is rotated to make the second cut. Bevel all the ends of the nut segments (*Photo 4*).

Dry-fit the pieces in preparation for gluing. Make sure the wood peaks, or "threads," track well from one piece to the next. Tape all but one of the joints with masking tape and roll it out flat. Apply glue to both surfaces of every joint. Allow the tape to stretch as you roll the pieces together. When the two ends are together, align them carefully and tape that joint as well. We used plastic stretch wrap to apply gluing pressure (*Photos 5-7*). Resist the temptation to wipe off the squeeze-out; it is more difficult to clean up smeared glue than dried beads. After the glue has dried, cut the two ends off square.

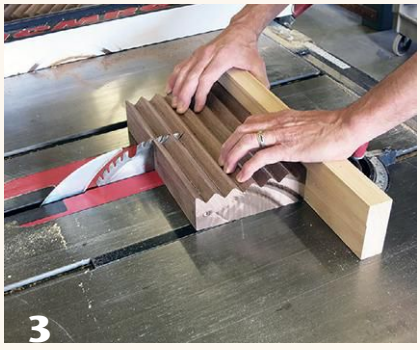
Drill key slots

To keep the tabletop stable without requiring perfectly fitting threads, we decided to add alignment keys to the nut. These keys would rub on the ▸

Cut V-grooves at the table saw

With the table saw blade tilted to 45 degrees, cut V-grooves that will become large screw threads.

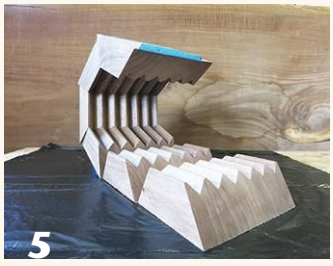
Cut and bevel nut staves



(3) Cross-cut the nut segments at a slight angle, in this case 3.8 degrees. This allows the V-groove threads to come together as one continuous thread when glued up.

(4) Angle the blade to 30 degrees and bevel the ends.

Glue nut staves together



Tape the joints together on the outside, apply glue to the beveled surfaces, and roll the nut together, making sure the threads align. Plastic stretch wrap is used to apply gluing pressure.

crests of the screw threads and provide stability. Before mounting the work on the lathe, we drilled six slots from the underside of the nut to accept the keys, as shown in *Photo 8*.

Drill holes centered on each joint, with each hole the same distance from the outside corners of the nut. Do not drill all the way through! We drilled each hole to a different depth to make the keys as long as possible yet still hidden under one turn of thread. This can be done by drilling a series of holes on a drill press and completing the slot with a chisel. To make the alignment keys, cut the stock to fit the slot width, and use a router to bullnose one edge. These keys will be trimmed to fit after the screw shank and nut have been turned on the lathe.

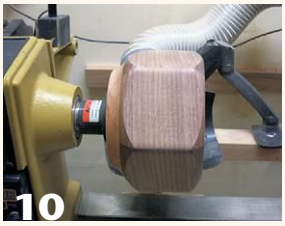
Mount and turn nut

Using the outside flats of the nut as a reference, glue and clamp a round wasteblock of the same diameter to the bottom of the nut (*Photo 9*). Once the glue is dry, screw on a faceplate and mount it on the lathe.

Turn the top surface flat, then radius the top and bottom edges to replicate the shape of a metal nut. On the bottom edge, leave a straight section in the center of each flat as wide as the leg stock, so the legs can be fitted later (*Photo 10*). We removed the wasteblock using the table saw. I opted not to part the nut from the wasteblock on the lathe, as that would have required a mortise and a set of wide jaws to hold the piece securely. The underside of the nut would also not have had a finished flat surface.

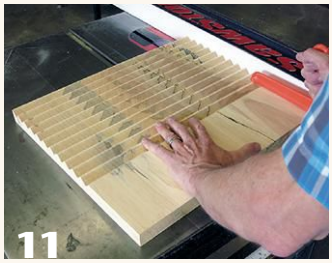
Drill key holes, mount, and turn

Prior to gluing a wasteblock to the bottom of the nut, drill six holes at the inside joints. These holes will later accept alignment keys.



Glue on a wasteblock, mount on the lathe, and round over the top and bottom edges to mimic a metal nut.

Cut and bevel shank staves



(11-12) Rip the grooved shank material into eight staves skewed to 3.5 degrees. The angle is achieved by first making an angled cut at the bandsaw, then using that side against the table saw fence.

(13) Tilt the table saw blade to 22.5 degrees and bevel the long edges.

Use a chisel to remove the sharp edges where the threads reach the faces of the nut and sand smooth.

Assemble screw shank

For the screw shank staves, we used stock planed to 1¼" (32mm) thick. Unlike the nut, the V-grooves that make up the threads on the screw shank were to be cut *across* the grain. So we edge-glued enough boards together to later rip eight staves, each 2$\frac{1}{32}$" (5cm) wide. The length of the boards at glue-up was 17" (43cm), allowing us to trim the length to 16⅛" (41cm).

As with the nut, we cut the shank's threads on the table saw, but note that the threads do not run the full length of the screw, as can be seen in *Photos 11 and 12*.

Once the panel is grooved, mark an angled cut on the face of the panel, crossing the ends of all the grooves. We determined this angle needed to be 3.5 degrees. Again, confirm that the angle is oriented for right-hand threads. Cut this line carefully on a bandsaw, then rip the eight strips of the screw shank to width on the table saw at the angle established by the bandsaw cut. Cut the first strip oversized, then reset the fence to the finished width and trim off the band-sawed edge. Now cut the remaining seven strips (*Photos 11, 12*). Number the pieces as you go, so they can be glued back together in the same order they were in the panel. This makes a huge difference in appearance, especially with interesting spalted wood patterns.

Set the table saw blade angle to 22.5 degrees and trim all the long edges, again leaving a $\frac{1}{32}$" flat on top (*Photo 13*).

Arrange the parts in an octagon, and secure them with a round of stretch wrap. Measure the size of the internal octagon and cut an octagonal filler piece on the table saw for both ends of the screw shank. These will fill the hollow ends and help to keep the screw cylinder as close as possible to a true octagon during glue-up. The filler pieces are also necessary for mounting the assembly on the lathe.

Remove the plastic wrap, and align the thread crests before taping (*Photos 14, 15*).

Unroll the assembly and brush glue on all beveled surfaces. Apply a heavy coat of glue to the octagons and roll everything up carefully again, allowing time to draw the two ends together before taping. Wrap the whole cylinder tight with stretch wrap. When the glue is dry, square the ends and cut the assembly to length, 15¼" (39cm), which includes a 1¼"-long tenon at the top for joining with the screw head (tabletop).

Turn screw shank, fine-tune threads

I mounted the screw shank cylinder on the lathe between centers, with the ends centered as accurately as possible. This is critical, so that as little wood as possible needs to be removed to yield a true cylinder. There should be no taper from one end to the other (*Photo 16*).

Since the threads were quite large, I made a wood gauge and used it to confirm the diameter all the way along the piece as I turned both the threaded and unthreaded parts to the same diameter (*Photo 17*). Once the cylinder is perfect, turn a tenon on the top end about 1¼" long, which will be used later to glue the shank into a mortise in the bottom of the screw head. Once the shank is sanded, remove it from the lathe.

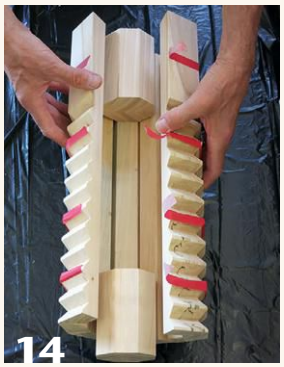
James wrapped a thin cord around the turned cylinder, centering it between the now scalloped bevels. He then drew a line down both sides of the cord to mark the new crest of the thread. Using a straight chisel, he started at the base of the screw and cut the thread sides to the marked lines. After completing one revolution, we tested the screw for fit in the nut. The fit had been designed somewhat loose, so no more fitting was necessary, and James chiseled the rest of the screw threads (*Photo 18*).

Assemble and turn screw head

The finished thickness of the screw head, or tabletop, was to be 5" (13cm), so we glued two layers together to get enough thickness, accounting for some waste needed for truing up at the lathe. We laid out the two layers on one slab. The screw head features a 45-degree angle, so the lower piece can be a smaller diameter. Cut these out on the bandsaw, spread wood glue across the surface, and clamp the parts together (*Photos 19-20*).

