

MAKE AN ELLIPTICAL VESSEL • LEGS ARE FOR MORE THAN STANDING • THE EMERALD ASH BORER THREAT

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

February 2022 vol 37, no 1 • woodturner.org



**CONVERTING A
STUMP BURL
INTO BOWLS**

.....
**IN THE SPIRIT OF
EXPLORATION**

.....
**GETTING STARTED IN
WEARABLE RINGS**

**GREG
GALLEGOS**
CATCHING THE "WAVES"

Guillaume Fontaine France

My passion for woodworking began twenty years ago with studies in cabinet-making and ornamental sculpture. In 2018, I began turning wood, and this completely changed my creative approach. Some of my work now focuses on contemporary forms with a carved *trompe l'oeil* effect. I try to vary my techniques as much as possible, using piercing, texture, and sculpted ornamentation executed with traditional tools.

I like to work with reclaimed local woods that have been marked by time. The wood has already lived, and we reveal its story, step by step, with our tools. A dialogue sets in during this metamorphosis, and I strive to understand and best match my techniques to this noble material that is wood. ■



Arid Earth,
2020, Spalted beech,
engraving, pyrography,
18" x 17" (46cm x 43cm)



At the Bend of a Path, 2020, Walnut (sapwood carved), 10" x 13" x 12" (25cm x 33cm x 30cm)



The Trumpets of the Dead,
2021, Fig wood,
alcohol tints, acrylic
paint, graphite wax,
each: 7" x 4" x 3"
(18cm x 10cm x 8cm)



Vase, 2020,
Sycamore maple,
acrylic paint,
13" x 5"
(33cm x 13cm)



Les Inséparables, 2020, Chestnut, graphite wax,
8" × 21" × 5" (20cm × 53cm × 13cm)



Chestnut Basket, 2020, Chestnut (multi-axis-turned
handle), grape seed oil, 9" × 19" (23cm × 48cm)



Cozy Nest, 2020, Maple, slate,
steel, wax, bitumen of Judea,
acrylic varnish, 9" × 14" × 6"
(23cm × 36cm × 15cm)



Test Tubes, 2021, Fig wood,
pyrography, laser engraving,
tallest: 15" × 3" (38cm × 8cm)

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

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Back Cover – Mike Jackofsky and Georgianne Jackofsky



woodturner.org

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For tips on article submission and photography
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Download a free complete *American Woodturner*
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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*

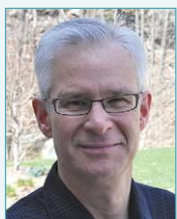
A NOTE ABOUT SAFETY

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



I have to admit, I don't turn nearly as often as I used to. When I was first learning woodturning, I couldn't wait for my next opportunity to make shavings. Within a few years, I was selling my work at art and craft fairs. But inspiration can be fickle and life gets busy; over the years, I found myself turning less often. I had gotten out of the routine of making things with my hands.

When I wanted to make a gift for a special someone this past Christmas, I decided it was time to venture back into my shop. I hadn't

turned for several months, but when I lifted the handle of my gouge and the shavings began to fly, I felt that old joy again and a part of me was reawakened. This time of year, we talk of New Year's resolutions and big changes. But sometimes, it takes only a little break in the routine to recall a passion that never truly left.

Happy turning in 2022!

Joshua Friend
—Joshua Friend

From the President



Inspiration

Like most of you, I am an experienced but "amateur" woodturner, having some technical skills but lacking in any formal artistic training. As a result, I often struggle to arrive at an elegant form, despite all of my wood-shaving production efforts. I find that exposure to the work of the professionals among us is invaluable. Comparing even a simple bowl made by one of them to many of my one-off casual items continues to inspire me and help me "up my game." The AAW print and online resources are a great resource for inspiration and technical help, and the ability to search by topic or author makes finding information easy. Just log in at woodturner.org and use the Explore! search tool, found under the "Resources" tab.

The AAW collection of wood exhibitions, curated by Tib Shaw, is an impressive tour de force, and this, along with other collections, can provide a wealth of ideas for woodturners of any skill level. These resources are all available on the AAW website, under "Resources" and "Galleries."

Annual Symposium in Chattanooga

By the time you read this, most turners will be in mid-winter mode in their shops, but the AAW will be fully engaged in

anticipation of our Annual International Symposium in Chattanooga (June 23-26). The program will be excellent, and you can plan for most or all of the activities you have enjoyed in recent years. We expect a record turnout, and for the first time will be recording selected portions of the event for later broadcast. The city of Chattanooga has much to offer visitors, and we hope you will take the opportunity to spend a day or two in our host city exploring. There are more details in this issue of the Journal and at woodturner.org.

We do not know at this point where we will be in the pandemic, but rest assured, we will take all appropriate precautions to make the Symposium as safe as possible for all attendees. More information about this will be provided as the date approaches.

Additional planning for 2022

Despite needing to cancel the in-person 2021 Symposium, and thanks to good fiscal management by the AAW staff and leadership, we finished the year in good financial shape. Our budget for 2022 anticipates a successful Chattanooga Symposium, as well as continuation of our online offerings. The Board has approved new investments in improving resources for our members and clubs. The Turners Without Borders Committee and the Long-Range Planning Committee have both made suggestions to the Board for initiatives

that have the potential to increase membership and expand services to the broader woodturning world.

Board transitions

In December, we said goodbye with sincere thanks to departing Board members Joe Dickey, Andy Cole, and Molly Winton. They each have contributed to the success, and survival, of the AAW with their time and dedication, and we expect their involvement will continue in other venues. Our newest Board members—Chuck Lobaito (Treasurer and Chair of the Finance Committee), Sally Burnett (Chair of Turners Without Borders), and KC Kendall (Chair of Demonstrator Selection and Program Planning and appointed to fill the remainder of Molly Winton's term through 2022)—are now fully on board and involved for what looks to be a remarkably busy year.

Given publication deadlines, I am writing this a few days before Christmas, and I must now return to the shop to finish my gift-production operation. I hope everyone had a safe and enjoyable holiday and that your woodturning endeavors are fun and rewarding.

Keep turning,

Mike Summerer

Mike Summerer
President, AAW Board of Directors



AAW'S 36TH ANNUAL INTERNATIONAL SYMPOSIUM

Chattanooga, Tennessee • June 23-26, 2022

TOGETHER AGAIN!

Whether you're a NEW TURNER or a PROFESSIONAL... Reunite and connect with other turners who share your interests. You'll find demonstrations targeted to your skill level. Over 3½ days, you'll have 100 compelling presentations to choose from to help you enrich your woodturning experience, including:

- Bowls & Platters
- Embellishment, Carving & Finishing
- Segmented Work
- Hollow Forms & Boxes
- Pens
- Inspiration and Creativity
- Spindles, Finials, Multiaxis
- Tool Making and Tool Handling
- Small Treasures

THE PROGRAMMING YOU EXPECT

In addition to world-class demonstrations, the Symposium brings back the programs that make the AAW International Symposium an unforgettable event:

- Largest Woodturning Tradeshow
- POP Discussion Panels
- Special Exhibitions
- AAW Member Benefit Auction and POP Auction
- Instant Gallery
- Special Interest Sessions
- Learn to Turn and Youth Turning Program

Plan to arrive Thursday for the New Member/Symposium 1st Timer Orientation, as well as the Exhibition Opening reception and Tradeshow preview!

Symposium Venue

Chattanooga Convention Center
1 Carter Plaza
Chattanooga, TN 37402

Host Hotel

Chattanooga Marriott Downtown
Two Carter St.
Chattanooga, TN 37402



A superb facility and like-minded friends!

Photo: Andi Wolfe

DETAILS AND REGISTRATION



For more details and to register
for the event, visit our
Chattanooga Symposium
webpage, tiny.cc/AAW2022!



Photo: Chattanooga Tourism Co.



Eric Lofstrom
demonstration,
Portland,
Oregon, 2018.

Photo: Andi Wolfe



AAW'S 36TH ANNUAL INTERNATIONAL SYMPOSIUM CHATTANOOGA DEMONSTRATORS

The AAW is excited to bring you a robust lineup of woodturning experts and experienced demonstrators from around the world. Covering a wide range of topics, they will share their techniques and insights to help you bring your woodturning skills to the next level.

Trent Bosch

- ▶ Aperture Series
- ▶ Mountain Bowl
- ▶ Revelations in Hollowing
- ▶ Sunburst Platter
- ▶ Vessels and Surfaces



Kip Christensen

- ▶ Inlaid Box with Double Inlay and Chatter Work
- ▶ Principles and Techniques of Clean Cutting
- ▶ Ten Projects Fast and Fun



Barbara Dill

- ▶ Multiaxis Concepts
- ▶ Candle Holder
- ▶ Split-Turning



Cindy Drozda

- ▶ Maximizing Burl Figure



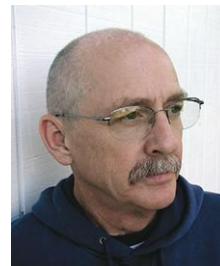
Keith Gotschall

- ▶ Three-Legged Stool
- ▶ Lidded Bowl
- ▶ Off-Center Platter



John Jordan

- ▶ Aesthetics and Properties of Wood
- ▶ Carved and Textured Surfaces
- ▶ Hollow Vessel Using Green Wood and Simple Tools



Michael Kehs

- ▶ Basic Bowls
- ▶ Burn Texturing
- ▶ Carving Leaves on Turned Objects
- ▶ Inside-Out Turning



Eric Lofstrom

- ▶ Multiaxis Rain Drop
- ▶ Namaste Bowl
- ▶ Skew Cuts
- ▶ Embellished Square Rim Bowl

**Jason Clark**

- ▶ Turning a Neo-Traditional Christmas Ornament
- ▶ Turning a Saturn Bowl

**Glenn Lucas**

- ▶ Beaded Bowl
- ▶ Elegant Bowl
- ▶ Lidded Sidegrain Bowl
- ▶ The Salad Bowl
- ▶ Traditional Irish Platter

**Rebecca DeGroot**

- ▶ Walking Mushroom
- ▶ Walking Teapot

**Mike Mahoney**

- ▶ Bowl Coring with McNaughton Center Saver
- ▶ Hollow Pepper Mill
- ▶ Hollow Form with Threaded Lid
- ▶ Quartersawn Oak Platter

**Mark Dreyer**

- ▶ Advanced Pen Making & Casting
- ▶ Introduction to Pen Making

**Hans Weissflog**

- ▶ Standing Oval
- ▶ Box with Pierced Lid
- ▶ Drunken Box
- ▶ Open Fruit Box
- ▶ Saturn Box

**Linda Ferber**

- ▶ Power-Carved Mushroom

**Dennis Belcher**

- ▶ Board to a Vase
- ▶ Wood Cracks: An Opportunity

**Janice Levi**

- ▶ Basic Pyrography
- ▶ Bracelet with Matching Pendant and Earrings
- ▶ Surface Enhancement from A to Z



DEMONSTRATORS, CONTINUED

Sammy Long

- ▶ Relief Carving with Rotary Tool



Wayne Miller

- ▶ Segmented Bowl Variations
- ▶ Segmented Donut
- ▶ Segmented "Teleidoscope"



Mark Palma

- ▶ Finishing Without Fear



Dennis Paullus

- ▶ Acorn Box
- ▶ Rotary Carving and Embellishing
- ▶ Threading Wood



Paul Russell

- ▶ Barely There Twig Pot
- ▶ Long Natural-Edge Platter



Doug Schneider

- ▶ Quick and Easy Steps to Basket Illusion
- ▶ Basket Illusion Bowl Using Shear-Style Beading Tools
- ▶ Comparing Scraping and Shear-Style Beading Techniques



Jason Swanson

- ▶ Making a Staved Blank
- ▶ Staved Peppermill



Call for Demonstrators: AAW Symposium 2023

The AAW's 37th Annual International Symposium will be held in Louisville, Kentucky, June 1-4, 2023. To apply to be a demonstrator, visit tiny.cc/Calls between May 1 and August 1, 2022. For more information, call the AAW office in Saint Paul, 877-595-9094 or 651-484-9094, or email memberservices@woodturner.org.

Call for Videographers AAW Symposium 2022

The AAW seeks videographers for its 36th International Symposium in Chattanooga, Tennessee, July 23-26, 2022. Applicants must have experience with video camera equipment, possess technical competence, and be able to make decisions regarding what is being turned, camera position, shooting angle, etc. The application process will be open through February 15, 2022. Videographers are required to help set up or tear down and do six rotations to receive a free Symposium registration. Selected videographers will be notified by March 2022. For more information or to apply, visit tiny.cc/CallVideo.

Call for Online Presentations: "AAW Presents"

Are you demonstrating online? If you have experience creating high-quality, effective, and interesting demonstrations, have access to the technical capability for a live interactive presentation, and would like to reach a large and enthusiastic audience, we want to hear from you. Consider applying to be part of the AAW's online series, AAW Presents. For full details and application, visit tiny.cc/Calls. Questions? Contact Tib Shaw, tib@woodturner.org.

Call for Entries

Bridging the Gap: The Craft and Art of Turning

2022 AAW Member Exhibition *Application Period: January 1 to March 15, 2022*

The theme for the 2022 AAW member show is *Bridging the Gap: The Craft and Art of Turning*. The themes for the annual member show traditionally draw from the host city or state where the AAW

will hold its Symposium. This year, the Symposium will be held in Chattanooga, Tennessee, a city of many bridges. The 2022 theme also refers to the continuum of work being created by our members,

from primarily functional to completely sculptural, and all points in between.

As always, the theme is open to many interpretations, whether your motivation is metaphor, material, techniques, or just the pleasure of turning! This year's theme opens the door to creating a Symposium exhibition that showcases the full scope of excellent work being created by woodturners, and we hope you will apply.

There are two cash prizes for this exhibition: \$300 Masters' Choice, selected by the jurors, and \$200 People's Choice, selected by Chattanooga Symposium attendees.

AAW Board of Directors Call for Nominees

The AAW offers much to its members, and we are looking for a few good people who can contribute something in return. Do you have the leadership experience, time, energy, and ideas to be a part of AAW's operations, 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.