Mark the center of the top and lay out a recess to mimic a Phillips drive. James cut this recess using a milling machine, but it could also be done with a drill ▸

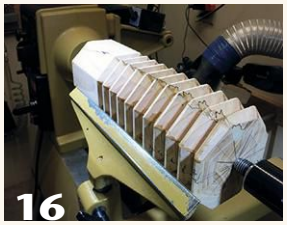
Dry-fit and glue shank staves


14


15

Make two octagonal fillers, one for each end of the shank. Using tape on the outside to hold the joints together, first dry-fit and then glue up the screw shank, being careful to align the threads.

Turn shank, chisel threads


16


17

At the lathe, turn the screw shank to a cylinder, using a gauge or caliper to ensure a consistent diameter. Form a tenon at the top end for later gluing to the screw head.


18

Use a bench chisel to reestablish the peaks of the threads.

Glue up screw head blank


19

20

Cut two circles at the bandsaw and glue them together to form a blank for the screw head. Since the head features a 45-degree angle, one layer can be smaller than the other.

Form Phillips drive, fill with epoxy

Before turning the screw head, cut a recess in the top to mimic a Phillips-head drive and fill it with clear epoxy. The author uses dry rice to gauge the amount of epoxy needed.

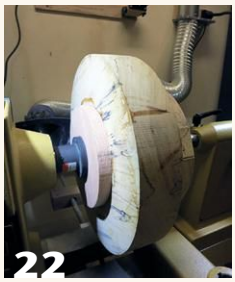
and chisels. To gauge how much epoxy we would need to fill the recess, we first filled it with rice to get a volume measurement (*Photo 21*). We then mixed and poured a super-clear epoxy.

When the epoxy had cured, I sanded the top and glued on a wasteblock, using the outer edges of the Phillips drive as a positioning reference. I then marked the center of the wasteblock, attached a faceplate, and mounted it on the lathe (*Photo 22*).

After truing up the outside and bottom surfaces of the screw head, I formed the 45-degree angle, mimicking a real screw head (*Photo 23*). I measured and marked the diameter of the mortise at the bottom with a caliper, then cut out the mortise with a bowl gouge and square-cornered scraper. The mortise should be about 1⅜" (35mm) deep to accept the tenon at the top of the screw shank (*Photo 24*).

To reverse-mount the work to remove the wasteblock from the top, I mounted a faceplate inside the bottom mortise. I first turned a spacer and screwed that into the mortise, then mounted the faceplate using screws long enough to extend deep into the screw head for a secure hold. I could then turn away the initial mounting wasteblock and true the top surface (*Photos 25, 26*). Sand the top. To bring the epoxy from a milky color up to a perfectly clear finish, I sanded all the way up to 3000 grit.

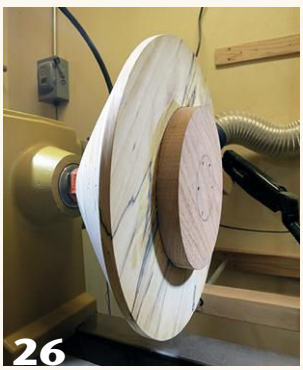
Turn screw head



(22-23) Glue a wasteblock to the top of the screw head and mount the work on the lathe using a faceplate. Turn the screw head to shape.

(24) At the bottom of the screw head, turn a recess, or mortise, to later accept the tenon at the top of the screw shank.

Reverse-mount, remove wasteblock



The author turned a spacer block to fit into the mortise, then mounted a faceplate to the spacer. Ensure the screws extend well into the screw head. Turn away the wasteblock on the top and sand the screw head.

Glue screw shank to head

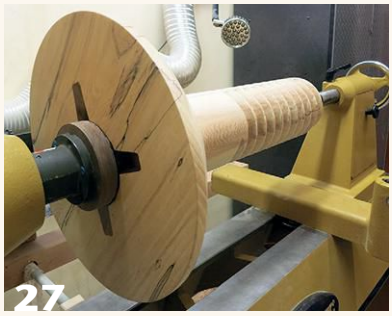
I used the lathe to apply gluing pressure when gluing the screw shank tenon into the screw head mortise. Remove the faceplate and spacer from the mortise and flip the screw head around, pressing it against something soft to avoid marring the tabletop. I used hook-and-loop material stuck to a wasteblock on a faceplate. Spread wood glue inside the mortise, and insert the screw shank tenon. Advance the tailstock quill to apply pressure (*Photo 27*).

Cut and attach legs

For the three legs, we used material planed to 1¼" thick. We marked the shape of the legs using a template and cut them out at the bandsaw. We then used a table router to put a small round-over on all edges, except for the right-angle notch, and gave them a light sanding (*Photo 28*).

Before attaching the legs, we trimmed and glued in the alignment keys. Begin by threading the wood screw into the nut. Trim the alignment keys until they can be pushed into their slots (*Photo 29*). Remove the screw, glue the keys, and set them in place. Then wind in the wood screw again to be sure the keys stay in place. Once the glue is set, if the screw is too tight, you will see rub marks on the

Glue shank to head



The author uses the lathe as a gluing clamp. Protect the top of the screw head with a soft pad, apply glue to the mortise and tenon, and apply pressure from the tailstock quill.

Make three legs

Three identical legs are cut and sanded.

Finalize alignment keys

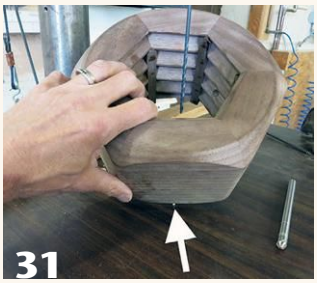
Temporarily thread the shank into the nut. Cut and trim the alignment keys and glue them into the holes you had drilled earlier. The keys are meant to eliminate any play between the shank and nut, yet still allow the threads to turn.

keys. Sand these rub marks back until you reach the desired clearance. Cut the projecting keys off and sand the base of the nut flat on a belt sander. Run a router around the perimeter of the nut to form a small radius in the center of each side. This radius should match the notch in the legs.

Next, we drilled holes in the nut for the three leg screws. We started with a shallow ⅛"-diameter hole just meant to align where the screw hole will emerge in the center of three edges. Place a short length of ⅛" dowel in the hole, then drill a corresponding hole in a waste board on the drill press table. Putting the dowel into the waste board will help keep the nut aligned properly during drilling. Drill the countersinks in the thread groove faces first and then switch to the drill size needed for your screws (*Photos 30, 31*).

After drilling the three screw holes through the nut, hold one leg at a time in position and, using extra-long bits (5½", or 14cm long), drill pilot holes into the legs. Glue the leg notch surfaces and drive the screws (*Photo 32*).

Mount legs



(30-31) Before predrilling for leg-mounting screws, drill a shallow alignment hole and insert a dowel. Drill a corresponding hole in the drill press table, and insert the other end of the dowel. Positioning this point directly under the drill bit will ensure the hole will emerge at the correct spot.

(32) Glue and screw each leg to the nut. Extra-long screws are driven from inside the nut and into the legs.

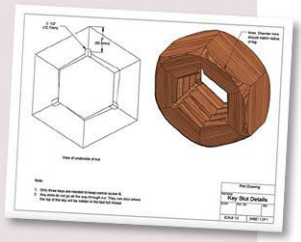
Finishing

For a finish, we applied Danish oil on the nut and, when dry, a coat of paste wax. A lathe-mounted buffing attachment worked well to apply carnauba wax to seal the threads on the screw shank and bring the surface of the screw head to a glossy finish. Carnauba wax was also used to buff the legs of the table.

I hope this project inspires you to come up with something else that challenges your abilities, so that we can learn from each other's ideas. Let's keep that wood turning! ■

Silas Wareham has worked for fifteen years as a custom shoemaker and recently entered the woodturning field. As both are traditional hand crafts where creativity is essential, it was not a difficult transition. He continues to improve his woodturning skills at his workshop in the Catskill mountains of New York. Email Silas at silaswareham@ccimail.com.

Downloadable Plans and CAD Model



Download the computer drawings and plans for this project from the AAW website. Log on and visit tiny.cc/AWextras or scan the QR code.