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 experience such as working with nonprofit organizations, especially in the areas of finance, strategic planning, nonprofit governance, or legal matters, are especially 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, members will elect two candidates, and the Board will appoint the third candidate, to serve a three-year term beginning the following January.

For information on the duties of Board members, call any current Board member or visit the AAW website at tiny.cc/Board for details.

—Linda Britt, Chair, Nominating Committee

If you are interested in serving on the board, please email the following to the executive director (phil@woodturner.org), no later than May 1, 2022:

- A statement of intent, 300 words or less, including qualifications and reasons for applying. Applications demonstrating past nonprofit organization experience and leadership are highly desirable.
- Current resume
- Letters of recommendation from two individuals who can attest to your organizational and leadership abilities
- A high-resolution head-and-shoulders photograph of yourself

A statement by each of the six candidates, along with photos, will be published in the August issue of *American Woodturner*. The AAW will assist the six candidates in producing a brief individual video statement posted to the AAW website. Voting will occur during the month of August. Election results will be announced by mid-September.

Application details

- Full application/submission details can be found in the August 2021 issue of *American Woodturner* (vol 36, no 4, page 8).
- Apply online at tiny.cc/Calls through March 15, 2022, 11:59 p.m. CST. All artists will be notified by March 31, 2022.

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

Correction

In our ongoing listing of donors for the AAW's 2021 monthly prize drawings, we failed to include the Tennessee Association of Woodturners (TAW), which generously donated a full two-day registration to its 2022 Woodturning Symposium, held January 28-29 in Franklin, Tennessee. We regret and apologize for this omission.

Why SETI rarely hires woodturners

You saw a white UFO...so, probably holly...could you tell what kind of finish it had?



Prize Drawing for AAW Members

One of your many membership benefits with AAW is the monthly prize drawings. Prizes this year include gift certificates, tools, kits, books, DVDs, event registrations, and online education. Member winners are randomly selected at the beginning of each month and notified of their prize.

Thank you to the many businesses that continue supporting AAW members with these engaging prizes. If your business would like to contribute a prize, contact memberservices@woodturner.org.

When you patronize these woodturning businesses, please thank them for their support of AAW members.

- Carter and Son Toolworks (carterandsontoolworks.com)
- David Ellsworth (ellsworthstudios.com)
- Glenn Lucas (glennlucaswoodturning.com)
- Hunter Tool Systems (huntertoolsystems.com)
- Mike Mahoney (bowlmakerinc.com)
- Nick Cook Woodturner (nickcookwoodturner.com)
- Niles Bottle Stoppers (nilesbottlestoppers.com)
- Preservation Solutions (preservation-solutions.com)
- Rockler Woodworking and Hardware (rockler.com)
- Tennessee Association of Woodturners (TAW) (tnwoodturners.org)
- Thompson Lathe Tools (thompsonlathetools.com)
- Trent Bosch (trentbosch.com)

Businesses will be updated throughout the year.

In Memoriam: Ron Fleming

Ronald Franklin Fleming passed away peacefully at home on December 6, 2021. He was born September 20, 1937, to Grover Franklin and Helen Evelyn Fleming in Oklahoma City, Oklahoma. Ron is survived by his son, Randall Fleming and his wife, Kathryn; daughter, Tamara Scott and her husband Brett Scott; son, Todd Fleming; seven grandchildren and six great grandchildren.

Ron was a long-time resident of Tulsa, Oklahoma. In his first career, he was one of the foremost airbrush graphic artists in the United States. His clients included the United States Air Force and Navy, Amtrak, American Express, Coors, Colgate, and many more.

Not satisfied with sticking to one medium, Ron took up the craft of woodturning and was one of the founding members of the AAW. He served on the board of the Wood Turning Center (now The Center for Art in Wood) for sixteen years. His work was revolutionary, as he saw the turned vessel not as a destination but as a new starting point, a fresh canvas with unlimited potential. He was one of the first turners to carve and paint



his pieces. He took the craft of woodturning and introduced it to the art world. His work helped pave the way for future woodturners to explore the limitless boundaries of our craft.

Ron's work is in permanent collections in many museums around the world, such as the Smithsonian Museum, Renwick Gallery in Washington D.C., and The State Department, Geneva, Switzerland, as well as multiple state museums. In 2017, he received the AAW's POP Merit Award. Ron also holds the great honor of having his work in the White House Permanent Collection of American Craft in Washington, D.C., with a piece displayed in the Red Room. ■

—Tim Yoder



Dragon Dance, 2000, Redwood burl, 17" x 19" (43cm x 48cm)

Eight dragons dance around the vessel in the water; each is different.

Ron Fleming Video

In 2017, Tim Yoder created a video about Ron Fleming to help commemorate Ron's AAW POP Merit Award that year. You can view the video at tiny.cc/RonFleming or by scanning the QR code.



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:

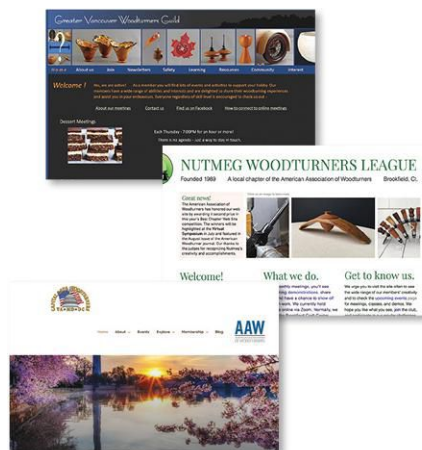
- Content that demonstrates partnership with AAW to share, support, and deliver woodturning education
- Visually appealing layout
- Sound writing skills
- Current technical, safety, and news-related content



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.

Important Message for AAW Members

AAW is committed to delivering the highest-quality woodturning resources and education to members. To continue to fulfill this commitment, AAW membership dues will increase on March 15, 2022. This increase reflects inflation and increased expenses in many areas, most significantly in paper, printing, and shipping costs for the *American Woodturner* journal. Individual/General memberships will increase to \$68 per year, and other membership levels will increase similarly beginning March 15, 2022.

To benefit from current membership rates, current AAW members may prepay/extend their memberships for up to four years (through 2026) at the current dues rates through March 14, 2022. This includes current AAW members who recently renewed. AAW members with memberships that expire on or before September 30, 2022, will be able to prepay/renew early for up to four years at the current rate through March 14, 2022.

Please contact AAW Member Services at 651-484-9094 (direct) or 877-595-9094 (toll free U.S.) to have Jane or Alexa prepay/extend your membership and take advantage of the current membership rates before the March increase.

Sponsor a Demonstration Room in Chattanooga

We are offering the opportunity to express your support of AAW by sponsoring a demonstration room or event activity during the 2022 Chattanooga Symposium. Whether as an individual member, an AAW vendor, or as a local chapter, this is a way to visibly display your support of the AAW and our programs. We especially want to thank all the individuals and organizations that have sponsored rooms and Symposium events in previous years.

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.



I was fortunate to win an AAW chapter scholarship and took a five-day course with Nick Cook at John C. Campbell Folk School (Brasstown, North Carolina). Nick is a versatile instructor with a great sense of humor. With seven of us in the class, we had demos morning and afternoon before getting on our individual lathes and turning several loose- and tight-fitting lidded boxes, button-and-needle boxes, plus a unique and difficult three-sided box. I urge all AAW members to take advantage of the chapter scholarship opportunity and look into the wide-ranging courses at Campbell.