LES SEPT MERS (THE SEVEN SEAS)

An Expressive Approach to Hollowing

J. Paul Fennell

To create *Les Sept Mers* (*The Seven Seas*), I used a technique I had been interested in for some time, where the interior of a thin-walled hollow form mimics the exterior shape and is subsequently pierced. The most basic of this process is a common practice: first turning a symmetrical form on the lathe and subsequently hollowing it with sufficiently thin walls for piercing. However, when the shape is *not* a purely symmetrical form, but rather one that is turned and then heavily sculpted, or randomly undulating, asymmetrical, or even geometrical—*and* with walls thin enough for piercing—this, as the saying goes, is a horse of a different color.

"Why?" you might ask, and "How?" Asking *why* begs the question of why makers make. It is an exercise of self-contemplation at a very personal level: What motivates artists to endeavor in a passion that endures, consistently *and* persistently, throughout their lives? Each maker, I'm sure, has his/her reasons; some of mine include intense curiosity, mystery, metaphor, and the discovery of a technique filled with new and exciting technical and aesthetic challenges.

The question of *how* is more straightforward (and *much* more time-consuming) and is the basis for this article. *Les Sept Mers* is a good example of the technique and is also another piece in a large body of my work that, over many years, references the sea as an expressive theme.

The concept

My initial idea was to create a form more or less spherical—an asymmetrical globe-like piece

Index, cut apart, reglue

After turning a cylinder (not shown), the author creates a seven-segment pie chart using a spreadsheet program and uses it to mark off seven pie-shaped segments.

The segment divisions are drawn on the surfaces of the cylinder, which is then carefully cut apart at the bandsaw.

After dry-fitting the segments, they are glued together with paper between the joints. This allows them to be split apart later.

Remount cylinder, turn sphere

The glued-up cylinder remounted on the lathe. Not shown: the cylinder is turned to a sphere shape.

incorporating the concept of seven major but slightly different elements. These elements would represent all of the world's oceans, figuratively expressed in ancient times as "The Seven Seas." *Les Sept Mers* was the result, an image of which first appeared in the 2020 AAW Virtual Symposium instant gallery. Later that year, a group of Oregon woodturners who had seen the piece in the instant gallery invited me to explain, via Zoom, how it was made. This writing is based on the slide presentation I was happy to provide for them.

Creating the form

The initial phase involved selecting an appropriate size of seasoned wood and turning it between centers to a smooth cylinder. I chose mesquite, native to the Southwest U.S., readily available, and known for its dimensional stability. I formed a tenon at one end for mounting later in a four-jaw chuck.

To represent the seven seas, I cut the cylinder at the bandsaw into seven segments, after indexing the cylinder into seven divisions. You could estimate the divisions by eye, as the segment widths do not have to be identical (remember, "the seven seas" is more metaphorical than literal). Instead, I used a small seven-segmented pie chart I created from an Excel spreadsheet. As a matter of course, I have been using the idea of small pie charts for indexing for some time, especially when my lathe indexing system does not accommodate certain odd-numbered divisions, like seven, nine, eleven, or thirteen.

Centering the pie chart on one end of the cylinder, I marked off the seven divisions on the cylinder's surface (*Photo 1*). I then mounted the cylinder between lathe centers and extended the divisional marks as lines along the cylinder's surface and across each end. The joints were marked with corresponding labels, which would become important later, when fitting the segments back together.

With a sharp blade and properly aligned bandsaw, I carefully cut the cylinder along the division lines to the center (*Photo 2*). You cannot cut straight through the entire cylinder because of the odd number of divisions, so care is needed where the lines converge. I used hose clamps to tightly dry-fit everything back together to make sure the joints lined up properly with minimal gaps; the small amount of wood removed by the saw kerfs was of no consequence.

Next, I glued the segmented cylinder back together with brown shopping bag paper between the joints (*Photo 3*). Allow the glue to dry thoroughly, for several days if necessary, as the piece will be remounted on the lathe to turn the form, and the joints must be sufficiently strong for truing up and shaping.

Photo 4 shows the cylinder remounted in a chuck on the headstock end, and a cone-shaped drive on the tailstock end for alignment and added stability. The cylinder was then trued up and smoothed with gouges. At this point, the joints were matched properly and would not have to be marked again ▸

until after the desired exterior shape was formed.

Using traditional turning tools, I turned the cylinder to somewhat represent the earth's shape, more or less by eye. The end result was not an exact sphere, but *implicit* of one. This technique does not call for hollowing at the lathe. Before parting the piece off, I drew more lines—approximately halfway between each glue joint—from top to bottom. About each of these new lines, random "waves," shown in red, were drawn by hand (*Photos 5, 6*). These waves would end up as the prominent peaks on the finished form. Each wave, though somewhat similar, is unique, and they do not have to be evenly spaced.

Draw seven "waves"


5


6

With the form turned to a sphere by eye, the author draws random "waves" between the glue joints.

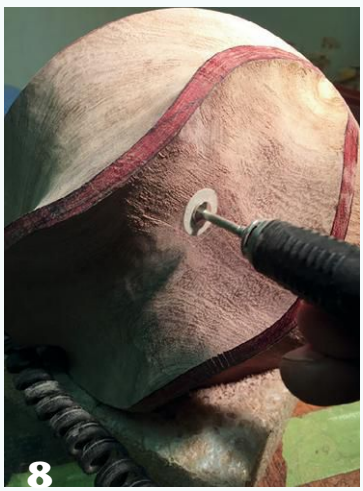
Power-carving and shaping

The next step involved power-carving a unique undulating surface for each of the seven sections, between the red waves, using a micromotor and a variety of rotary burs. *Photo 7* illustrates the shaping process, initially done with a coarse rotary bur for efficiently removing wood, and then with smaller and differently shaped burs in areas where the waves converge. I used small mandrel-mounted sanding disks to smooth the roughed-out surfaces (*Photos 8, 9*).

Since the undulating surfaces between the waves were to be pierced, I drilled a number of holes of a specific depth all about the piece, using a loose sleeve over a drill bit as a depth gauge (*Photo 10*). The measured depth for piercing thickness would be about 5/32" (4mm). The number of holes was somewhat arbitrary, but it was necessary to have enough to ensure a uniform thickness over the entire undulating surface. Too many holes would reduce the size of the pierced

Carve and sand between waves


7


8


9

(7-8) The sections between the red waves are shaped with a coarse bur, then refined with small sanding disks.

(9) The wave elements well-defined. Sanding complete.

openings. *Photo 11* shows one of the seven sections completely drilled.

After the drilling was completed, I relabeled the seven joints.

Separating and carving the segments

The next step was to carefully separate the segments along the papered joints. I did this using one or more very thin-bladed knives, taking care not to damage the joint edge along the outside surface. Only the first separation was performed on the outside surface, which required more care. The form separated into two pieces, one comprising three sections joined together, and the other, four. With the interior now exposed, I separated the remaining joints from the inside (*Photo 12*).

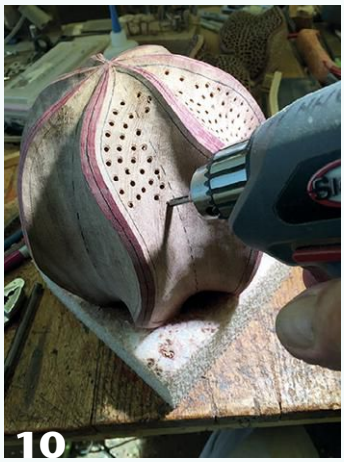
After the segments were separated, I carved away the inside surfaces down to where the holes began appearing. Initially, I removed the bulk of the wood with an electric reciprocating power-carving tool (*Photo 13*). Detailed carving, down to where the holes show through, was carefully done with a micromotor and a variety of burs of different shapes, sizes, and cuts (*Photo 14*). Once the seven sections were carved to thickness, I carefully sanded each joint edge to remove any remaining paper.

Regluing sections, piercing

Before gluing the segments back together, I dry-fitted them to make sure all the joints were tight and properly aligned. I held the pieces together with large strong rubber bands stretched around the circumference.

I glued only two or three segments at a time—rather than all seven at once. The main reason is that if I glued all at once, the centers of the pierced openings could drop into the confines of the enclosed form and would be very difficult ▸

Drill depth holes


10


11

The author drills holes to a predefined depth between the red waves. Note that the holes are not too close to the joints or the wave patterns.

Split segments, thin walls to depth


12


13


14

(12) The paper glue joints are split apart (not shown).

(13-14) The author uses a reciprocating carving tool to thin the walls from the inside surface until the drilled holes become visible.