—Bob Nordstrom, Sarasota Woodturners, Florida



I read Terry Martin's article on making a simple sushi plate (vol 36, no 5) while visiting my parents over Thanksgiving. I decided to make a couple for my sister for Christmas and thought you might enjoy



seeing some work that was inspired by the article. The wood is English walnut.
—Preston Christensen

Two Florida clubs, Space Coast Woodturners and Brevard Woodturners, recently joined in an effort to honor veterans who flew to Washington, D.C., for a day with Space Coast Honor Flight (spacecoasthonorflight.org). Each veteran received a turned pen to help commemorate the occasion.

In March 2020, the flights were stopped due to COVID-19, but the program resumed on September 11, 2021, when twenty-five veterans were flown to Washington. By that time, our clubs had turned 500 pens to be given to veterans. We made the pens during club hands-on workdays or at home. Participants received two kits and made one for the Honor Flight and kept one for themselves. Some club members, who do not turn pens, donated blanks and money for the kits. We now have a stock of completed pens to continue the program into 2022 and are expecting to add more.

—Gary Christensen, Space Coast Woodturners

The Grand River Woodturners Guild (Michigan) was recently presented with a wonderful outreach opportunity. In early November 2021,



From left: Doug Brinks, Holly Hernandez, John Behrend, Mary Boucher, Pete Vandermeer, and David Kerley.

Holly Hernandez, from the Kent County 17th Circuit Court, contacted me to see if our club could turn around twenty mini gavels to send to families who were finalizing their adoptions on December 2, 2021.

The GRWG rose to the occasion. Two weeks later, club members met with Holly Hernandez and Mary Boucher from the Kent County Court to present them with forty mini gavels, which were mailed to the families. On Adoption Day, the families finalized their adoptions via Zoom. When the judge said, "It's final" and whacked his gavel, the children also whacked their gavels. The children got to keep the gavels as a memento of this special day.

—Doug Brinks, Grand River Woodturners Guild

I'm not a golfer, but many of my friends are. So I've been turning golf tees and passing them out. This project is a great way to use those small scraps of wood that are just too beautiful to throw away.

—Tim Heil, Minnesota



AAW Grant Helps Students Make BoC Boxes

The technology program at C.W. Baker High School in Baldwinsville, New York, was recently awarded an Educational Opportunity Grant from the AAW. Students in Michael Malecki's Materials Processing class decided to use some of the grant money to purchase tools that would aid in the creation of Beads of Courage (BoC) boxes.

The Beads of Courage program provides beads for children undergoing medical treatments. The beads serve as tangible milestone markers that empower children to tell the story of their treatment journey. C.W. Baker students made fourteen lidded boxes for the Beads of Courage program operating at Maureen's Hope Foundation. Susan Bertrand, founder of Maureen's Hope, will link pediatric patients with these specially made maple and walnut boxes.

Mr. Malecki's students knew Maureen's Hope was deserving of

their time and efforts. Students went through the entire process of planing wood, ripping strips, cutting appropriate angles, gluing, turning between centers, turning with a chuck, sanding, and finishing. "It was very rewarding to create a functional product that will be given to a child in need. I really enjoyed the process of creating the boxes," said 11th-grader Margaret Solomon. Senior Maeve Bartell said, "The Beads of Courage program helps tell a story about strength and working together to express human caring. It's awesome to be a small positive part of that story."

For more about how you can help with the Beads of Courage program, check out beadsofcourage.org and maureenshope.org.

—Michael Malecki, Member of AAW and Woodworkers of Central New York



From left: Students Michael Fults, AJ Hildreth, Timothy Svitak, Ava Graham, Margaret Solomon, and Maeve Bartell; Instructor Michael Malecki.

BAWA Makes BoC Boxes for Bay Area Hospitals

At the beginning of 2021, the Bay Area Woodturners Association, (BAWA) of Pleasant Hill, California, under the guidance of President Jim Rodgers, initiated a Beads of Courage box-making program. Our club, along with other arts and crafts organizations, operates out of the Pleasant Hill Adult Education Center. Members of another group that meets there, the Diablo Woodworkers, chose to participate, too. All the boxes we make find their way to children undergoing medical treatments, in an effort to provide support for them and their families.

By the end of 2021, about one year into our club program, BAWA and Diablo Woodworkers had donated more than fifty boxes to five different hospitals in the Bay Area. Beads of Courage, through a mail-in program, also provides support to children and

their families who do not have the opportunity to receive boxes at their current healthcare facility. BAWA members have hand-delivered boxes to children in this program, and, when requested, even created custom boxes with specially requested themes (such as Spider Man).

BAWA members who have been involved have found great satisfaction in being part of a community of support to families. For the makers, it has added meaning to a craft they already love and now are able to use to make a difference in a child's life. If your club would like to start a program, you can learn more about doing so at the Beads of Courage website, beadsofcourage.org, or by contacting the BAWA Beads of Courage program manager.

—Larry Batti, Bay Area Woodturners Association



Tips

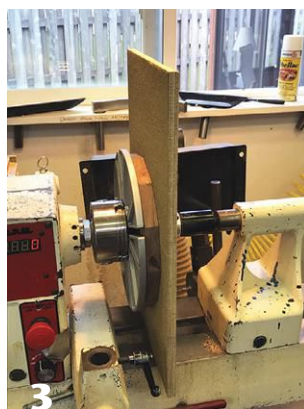
Sanding jig for segmented rings

A drum sander is probably the gold standard for sanding and flattening segmented rings. But since I don't have one, I came up with an improvised method: I use a flat sanding board at the lathe, with pressure applied by the tailstock handwheel. To make the jig, I simply adhered two full sheets of 60-grit sandpaper to a plywood board using spray adhesive (*Photo 1*).

With a segmented ring mounted on the lathe, position the sanding board between the ring and the tailstock, with its bottom edge resting evenly on the bed ways. With the lathe turning slowly (less than 500 rpm), use the tailstock handwheel to gently push the sanding board into the work (*Photos 2, 3*). Adjust the tailstock pressure against the ring as desired. As more pressure is applied, more aggressive sanding will occur. Check your progress often until the ring is flattened.

Since the board's square bottom edge is registered against the bed ways, it can't spin. But for added safety, do not remove the tailstock while the lathe is running.

—Bob Patros, Wisconsin



Remove a stuck scroll chuck

I sometimes find my scroll chuck seats itself too firmly on the spindle and is hard to remove. The metal pin that came with my chuck does not always provide enough leverage and often leaves me frustrated and with bruised knuckles. For these occasions, I came up with a simple and effective method to unseat the chuck: Insert a piece of scrap wood in the chuck, tighten the jaws, and then give a firm tap on the end of the wood with a rubber mallet while holding the headstock handwheel firmly. The added leverage quickly and safely loosens the chuck with minimal effort.

The wood shown in the photo is approximately ½" thick, 2" wide, and 12" long (13mm × 5cm × 30cm), but any sturdy piece of wood will do.

—Dex Hallwood, British Columbia, Canada



Keep live center lock pin handy

I use a Oneway live center, and in order to install or remove cone centers or other accessories, you have to insert a rod, or pin, to keep the live center from spinning. I like to keep the rod handy by attaching it to the tailstock locking handle with a piece of flexible stranded wire. When not in use, the pin hangs safely out of the way, yet it's always right there when I need it.

The Oneway live center comes with a rod, but it is longer than necessary to lock the live center. I save it for occasions when I have to remove the point from the cup center. For locking the live center, I use a short piece of gas welding rod, but any ⅛"- (3mm-) diameter steel rod will do the job.

—Carl Ford, New York



Safer on/off switch

When I purchased my General 160 lathe, the on/off control was a simple flip switch located under the ways on the right side of the headstock cabinet, which I found to be inconvenient and difficult to reach in a hurry (*Photo 1*). I decided to move the flip switch to the front of the lathe and to my left side. This was more convenient and worked great for some time, until one day I accidentally flipped it to the “on” position with my knee. Luckily, no injuries resulted, but it was very scary. I immediately discarded the flip switch and replaced it with a large safety switch in the same position. This switch cannot be turned on without dedicated effort and has a large “stop” flap (*Photo 2*). It works so well that I also installed one on my table saw.

—Don Jacobs, Newfoundland and Labrador, Canada



White vinegar for epoxy cleanup

Years ago, I had a friend who worked for a company that made cardboard tubes. Some of those tubes were used for casting cement posts and were coated with epoxy on the inside. Because of the difficulty in cleaning the equipment, they would run for four hours and then clean for four hours. My friend worked in maintenance and had to do the cleaning. They tried all the various toxic solvents the epoxy manufacturer recommended, but nothing worked well. The mixing tubes for their spray manifold were filled with cured epoxy he could not get out. They had to replace the expensive mixing tubes.

When he told me about his troubles cleaning up the epoxy, I remembered an article in *Multihulls Magazine* about using white vinegar for cleaning up epoxy. I told him to buy a gallon of white vinegar and put the mixing tubes in their ultrasonic bath with the vinegar. The next day, the tubes were clean and ready for use. He ordered a fifty-five-gallon drum of white vinegar and hooked it to the spray manifold. Now they could run for over seven hours and then run white vinegar through the manifold for only ten minutes.

Recently, a member of my local AAW chapter was telling me about the difficulty he had cleaning up after pouring epoxy into something he wanted to turn. I told him about using white vinegar for cleaning up epoxy. He immediately bought a gallon of white vinegar and soon reported that he is very happy with how it cleans up epoxy. It occurred to me that there are other AAW members who would appreciate knowing that non-toxic and inexpensive white vinegar can be used for epoxy cleanup. ►

—Leon Olson, Southern Utah
Woodturners

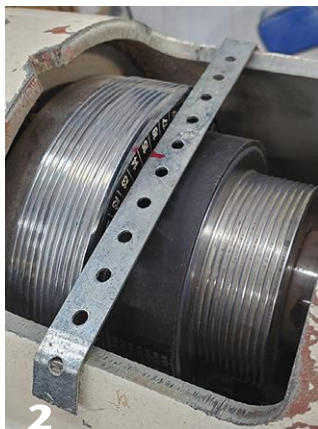
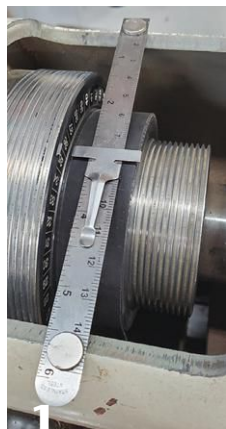
Metal strip shows indexing center

If you use the indexing wheel on your Oneway, you may have used the trick of putting some tape with a mark on it across the opening of the headstock. The goal is to identify the center of the spindle, so you can line up the numbers on the indexing wheel to the center with a visual check. Oneway provides a good indexing system, but it does not have a reference pointer for the index number. They recommend using tape with a mark on it, which works pretty well.

Recently, I was doing some indexing but didn't have any tape handy. I had the idea of using a 6" (15cm) metal ruler, which I had stuck to the headstock with magnets (*Photo 1*). I found that worked much better than tape, although I was a bit concerned about it slipping around as well as the possibility of accidentally losing one of the magnets inside the headstock.

Expanding on the idea, I found a metal strip from my junk box, bent the ends to fit, epoxied small magnets to the ends, and used a permanent marker to note the center (*Photo 2*). Now, whenever I am indexing, I just snap this onto the headstock and I'm ready to go.

—Steve Fairbairn,
British Columbia,
Canada



TIPS

Gluing small parts

Gluing small parts can be a special challenge. I have found that cyanoacrylate (CA) glue tends to be brittle and does not hold well when there is very little glue surface, like gluing the heads on the Wise Men in the photo. Using a stronger wood glue is frequently the answer but can be a challenge because of the difficulty in holding small odd-shaped parts that do not lend themselves to clamping. My solution is to use a bit of wood glue on each surface and then add a drop of thin CA. The moisture in the wood glue acts as an accelerant, causing the CA to set up quickly and act like a clamp while the longer-curing, stronger wood glue dries.

—Mike Peace, Georgia

**Reduce mold stains on bowls**

After rough-turning bowls from green logs and sealing the endgrain, I have often discovered black stains from mold growth during the drying process. *Photo 1* shows black mold on the endgrain of a boxelder log that was cut and sealed just two weeks before. The mold leaves a black stain that can penetrate the wood significantly, making it difficult to turn away.

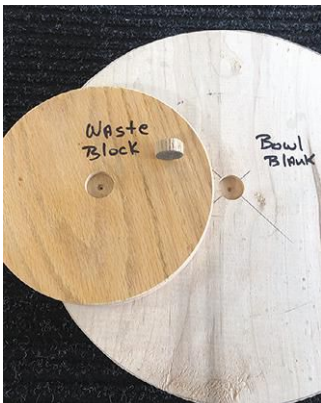
To hinder or prevent the mold from growing, I spray both the outside and inside of rough-turned bowls with Lysol and brush it into the wood (*Photo 2*). Any antiseptic spray could be used, but I prefer a strong bathroom cleaner that contains sodium hypochlorite (bleach). After the Lysol has more or less dried, I then apply the endgrain sealer to the outside of the bowl, wrap it in newspaper, and place it in a paper bag. After a few weeks of drying, the bowl can be unwrapped. If there is any mold on the interior surface, it can be retreated with the bleach cleaning solution.

—Graham Dolby, Alberta, Canada

**Sliding table protects lathe bed**

I like to use the lathe while finishing my work. The light and positioning are much better, and I can apply a dye or finish while the lathe is turning slowly. To protect the lathe from getting stained or covered in finish, and to hold all my finishing materials, I built a small wooden table. It is just wider than the total width of the lathe, so it catches any finishing drips (*Photo 1*). A wood slat that fits the gap in the bed ways prevents the table from sliding off, yet allows me to move it along the length of the bed, depending on where I am working (*Photo 2*). I just hang it up on the wall when it's not in use.

—Silas Wareham, New York

**Center wasteblock accurately**

Whenever I glue a wasteblock to a bowl blank, I struggle to keep the block centered on the blank. The glue makes the joint slippery. Plus, it's difficult to see if the wasteblock is centered because of glue squeeze-out. My solution is to use a small centering dowel. If I drill a shallow hole in the center of the wasteblock and another hole in the bowl blank center, I can align the two parts with a short dowel. The dowel gets turned away as I complete the foot on the bowl.