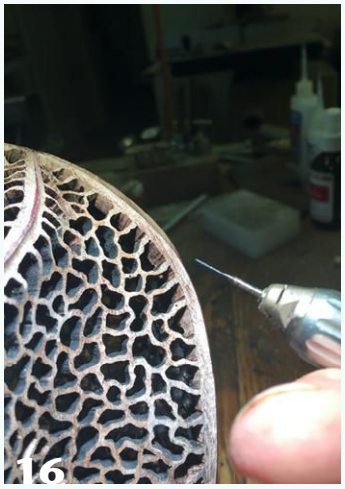
to remove. Thus, while the entire form was held together with rubber bands, only two or three segments were bonded, first with cyanoacrylate (CA) glue applied sparingly on the exterior joints—just enough to secure the pieces when the form is disassembled—and then with a generous amount of wood glue on the insides of the joints. After the glue was dry, I repeated the process, again using rubber bands around the circumference to glue the remaining loose segments together (or at least in pairs).

Beginning with seven loose segments, I now had sections comprising permanently glued-up segments, which could then be pierced separately prior to final glue-up (*Photo 15*). For piercing, I used the NSK Presto, a high-speed air-driven handpiece. The piercings, random and cellular-like, can also typify shadows created by sunlight reflecting off ocean waves. The previously drilled depth holes vanished because they were located within the dropped-out center of each larger pierced opening. To do the piercing, I created a custom needle-shaped bur from a modified cobalt drill bit (*Photo 16*).

After all of the piercing was complete but prior to the last glue-up, I stained the interior with black leather dye for contrast (*Photo 17*). The final glue-up was essentially joining two sections of glued-up and pierced segments, using the same gluing process with the rubber bands. The last bit of the piercing took place around and through the two final glued-up joints (*Photo 18*). I have found that even though much of the thin joint is pierced away, the structural integrity of the piece is not adversely affected.

Understandably, my custom bur made from a drill bit burned rather than cut the openings, but it afforded greater control. The small tapered burs typically used for piercing burn as well, since they are designed for cutting much harder substances than relatively soft, resinous wood. I carefully removed the charred resin from around each opening with a clean piercing bur (*Photo 19*).

Reglue in sections, pierce



(15) Three of the drilled sections are permanently glued back together, and piercing commences.

(16) The author does the bulk of the piercing using a custom needle-shaped bur made from a cobalt drill bit.

Dye interior, final glue-up

(17) Prior to gluing up the final pierced sections, the author dyes the interior black for contrast.

(18) The remaining sections are glued back together, and a last bit of piercing is required around and through the two last glue joints.

Completing the piece

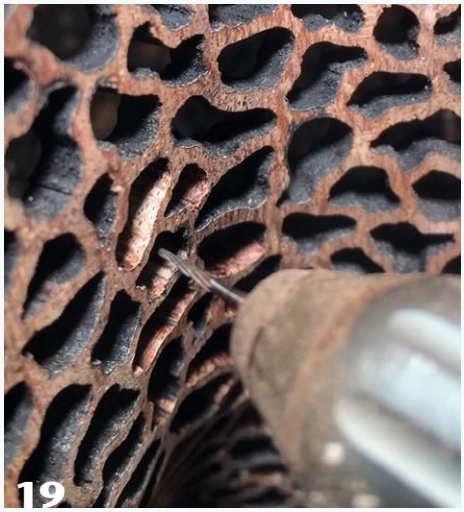
On the exterior, I carefully shaped the wave peaks using a pointed tree bur and micromotor, as shown in *Photo 20*. I took the most care where the peaks converge at the top and bottom of the form. I then carefully sanded the entire piece to remove any remaining marks and excess glue.

I applied a finish consisting of equal-parts boiled linseed

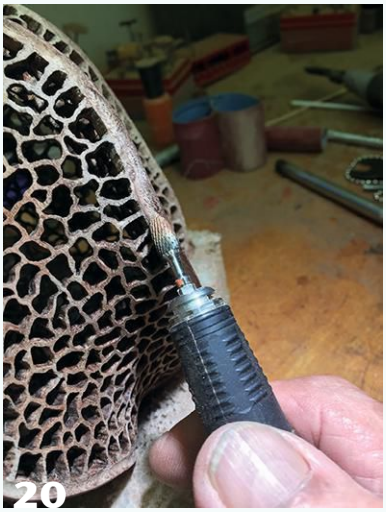
oil, tung oil, interior gloss alkyd varnish, and mineral spirits. After the finish had dried, I buffed the piece. Finally, I turned and carved a small stand to hold and set the piece slightly off from vertical. ■

J. Paul Fennell, a wood artist living in Scottsdale, Arizona, has been actively turning for over fifty years. He has been a frequent demonstrator and instructor nationally and internationally, and his work resides in many museums and private collections. He can be contacted at jpaulfennell@yahoo.com, or visit his website, jpaulfennell.com.

Finishing touches

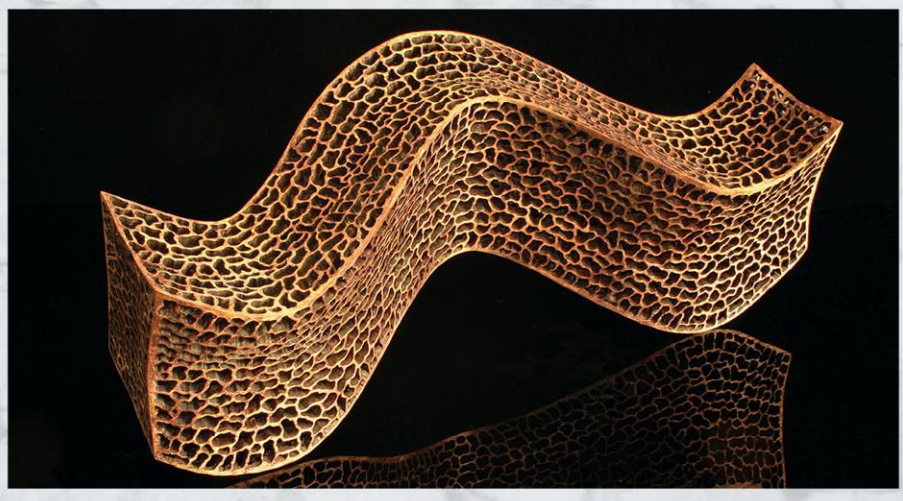


To clean up the charred surfaces left by the first piercing bur, the author touches them with a clean piercing bur.



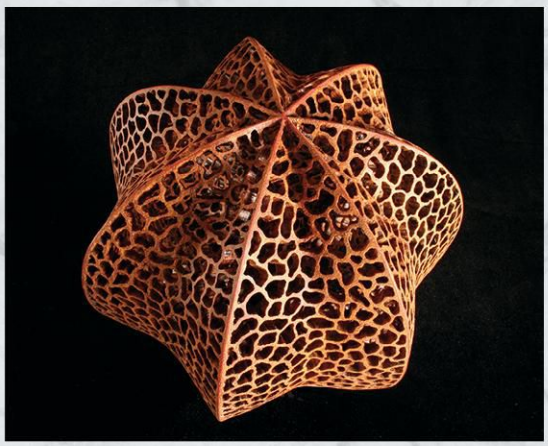
Final shaping of the wave peaks is accomplished with a pointed carbide tree bur.

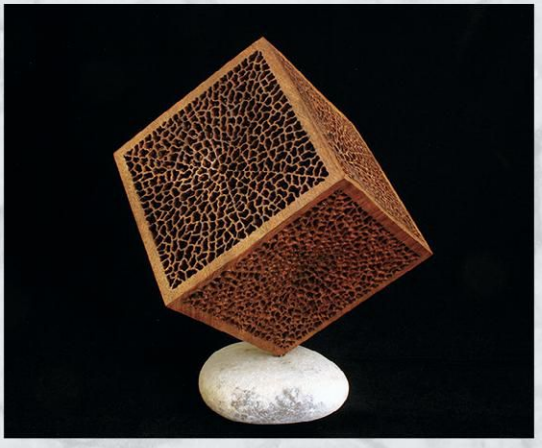
Other Examples of the Technique



Maiandros, 2018, Butternut, 6" × 14" × 5½" (15cm × 36cm × 14cm)

Septaspheroid, 2016, Mesquite, 6" × 6" (15cm × 15cm)





Suspended Intimation, 2018, Mesquite, 12" × 9" × 9" (30cm × 23cm × 23cm)

Community + Creativity + Confidence = Future Artistic Leaders

The 2022 Virtual WIT eXchange

WIT eXCHANGE
Virtual 2022

FOR FURTHER READING

EXPLORE!