—Tim Heil, Minnesota

Calendar of Events

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

See AAW's online Remote Demonstration Event Calendar at tiny.cc/IRDCalendar.

Alaska

April 2–3, 2022, Alaska Woodturners Association 17th annual woodturning symposium, Anchorage Glass Sash & Door Supply, Anchorage. Demonstrators to include Pat Carroll (Ireland), Emiliano Achaval (Hawai'i), and two local turners. Event to feature eight demonstrations per day, instant gallery, door prizes, and more. For more, visit AKWoodturners.org.

Florida

February 18–20, 2022, Florida Woodturning Symposium, RP Funding Center, Lakeland. National demonstrators to include David Ellsworth, Mark Gardner, Carol Hall, and Avelino Samuel. Regional demonstrators to include Kent Hariss, Keith Larrett, Jack Roberts, and Kent Weakley. New venue this year. For more, visit floridawoodturningsymposium.com.

Illinois

September 22–25, 2022, The 7th Segmenting Symposium, Crowne Plaza Hotel, Northbrook. Demonstrators to include Malcolm Tibbetts, Jerry Bennett, Curt Theobald, Tom Lohman, Robin Costelle, Jim Rodgers, and Bob Behnke. Event to include instant gallery, companion activities, and tradeshow. For more, visit segmentedwoodturners.org.

Minnesota

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

- January 9–March 20: *Art from the Lathe*: Selections from the AAW Permanent Collection
- January 9–May 29: *She's Tops*, a selection of artist-made spinning tops
- March 27–May 29: *The Space Between* (17th annual POP exhibition featuring small-scale sculptures)
- September 4–December 28: *Bridging the Gap: The Craft and Art of Woodturning* (AAW 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 26, 27, 2022, 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.

Pennsylvania

September 23–25, 2022, The Mid Atlantic Woodturning Symposium, Lancaster Marriott Hotel and Convention Center, Lancaster. For more, visit mawts.com.

Washington

March 19, 2022, Northwest Washington Woodturners presents its 11th annual all-day demo: A Day with Nick Agar, Anacortes First Baptist Church, Anacortes. Nick will spend a full 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.



VIRTUAL EVENTS

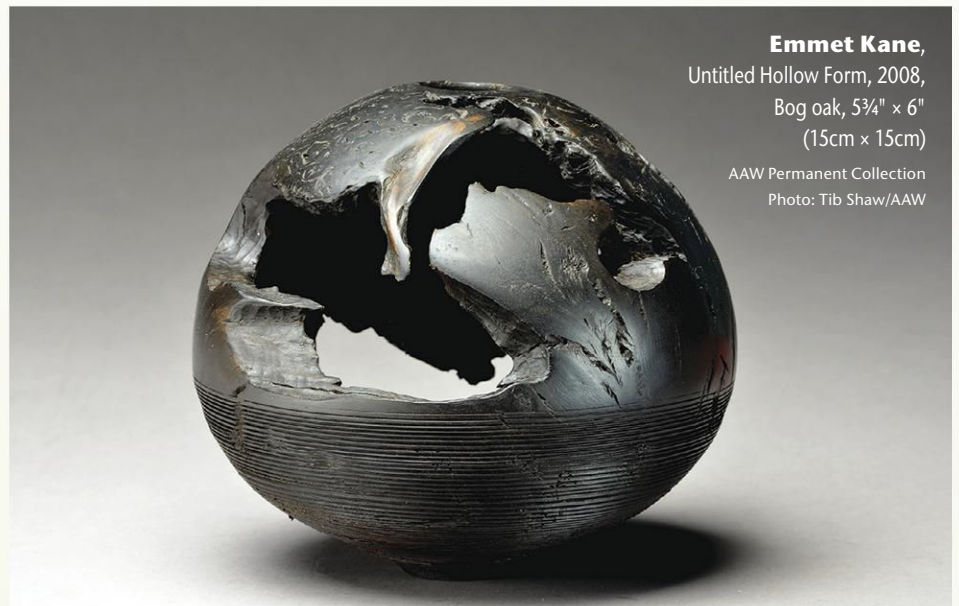
View interactive demonstrations from the comfort of your own home.

Visit tiny.cc/AAWPresents for more details and to register for upcoming sessions.



2022 DATES

- February 19: Mark Dreyer and John Underhill – From Pen Turning to Pen Making: An Extended Look at Differentiating Yourself in the World of Pen Making and Casting
- March 5: WIT Presents: Tania Radda
- March 19: Dale Larson – Getting the Best Bowl Blanks from a Tree
- Additional sessions TBD



Emmet Kane,

Untitled Hollow Form, 2008,
Bog oak, 5¾" × 6"
(15cm × 15cm)

AAW Permanent Collection
Photo: Tib Shaw/AAW

SKILL-BUILDING PROJECT

Getting Started in WEARABLE RINGS

Kurt Hertzog

A project that has been very popular in the woodturning community in recent years is wearable rings. As with the range of penturning possibilities, rings can be made very simply or quite elaborately. Focusing on those who are new to turning wearable rings, this article covers the basic concepts and offers a path to creating your first ring. This article addresses turners who want to get started with no specialized equipment or out-of-pocket investment—that is, making a ring “from scratch” using common tools, wood, workholding methods, etc.

A second article will soon follow, addressing turners who want to take their rings to the next level and don't mind buying extra gizmos. As with any of the woodturning specialties, the ring-turning market offers blanks, castings, jigs, fixtures, kits, specialty finishes, specialized mandrels, ring cores, and more. These two articles should give you the basics to build upon and go as far as you wish in making wearable rings.



Ring sizing and design

Whether making basic or advanced rings, you will need to know the ring size of the planned recipient. Keep in mind that a ring's fit can vary with the season, as fingers may swell in the summer months. The desired (comfortable) ring size also depends on the ring design, especially the width of the band; the internal profile and edge treatment are important factors here. Don't forget that a few added or lost pounds can alter ring size, too.

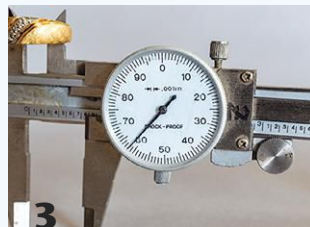
How you design the ring and your choice of materials are dictated by the expected use. Will this ring be a special dress piece, worn only on occasion, or will it be a wedding band worn every day, all day? Rings worn in an office environment will certainly take less of a beating than those worn on a construction site. Durability of materials is therefore an important consideration.

You can determine the correct ring size in a few simple ways. If the recipient

Ring sizing



A set of ring gauges is helpful for determining either the size of an existing ring known to fit or a previously undetermined ring size.



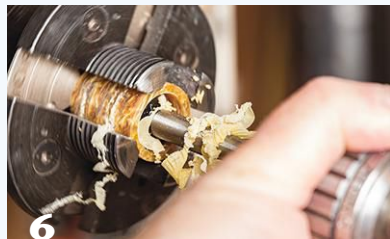
An alternate method—a dial or digital caliper.

Material selection



Straightforward wood grain is not the most visually appealing or strong. Instead, opt for an interesting burl, plastic, antler, or other material.

Blank production method 1: drilling



(5) A hole saw mounted in a drill press produces "plugs" of nearly the correct outside diameter.

(6-7) A Forstner bit mounted in a lathe cores the ring blank close to the final inside diameter.

has been measured recently by a jeweler or another knowledgeable person, you can usually rely on that number. If it is feasible, you could also have the recipient use a ring gauge to find the most comfortable size (*Photo 1*). I prefer to do this with the recipient, if possible, so I can see the fit for myself.

Another method is to measure a ring the recipient currently wears and finds comfortable. An inexpensive ring gauge can give you the size of that ring (*Photo 2*). If the recipient is not local, you could ask them to ship you an inexpensive ring they enjoy wearing. Note that some countries have different ring measurement systems, but these can be equated to the system you use. Sizing charts that help you convert any ring size to an inside diameter (ID) measurement can be found online.

Sizing can also be done by mathematical equation. We know that a size 3 has an ID of 14.1mm, and with every full size larger, the ID increases by 0.8mm. So you can determine the ID of any

size. For example, to find the ID of a size 9 ring, follow this equation: $((9-3) \times 0.8\text{mm}) + 14.1\text{mm} = 18.9\text{mm}$. A digital or dial caliper can also be used to verify ring size (*Photo 3*).

Material selection

Since in this article we are making a ring from scratch, without a metal or ceramic ring core, the strength of the ring will be determined by the material you choose, as well as grain orientation if you choose wood. Any material you can turn on the lathe is fair game—plastics, woods, antler, soft metals, and other natural materials.

While you can use any species of wood to make a ring, I find that most woods with plain or straightforward grain present difficulties. Regardless of how you orient the grain, you'll be at the mercy of the strength of the lignin bond and there will be a high potential for breakage with any stress. This encourages me to use burl (with its irregular grain), plastics, or antler (*Photo 4*). These

materials don't have strength issues related to grain orientation, and some (like antler) can be reinforced with cyanoacrylate (CA) adhesive.

Create the ring blank

Method 1

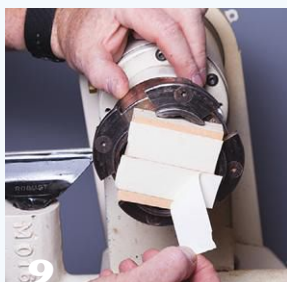
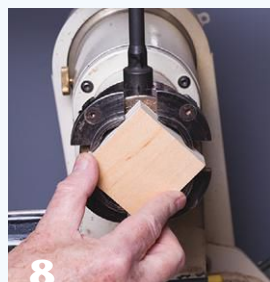
There are a variety of ways to create ring blanks. One method is to use a hole saw and Forstner bit. I like to cut multiple blanks at one time from flat stock at the drill press. First, cut part of the way through with a hole saw. Ensure the hole saw has a large enough diameter to accommodate the outside diameter (OD) you are shooting for. With the center hole from the hole saw and material surface still intact, a Forstner bit can be accurately located to bore to nearly the finished ID. Cut all the way through with the Forstner bit. To release the ring blank, switch back to the hole saw and cut the rest of the way through.

A variation of this method is to cut all the way through using a hole saw, then drill the ID using a Forstner bit at the lathe (*Photos 5-7*).

Method 2

Another method to create ring blanks is to cut them from flat stock fastened to a sacrificial faceplate. It is good practice to flatten the ring stock and make the front and back surfaces parallel prior to mounting on the lathe. *Photo 8* shows a small waste block mounted in a chuck. Use double-sided tape to mount the ring stock on the waste block (*Photos 9, 10*). ▶

Blank production method 2: turning



The ring material (burl) is attached to a sacrificial waste block using double-sided tape.

After transferring the ID ring size to the blank using a caliper, use a parting tool or bedan to cut out the ring blank (*Photos 11-14*). You could also use the hole saw and Forstner bit approach with the material mounted on the lathe. The blanks can be made as near to finished size as you wish by selecting the proper-sized Forstner bits and hole saws or by cutting appropriately with your parting tool.

Turn/sand to final size

There are several methods of work-holding that will allow you to complete the inner and outer diameters of the ring. I prefer to fine-tune the ID by lightly clamping the blank in a chuck and sanding the inside (*Photo 15*). If you have left just a little extra stock during your initial blank

sizing, the sanding will quickly get you to the finished dimension.

By this point in the process, you already know the target ID—whether by calculation, conversion chart, or actual measurement of a properly fitting ring. Use a caliper to check the ID of the ring as you progress (*Photo 16*). Be careful as you insert your caliper jaws into the ring, as it is easy to scratch or mar the inner surface with the sharp edges of the caliper. Once you have arrived at the correct size, the ideal test is an actual finger fit. Obviously, if this is for someone else, that ultimate fit check may have to wait. You can also slide the ring onto a ring gauge to confirm you've got the correct ring size number.

With the ID completed, I usually mount the ring on a shopmade mandrel to complete the outside

surface and edges of the ring. You could mount the ring in a chuck with expanding jaws, but I prefer an easily made mandrel. Mount a piece of scrap wood in a chuck and turn it to run true. Then form a spigot just smaller than the ID of the ring. If you take off too much material, you can take up the slack with a wrap or two of painter's tape. The goal is to have a no-slip grip that is loose enough not to split the ring when you mount it on the mandrel (*Photos 17, 18*).

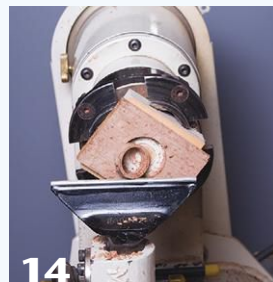
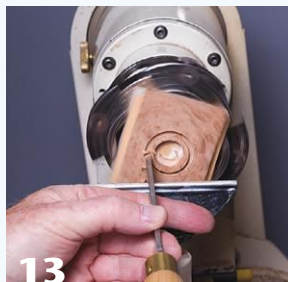
The OD can be sized, shaped, and sanded to completion, moving the ring as needed on the mount (*Photos 19-21*). The versatility of this mounting technique is exceptional, as it allows you to cut and sand into the tape and mandrel, which can be replaced as needed. You can also hang the ring over the end to work

Transfer ring size to wood



Use a caliper to transfer the desired ring size to the wood.

Turn ring blank



The author turns the inside and outside diameters with a parting tool.

Fine-tune inside diameter



To fine-tune the inside diameter, the author sands away material using sandpaper wrapped around a dowel. Stop the lathe and check progress using a caliper.

Shopmade mandrel



To work on the outside diameter, a shopmade mandrel is useful. Turn a spigot to accept the ring.

Complete outside of ring



19 The outside of the ring is turned, sanded, and parted to a custom width.



20



21

The author cleans up the ring's edge by partially mounting it on the mandrel.

Apply finish



22

Plastic wrap keeps the ring from getting stuck on the mandrel during finishing.

on the edges, which should be eased for a more comfortable fit.

With the ring completed, inside and out, you can apply a finish on the outside while the ring is mounted on the mandrel. One way to avoid getting your finish on the mandrel, and to prevent gluing the ring to the mandrel, is to place some plastic wrap over the spigot (*Photo 22*). Finish the outside of the ring, then remove it and finish the inside.