Log on at woodturner.org and use the Explore! search tool to find these *American Woodturner* articles about past WIT eXchanges and WIT's approach to creativity.

- "Uproarious Reciprocation: The 2018 Women in Turning eXchange," by Lynne Yamaguchi and Kathleen Duncan, February 2019 (vol 34, no 1, page 42)
- "Abundant Imagination: A Case Study in Fostering Creativity," by Lynne Yamaguchi, August 2019 (vol 34, no 4, page 37)
- "Breaking Boundaries and Removing Limitations," by Linda Ferber and Marie Anderson, April 2021 (vol 36, no 2, page 42)
- "Ripples Become a Tsunami: The 2021 Virtual WIT eXchange," by Linda Ferber and Marie Anderson, December 2021 (vol 36, no 6, page 32)

In the spring of 2022, forty-eight women from eight countries came together for an online community event called the 2022 Virtual WIT eXchange. As part of AAW's Women in Turning (WIT) program, these women took the challenge to push beyond their comfort zone, remained committed to the creative process, and came out the other side with new confidence, new skills, and new friends. Some of the participants were eXchange veterans, and some were complete newbies. Working on a team, managing and blending three distinct personalities within a specific timeframe on a spontaneous project was the assignment. All approached the challenge with various levels of trepidation.

As in previous WIT eXchange events, the 2022 teams mostly consisted of a beginner, intermediate, and an advanced turner. Each team was given two inspiration words—a noun and a modifier—and was asked to come up with a creative project based on those two words.

Empowering women

The WIT committee envisioned the eXchange events with the goal of empowering all attendees through a creative journey. The women share their skills and document their experiences so others can also be inspired. The focus has always been on the *process* rather than the end project. Why? You may hear different reasons. The truth is, collaboration is uncomfortable. Working on a team can be extremely stressful. Removing the expectation of having to create a gallery-quality finished project opens the door to experimentation, allowing creative risk-taking. This recipe has increased the confidence of many who have participated in past eXchanges.

There have now been two in-person and three virtual WIT eXchanges. With each event, the feedback from participants (both in-person and virtual) has been positive. Participants have created a supportive community whose members encourage, inspire, and uplift each other. It has helped many to take the next step in their artistic journey. Past participants say their eXchange experience encouraged them to go beyond their comfort zone. Some have applied for calls for entry found on the AAW website, including the annual POP Showcase Artist and Symposium demonstrator opportunities. Others have decided to take the leap and try demonstrating at a local club or regional symposium. Several past participants have also organized their own eXchange events modeled after the WIT eXchange. And still others have used the confidence they gained to step up to a leadership role in their local club. The community we've built encourages all to take that next step, even if it is scary! ■

Niles Bottle stoppers (nilesbottlestoppers.com) has sponsored the WIT eXchange since the event's inception in 2018. The WIT committee is deeply grateful to Carl and Robin Jacobson of Niles Bottle Stoppers for continuing this legacy, started by former owner Ruth Niles, with a commitment to sponsor the upcoming 2023 Virtual WIT eXchange.

—Marie Anderson and Linda Ferber

Team 23 N' US (Marie Anderson, Julie Schmidt, Janet Low)

Connective Language, 2022, Elm, walnut, maple, red oak, bamboo, poplar, basswood, boxelder, wire, acrylic paint, embroidery floss, seed beads, pearl, feathers, 13" × 14" (33cm × 36cm)

Team Bee iroNiC (Crystal Earley, Beth Lockamy, Suzanne Trosclair)

Ironic Containment, 2022, Various woods, resin, beads, feathers, antlers, 16" × 28" × 30" (41cm × 71cm × 76cm)

In Their Own Words

"As a very new turner, I was hesitant to sign up. I thought, *What can I add to this project?* I decided to join anyway, and I'm so glad I did. I learned a lot about myself, gained confidence and met some new friends who happen to be great mentors!"

"The eXchange has given me a connection to other women, which has helped me get through some isolation I was feeling. The creativity boost was a bonus!"

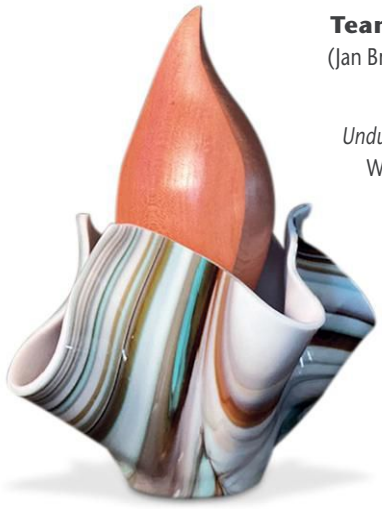
"The WIT eXchange has fostered my creativity and helped me grow as a woodturner and artist. I started my first eXchange as a complete novice, but with each collaboration, I have gained skill and confidence. Moreover, I have developed lasting friendships and now feel welcome and included in the woodturning community."

"This spring, I participated in my third Virtual WIT eXchange. As I have come to learn, one of the best parts of woodturning is the community that comes along with it, and I am so thankful to WIT for introducing me to an incredible, inspiring group of makers. I have forged lasting friendships that have encouraged, inspired, and challenged me."

"I have learned about and experimented in so many new material techniques in these past few eXchanges—carving, texturing, coloring, burning—and I am excited to see these processes become a part of my emerging artistic style."

Team The California Girls
(Cindy Navarro, Stephanie Fuchs, Amanda DeNoyer)

Extravagant Pride, 2022, Spalted birch, cherry, ironwood, Douglas fir, plywood, acrylic paints, epoxy resin, glass beads, embellishing wax, walnut oil, metallic thread, LED fairy lights, mirrored spinning base, 13" × 18" (33cm × 46cm)



Team The Dryads
(Jan Brown, Deb Chapin, Robin McIntyre)

Undulating Spirit, 2022, Wood, glass, 9" × 5" (23cm × 13cm)

The Easter EGG Group
(Evelin Schirrmacher, Patricia Spero, Christine Wenzhöfer)

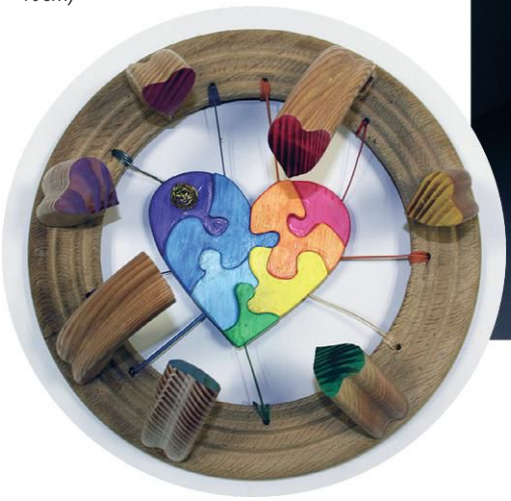
Translation Controlled, 2022, Various woods, 6" × 15¾" × 8" (15cm × 40cm × 20cm)

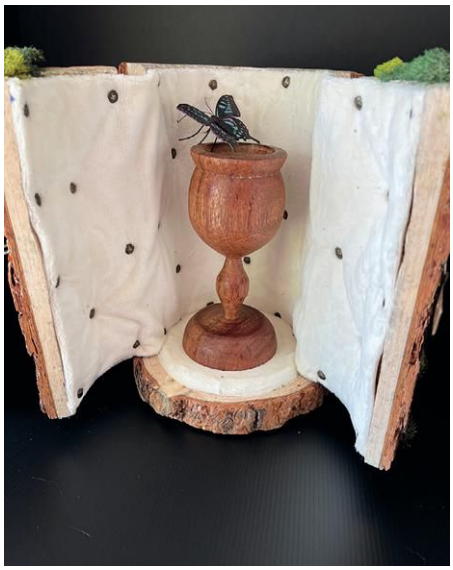
Team Dances with Lathes (Linda Ferber, Alexa Calliguri, Cindy Pei-Si Young)

Fluid Solution, 2022, Ash, cherry, eucalyptus, birch, zebra wood, walnut, padauk, plywood, leather, wire, goatskin, acrylic paints, 5" × 24½" × 16" (13cm × 62cm × 41cm)

Team Sparkling Sisters Twisters (Iris Laven, Stinne Lund Vestergaard, Esther Assamat)

Love Intricate, 2022, Various woods, 8" × 15¾" (20cm × 40cm)





Team Rocky Road (Katheryn Casebolt, Suzette Edwards, Ellen Starr)

Integrated Transfiguration, 2022, Wood, metal, velour, 11" × 5" (28cm × 13cm)

Team Minnesota Mavens (Janese Evans, Rosanne Gold, Bonnie McDermid)

Frontier Flawed, 2022, Maple, myrtle, paint, 12" × 10" (30cm × 25cm)

Team Round the Clockers (Molly Johnson, Kathleen Gardiner, Melissa (Bee) Fantasia)

Noisy Mimicry, 2022, Wood, resin, paint, epoxy, feathers, wax, water pump and tubing, music box, moss, 14" × 32" × 25" (36cm × 81cm × 64cm)

Team Unknown Collisionist (Joan Busby, Paula McClain, Kandie Candelaria)

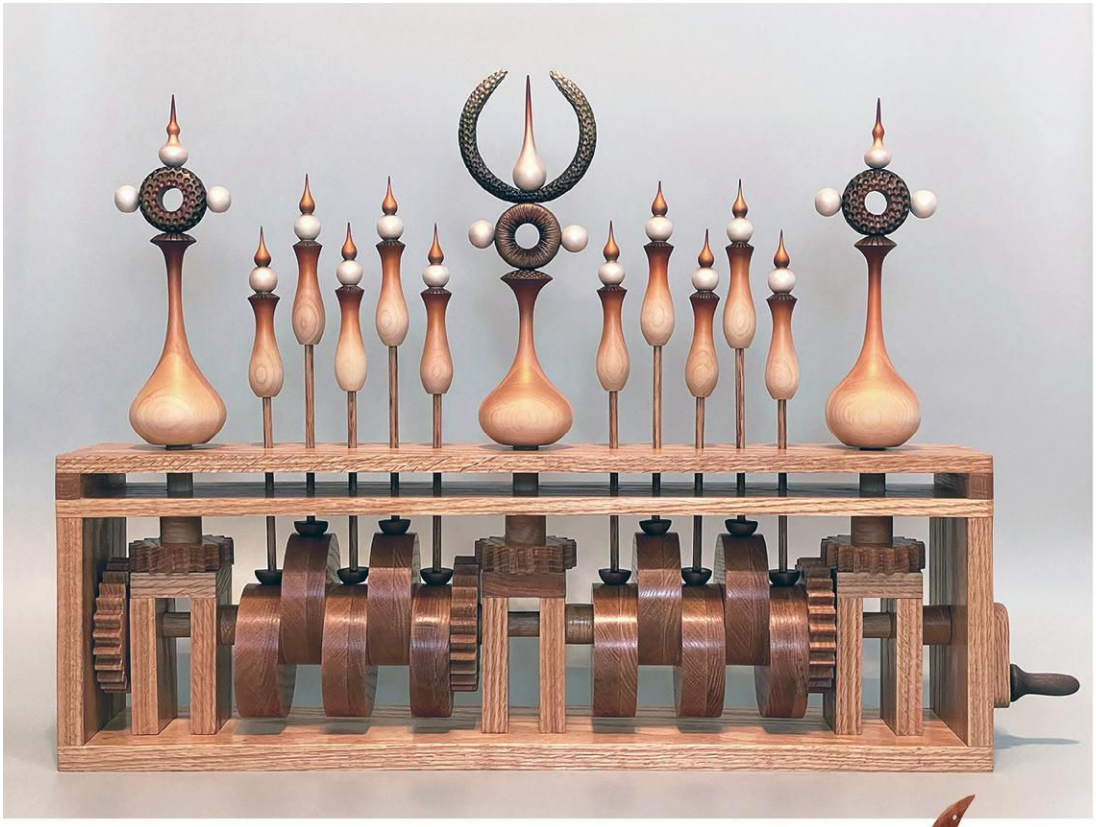
Unruly Collision, 2022, Mesquite, beetle pine, purpleheart, cherry, resin, 10" × 12" × 10" (25cm × 30cm × 25cm)

Team Sky Bridge Strippers (Susan Rennie, Joyce Botsch, Lupe Nielsen)

Wild Getaway, 2022, Wood, wood, wood, a little bit of glue, paint, and a couple of pins, 30" × 24" × 14" (76cm × 61cm × 36cm)

Team Tempestuous Turners (Shawn Preus, Pippa Lattey, Sheila Balzer)

Stormy Source, 2022, Maple, dogwood, apple, pear, oak, lilac, elm, yellowwood, cedar, plywood, spalted spruce, boxwood, laurel, maple burl, copper grounding wire, carded fiber, hardware, lazy Susan base, 36" × 20" (91cm × 51cm)



Team Three Beeches (Alex Bradley, Jessica Edwards, Heather Marusiak)

Rhythmic Dance, 2022, Red oak, maple, walnut, acrylic paint, 20½" × 29½" × 5" (52cm × 75cm × 13cm)

Team The Wood Sirens (Nicole MacDonald, Donna Rhindress, Joanne Sauvageau)

Ample Reciprocity, 2022, Wood, plastic, 14" × 11" × 17" (36cm × 28cm × 43cm)

Team The Twirling Sages (Pam Bozkurt, Phyllis Moffitt, Laura van Leeuwen)

Home and Reborn, 2022, Cherry, cedar, cold bend wood, encaustic paint, preserved moss, resurrection fern, 10" × 8" (25cm × 20cm)

2023 WIT eXchange and More

Please watch for details and plan to join us for the 2023 Virtual WIT eXchange. Registration opened February 1, and the event will run March 1 through April 15, with the presentation of projects taking place April 29, 2023. Women are invited to join us to take the next step in their creative journey.

Visit tiny.cc/WIT to register for the event and to learn more about AAW's WIT program, view video recordings of past WIT Presents and WIT eXchange projects, read WIT newsletters, and more.

A Family Affair: The Vicmarc Story

The Verrecchia family in their factory. From left: Victor, Rosie, Marco, Emma, Alex, and Leo.

Terry Martin

There are many things that woodturners across the world have in common, but probably one of the most significant is owning a lathe. Big or small, old or new, expensively purchased or homemade, our lathes are at the center of our turning lives. There are many brands of lathes you can buy, from mini lathes to giant lathes, from cheap copies to top-quality machines, but surprisingly few turners know where their lathes are made and who makes them.

When I started turning in 1983, Australia had several lathe manufacturers, and I began turning on a locally made Woodfast lathe in the college where I worked. In 1988, my family moved to Brisbane, in the state of Queensland, and I needed to buy my own lathe. I heard there was a local man making large lathes, so I tracked him down to his tiny workshop in the sleepy seaside town of Redcliffe. Victor Verrecchia was full of energy and purpose, and the long-bed lathe I bought from him would be the center of my working life for years to come. What I didn't know then was that Victor and I would become lifetime friends and, as our friendship has deepened over the thirty-five years since then, I have visited him regularly and watched his business grow.

European roots

Victor's life is the kind of immigrant success story that Australia and the USA have in common: the drive to succeed in a new land, devotion to the family, and willingness to work as hard as it takes to make the business a success. Victor was one of three children, born in 1948 in Cerreto, Italy. After the war, there was hardly any work in Italy, so when Victor was 12, his father went to Switzerland to find employment. When he was settled, he brought the whole family to join him there. It was difficult to move to the German-speaking region, as Victor explains: "I had a little French from school in Italy, but I spoke no German. Lucky for me there was a really good teacher who spent a lot of extra time to help me with the language." Victor's family lived in the town of Bettlach, where watchmaking was the major industry. He didn't want to be a builder like his father, so when he finished school, he found an engineering shop that would employ him. "They built machines for watchmaking," Victor explains, "and I did a four-year apprenticeship that I finished when I was 20."

Victor soon found work with a company that exported watchmaking machinery to Italy and, because he spoke Italian, he was sent there to arrange sales and contracts. Victor

saw a new opportunity to develop his career: "Many people speak three languages in Switzerland, but if you can speak four or five, you will earn more money. My boss couldn't speak English, so he wanted to send me to England, but I couldn't speak English either." With typical enthusiasm, in 1974 Victor and his wife Rosie decided to move to New Zealand to learn English, but they liked it there and stayed for seven years. Because of his ability to work with high precision, he had no problem finding work, such as looking after lab equipment used for medical research. During those years, their son Marco and daughter Carla were born.

Victor with the lathe he made in 1978.

Life in a new world

It was hard work to establish themselves in a new country, and Victor often had to draw on his many skills to make ends meet: "When we arrived in New Zealand, I went to buy some tables and chairs. I was shocked at the prices, and because I was able to use the workshop where I worked, I thought it would be better to make the furniture myself. Then I found out that the machinery I would need was more expensive than the furniture itself, so I decided to make my own copy lathe. I also made an attachment to attach a saw so I could cut wood to length." Although he didn't realize it at the time, this lathe would change his family's future.

Victor was determined to start his own business, but he felt the opportunities would be better in Australia, so in 1982 they moved again. Victor approaches everything with remarkable self-confidence, and his arrival in their chosen city of Brisbane was typical: "We decided we'd like to be near a beach, and at the airport I saw a photo of a hotel on the beach in Redcliffe, so we went there. Within a few days, I found a job in a steel fabrication company and we bought a house. That's how we came to where we live and work now."

Success requires hard work

Victor held down three jobs while he was trying to establish their new life in Australia. "I started at five in the morning making wood stoves, then from lunchtime to 6:00 p.m. I worked in my own workshop making metal fences, and at night I delivered pizzas." Among the many family possessions that Victor took to Australia, he also took the lathe he had made, and he soon found an unexpected use for it: "The owner of the stove factory needed wooden handles for the doors, so I made 500 handles on my copy lathe at night in my workshop."

By 1984 Victor felt his job was not going anywhere, so he decided to take his lathe to a woodworking machinery business to see if they could sell it. "Straight away they asked me to make another one!" he says with a big smile. Cast components are reproduced using "patterns," which are made by pattern makers, and Victor had brought the patterns to Australia. "That meant I could quickly reproduce the lathe, so I made my first VL150." (*150* refers to the swing of the lathe in millimeters, indicating the maximum radius of the work that can be spun over the bed.) "Two days after I delivered that, he called and said, 'I've sold both lathes, so can you make me ten more?' They were selling for $1,500, which was a lot of money for me back then, so I rented my own workshop and started manufacturing my lathes." In this way, Vicmarc machinery was born.

After the success of the VL150, Victor created the larger VL200. Because he didn't have any patterns for the castings, he started making these lathes with his own invention of a U-channel steel bed, but soon he found a local foundry with a pattern maker and expanded his range further to include the cast-iron VL250 long bed. This was the first lathe I bought from Victor. I remember his tiny workshop very well and was impressed by the two giant Samoans who worked for him. If anything needed to be moved, they just picked it up and carried it. I had ▸

tricky winding stone steps down to my workshop, so imagine my surprise when the two enormous men came with Victor to deliver the lathe. They carried it down the steps as if it weighed nothing.

The company grows

Victor continued in his old workshop until 1991, when he moved into the purpose-built factory that the company still occupies. It was a hard time, as Victor explains: "After we started to develop the factory, I had to work really hard to pay for all the machinery. I was getting more orders for chucks than I could make, but I couldn't find anyone else to operate the CNC machine, so I used to stay back and work on it right through the night. I had a dog who kept me company, and she really knew the routine. I'd sit in front of the machine waiting for it to finish its cycle so I could reload it, but sometimes I'd nod off, so the dog would nudge my leg to let me know I had to restart the cycle. One day my secretary asked me, 'Vic, do you know how many hours you've worked this week?' I thought it was about eighty, but she told me it was 127 hours!"

Family—always family

During this time, I remember Victor's son Marco was always there, a confident and energetic boy who seemed willing to take on any task. Victor had always hoped Marco would grow into the family business, and the name of the company reflects this: Victor + Marco = Vicmarc. Marco recalls starting work in the small workshop when he was 12: "I still have the notebook I wrote my hours in, so I know that by the time I was 16 years old, I'd saved six and half thousand dollars. I bought my first motorbike that way, working after school. I did the grinding and preparation of the machines, then painting them, cutting chuck jaws—all the jobs from the bottom up till I was programming and running all the CNC machines. After high school, I did my apprenticeship and qualified as a fitter and turner. As part of the apprenticeship, I had to study at technical college, but I was always ahead of all the other students because I'd done everything before." Marco has no doubts about how important his father's influence was: "I've learned so much from him. Nobody is as good as Dad at machining and fixing things."

Marco continued to develop his skills, and he even worked outside the company for a year to learn AutoCAD so he could digitally draw and design parts. Eventually he took over management of the company in 2008, and in response to that he streamlined systems management to cut costs and keep the business viable. Marco's management style is very simple: "I make sure that the men who work here can do what is needed and then I leave them to get on with it. I won't stand and look over their shoulder because I wouldn't like that to happen to me. I still sweep the factory floor if it's needed; that's how I keep in touch with what's going on. If they see me out there working, they respect me more." Victor still works at the factory, but he takes more of an advisory role now. It's entertaining listening to them talk about the business and finishing each other's sentences like a stage act. Victor: "I can be confident it's all in good hands and if..." Marco: "...if I get stuck, I can always ask Dad."

(*Left*) Employee Michael Kestle: "If I wasn't proud of the products we make, I wouldn't be here."

(*Right*) Marco: "We just want to make sure we do a really good job."

Highlights

I asked Victor and Marco what the highlights of running the business have been. Victor said that producing their best-selling VL300 lathe was important, as well as the bed extensions that allow owners of the short-bed models to expand their work potential. I knew that Vicmarc chucks are a mainstay of the business, but I was surprised by the figures he told me: "I developed the first key-operated self-centering chuck for woodturning, and in 1994 I bought our first CNC machine for making those chucks. In one year, we made 10,000 chucks and in 1996 we bought two more machines. Now we have six machines and they run forty-two hours a week making pulleys, jaws, chuck bodies, live centers, spindles, and more." Marco interrupted: "Not many people know how much investment it takes to run a competitive company these days. For example, we used to pay up to $22,000 a year for electricity, but we installed a huge solar system on the factory roof and now we pay only around $1,000 a year."

In this day of electronic wizardry, it is easy to forget how recent some changes have been, and I can never forget when Victor came to my workshop in 1994 with his new cone-pulley mechanical variable speed. He fitted the new drive to my original long-bed lathe for me to try, and it was a revelation. For the first time, I didn't have to stop the lathe and change belt pulleys to adjust speed. It is impossible to exaggerate how sophisticated this was compared to the old way, so imagine how delighted I was when, only a few years later, I was able to trade in my old lathe for a new VL300 with electronic variable speed—something we all take for granted now.

The next generation

"These product developments have been really important," says Marco, but the most important thing is the way that everyone in the family has helped." "That's right," says Victor. "Marco started very early and back then my wife Rose also used to come into the factory and assemble chucks and do other work." Marco beamed with pride as he told me, "My older son Leo, who is 19, has been working here since he finished school. His brother Alex, who is 17, is twice as good as I was when I was his age. He's doing a high-school-based apprenticeship in fitting and machining, and he works here as well. I hope he will come into the company, too. My daughter Bella also worked here in the office, but she's studying law now, and my wife Emma has always worked here assembling, packing, and arranging all the shipping. We want to stay a small family business and don't want to try to compete with huge corporations. We just want to make sure we do a really good job and improve all the time."

> "I developed the first key-operated self-centering chuck for woodturning, and in 1994 I bought our first CNC machine for making those chucks."
> —Victor Verrecchia

Another view from the factory floor

Such family pride is understandable, but I found that this pride extends to the workers on the factory floor. For years I have watched Michael Kestle working quietly at the CNC machines at one end of the factory. I asked him what it has been like working for Vicmarc. "They're a good company to work for and everyone always helps each other," he said. "I started here in 1999 and did my apprenticeship with Victor. As long as I do what is needed, they give me the independence to do it how I want, and if I have an idea how to make something work better, they are always open to that—and of course that works both ways."

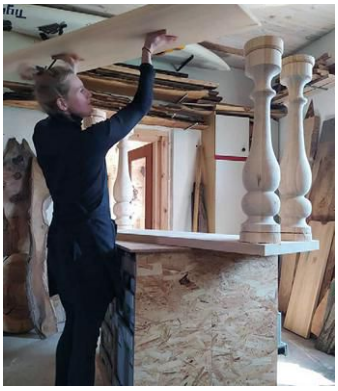
Michael then surprised me with something I had never known: "I live just five minutes from here and I went to the same school as Marco. That school is just down the road and my sixteen-year-old son is studying there now. It's not just a family business, it's a community business. We all go to each others' weddings and events like that, and we often get together outside work just to enjoy ourselves. I can't believe how big Marco's boys are now and I think one day one of them will probably take over from Marco." I was deeply impressed. I know that Vicmarc exports lathes to Japan, South Korea, Israel, Germany, France, Denmark, Italy, the U.S., Ireland, England, Canada, and South Africa, so I asked Michael how he feels about the products he helps make, which travel all over the world. He smiled broadly: "If I wasn't proud of the products we make, I wouldn't be here."

Next time you are working on your lathe, take a moment to think of the people who made it. If it's a good lathe, they probably feel the same as Victor felt when he told me, "I am so proud of what my wife and I created." For myself, when I walk into my workshop and see my lathe sitting at the center of everything, I always feel the same as when I started turning forty years ago. So, enough writing for now—I need to go into the workshop and turn something. ■

Terry Martin is a woodturner and writer working in Ipswich, Australia. Visit his website, terrymartinwoodartist.com, or contact him at tmartin111@bigpond.com.

Members' Gallery

Pine Console and Lamps, 2021, Pine, stain, varnish, acrylic paint, Console: 31½" × 63" × 17¾" (80cm × 160cm × 45cm); Lamps: 25½" × 6¼" (65cm × 16cm)



Alicja Solarska, Poland

I try to always follow change when it appears, as it enriches and diversifies my life with new experiences. When the idea of turning wood appeared, I could not refuse, and now I have been at it for three years. I work with my husband in our sawmill in a village near Warsaw, so I live surrounded by wood. I often try to turn "imperfections" such as bark inclusions and cavities into assets in the final piece. I turn simple forms and, to emphasize the qualities of wood, sometimes use epoxy resin.

I am also a teacher of woodturning. My students are people who want to try woodturning or just learn something new. I often teach women, who tend to have a wonderful touch in their use of the tools. It can be an opportunity for them to overcome personal challenges and gender stereotypes.

For more, visit alicjawkrainiedrewna.pl or visit Alicja's Instagram, @alicja_w_krainie_drewna.

Leroy Coleman, Jr., Alabama

I am a woodturning artist who had the late Raymond Leier, former co-owner of del Mano Gallery, as a mentor. Ray was not only a mentor, but a friend who helped me develop my approach to turning. He encouraged me to pursue the combination of polyester resin and wood. I was able to accomplish this approach only after many failed attempts. But after my first success, I worked on applying the process to other applications as well. I also added typographic labels, along with rhinestones.

Rather than giving my work titles, I have adopted the theme of "Love, Peace, & Joy" and display those words on my bowls and artistic ornaments. I believe that wood art should be not just a thing of beauty, but something that increases in value for the benefit of the collector.

For more, visit Leroy's Etsy shop, etsy.com/shop/colemancrafts.

Untitled, 2022, Black walnut, polyester resin, wax, typography, rhinestones, 5½" × 5⅞" (14cm × 15cm)

Untitled, 2022, Maple burl, polyester resin, wax, typography, rhinestones, 6½" × 5¾" (17cm × 15cm)

Untitled, 2017, Curly maple, polyester resin, typography, Swarovski rhinestones, 4¾" × 5⅞" (12cm × 15cm)

Collection of Florida State University Museum of Fine Arts

Eli Polite, Delaware

I have been turning wood seriously for about five years. After getting involved in the woodturning community, I took a hard look at what was being presented in online forums, groups, and social media platforms. I wanted my work to stand apart, so I started a journey with the goal of separating myself from traditional segmented turning. I wanted to make more flowing, less pixilated designs.

Having worked in a production setting my entire adult life, I wanted to keep my woodturning separate from the idea of mass production. Almost all of my works are one-off designs that are very time-consuming and require a great deal of patience. I hope to continue pushing myself beyond my own comfort zone. I also hope my work inspires others to join this great community of woodturners and moves people who are already turning to push themselves as far as their skills and talent will take them.

Morning Star, 2022, Ornament: Sapele, maple, wenge, aluminum; Stand and hanger: .999 Silver, sapele, ebony, maple veneers, granite, 20" (51cm) tall with stand

Micro, 2022, Ebony, maple, 1¼" × ⅜" (32mm × 10mm)

Dots, 2022, Ebony, maple, 3" × 1½" (8cm × 38mm)

Steve Miller, North Carolina

When I started turning wood in 1998, I was attracted to the natural beauty of the wood itself, without any embellishment. I was intrigued by the pieces I saw at local art shows and was curious about the process of working with a raw, natural material such as a log. After turning "round and brown" pieces for eighteen years, I was curious to try something different, push my own limits, and step well outside my comfort zone with carving, burning, and especially painting wood.

In 2016, I enrolled in a two-week class at Arrowmont, taught by Nick Agar and Jacques Vesery. Since then, the majority of my pieces are heavily embellished with carving, texturing, and burning. I prefer organic textures based on those found in nature. The last step in my process is to apply multiple layers of acrylic paints, dyes, or stains to bring the contours and textures to life. The end result is, hopefully, a form or vessel that has the warmth and tactile qualities of wood, with the visual punch of a painting. ▸

Asian Vessel, 2022, Pear, 13" × 6" (33cm × 15cm)

Oak Burl Teapot, 2022, Oak, 13" × 12" (33cm × 30cm)

Weeping Cherry Bowl, 2021, Cherry, 4" × 7" (10cm × 18cm)

Robbie Graham, New Zealand

My interest in woodturning began in the early 1980s, after receiving a wedding gift of turned goblets. I was intrigued by them and investigated how they were made. I built a lathe, read some library books, and was hooked. While living in Perth, I owned a production spindle-turning business but gradually veered toward wood-turned art. My wife and I moved back to New Zealand in 1995 and opened Wildwood Gallery, where I became a full-time artist creating mainly pieces in wood but also outdoor metal sculptures and photography.

I aspire to promote woodturning as an art form, rather than a means of creating functional items. Multiaxis and off-set turning techniques appeal to me, as they allow me to create forms with the illusion of the impossible. Living near scenic Lake Taupo, I am inspired by the patterns and shapes I see in nature. For instance, I often embellish the surface with designs based on a leaf, outlined and filled with pyrography. I then use iridescent paints to enhance the repeating patterns.

I also enjoy sharing my passion for woodturning through membership in New Zealand's National Association of Woodworkers (NAW) and the AAW, offering demonstrations or private instruction, and connecting with like-minded people around the world. ■

For more, visit wildwoodgallery.co.nz.

Cherry Natural Edge Bowl, 2017, Cherry, 3¼" × 6¼" × 4" (8cm × 16cm × 10cm)

Shears, 2010, Pohutukawa, old shears, rust patina, haarlem oil, 13¾" × 8" (35cm × 20cm)

Leaves 3, 2020, Matai, iridescent acrylic paint, lacquer, haarlem oil, 2¾" × 8" (7cm × 20cm)

Divided 2 and 3, 2017, Matai, pyrography, iridescent acrylic paint, each: 17¼" × 7¼" × 2⅜" (44cm × 18cm × 6cm)

Toru 2, 2008, Black maire, pyrography, iridescent acrylic paint, haarlem oil, 3½" × 11" (9cm × 28cm)

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Inside This Issue!

J. Paul Fennell's *Les Sept Mers* is a pierced "hollow form" with an asymmetrical, undulating exterior and a correspondingly irregular interior. How is this possible? J. Paul shares his process on page 40.

Les Sept Mers (The Seven Seas)

To create *Les Sept Mers* (*The Seven Seas*), I used a technique I had been interested in for some time, where the interior of a thin-walled hollow form mimics the exterior shape and is subsequently pierced. The most basic of this process is a common practice: first turning a symmetrical form on the lathe and subsequently hollowing it with sufficiently thin walls for piercing. However, when the shape is *not* a purely symmetrical turned form, but rather one that is heavily sculpted, or randomly undulating, asymmetrical, or even geometrical—*and* with walls thin enough for piercing—this, as the saying goes, is a horse of a different color.

Les Sept Mers (The Seven Seas), 2020, Mesquite, 7" × 7" (18cm × 18cm)