Finishing

There are many different finishes that can be used on rings. Much like pens, rings are subjected to frequent abuse. They are banged against things, scratched, and at times crushed. Some materials, such as plastics—whether cast, extruded, or solid surface—and dense woods like blackwood, don't really need a finish at all. They can be polished and buffed to any sheen, and you can rely on the material's inherent characteristics for durability.

For woods requiring a finish for looks and protection, there isn't a finish that is too tough. Virtually any woodworking finish can be used on wood rings. To punch up the grain on a burl ring, oils will do nicely but provide little to no wear protection.

The three finishes that I have found are easy to apply and will

stand up well over time are lacquer, CA glue, and UV-curing resin. Once the finish is cured, the ring can be buffed to the desired sheen.

Coming up next

In the next article on rings, we'll explore other options available for those willing to invest in specialty ring-turning equipment and supplies. There are one- and two-piece ring cores in metal and ceramic, which add elegance and durability. For workholding, there are several

precision-machined mandrels on the market. With a solid understanding of the processes and materials, you'll be well on your way to making professional-quality rings. ■

Kurt Hertzog is a past president of the AAW, past chairman of the Rochester Woodworkers Society, and a council member of the Pen Makers Guild. He has written about woodturning and woodworking extensively for various publications. For more, visit kurthertzog.com.

Production Mode

To make many rings of the same size and material quickly, I create a "progressive blank." Mount the material in a chuck and turn a cylinder to nearly the final OD. Once an appreciable length of stock is turned, remove the tailstock and true up the end. Mount a slightly undersized Forstner bit in the tailstock and drill deep enough to part off a few rings (*Photo a*).

With the ID drilled, sand the inside to final dimension and ease the one exposed edge. Now part off that ring using a skew or other cutting tool (*Photo b*) and set it aside to complete the other edge on a mandrel later. Continue parting off rings at your desired width until the stock is depleted. This technique can produce many well-turned rings in a very short time.



a



b

The author turns and hollows a cylinder of burl, then parts away multiple rings. A thin dowel held in the cylinder catches the rings as they come off.

Touchless Turned Lamp

Kai Muenzer

Here is a functional project with a simple but elegant design. This decorative accent lamp can be operated with just the wave of a hand, thanks to a touchless sensor protruding through a hole in its base. All wood parts can be turned from readily available 1" (25mm-) thick stock. The design possibilities for piercing the lamp screen, allowing the light to come through, are limited only by your imagination.

Design and materials

The turned components of the lamp are shown in *Photo 1*. The frame holds two screens (front and back), with the front screen being pierced to allow the light to pass through. The inside of the back screen can be lined with reflective foil to increase the light's intensity. For an attractive design, I like to make the frame and base from the same wood

species, and the screens and post from another, contrasting species.

Between the two screens, a strip of LED lights is connected to the inner edge of the square frame. The turned post has a hole drilled through it, so you can connect the LED strip to the electronics, which are contained in the base. The base contains the battery pack, which needs to be accessible for replacement. With the weight of the batteries in the base, the lamp stands securely without tipping.

As outlined here, all turning for the project can be completed on a mini- or midi-lathe. The following wood components are needed, all in 1"-thick dry hardwood:

- Frame and base: Both cut from one piece, 7" × 7" (18cm × 18cm)
- Screens: Two pieces, 6" × 6" (15cm × 15cm)
- Post: One piece, 5¼" (13cm) long, 1" square

Electronics

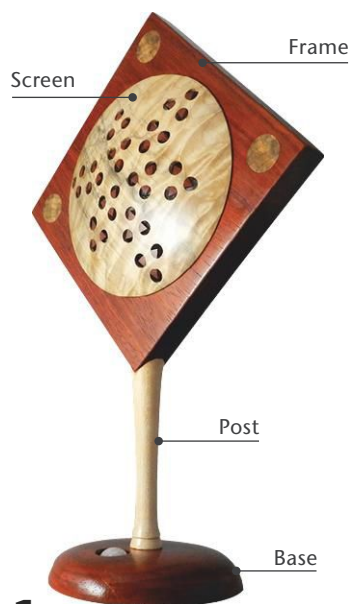
Unfortunately, I could not find a ready-made kit that includes a small battery pack and a motion sensor to feed an

LED strip. However, the electronic parts are commonly available and can be found easily online. An example of the components and wiring is given in *Photos 2 and 3*. The electronic parts you will need include the following:

- Battery holder for four AAA batteries
- Human Infrared Sensor Module (I used HC-SR501)
- General-purpose transistor (I used N3904 TO-92 NPN)
- Heat-shrink tubing, 2mm
- DC-powered 5-volt flexible LED strip, 3' (1m) long
- Resistors: 47 ohm, 2K2 ohm
- Soldering iron and kit, brass brush
- Electric wire stripper

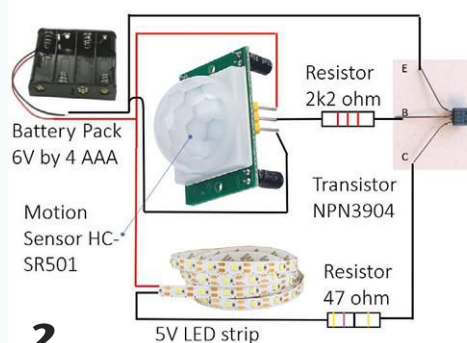


Wood components

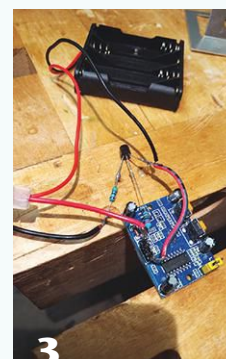


1

Wiring diagram



2



Basic soldering connects the electronic components.

3

Shape outside of screen



4 Mount and turn the outside of the two screens to a gentle curve. Leave a tenon for remounting in a chuck.

Shape inside of screen



5 Remount the screen in a chuck and turn the inside profile. Leave a flat rim for later mounting in the frame.
6

Remove tenon



7 The author remounts the screen in bowl jaws so he can remove the tenon from the outside.

Separate base from frame



8 With the frame material centered on a sacrificial faceplate and held in place with hot-melt glue, drill through the frame with a $\frac{5}{8}$ " bit.



9 Turn a recess in the base $\frac{5}{8}$ " deep, then part off the base from the frame.



Test-fit screen in frame



11 Turn a shallow step in the frame to accept the screen rim, and check for a snug fit of the screen in the opening.



The project requires some basic soldering to make the wiring connections. If you have never tried soldering, it is not very difficult to learn, and working with low-voltage electronics is relatively safe. I provide step-by-step instructions in the video referenced at the end of this article.

Turn the screens

Turning the screens is like turning a simple bowl, except that the rim of the screen must fit snugly into the recess of the frame and there is no foot. To mount the screen material on the lathe, I glued sacrificial tenons, or spigots, to the center of the squares. I made the spigots the correct size to fit the jaws of my chuck.

Before mounting the screens on the lathe, cut the square blanks to a 6"-diameter circle. Then, with the spigot clamped in the chuck, true up the blank and turn its outside profile to a smooth,

shallow curve. Leave a small tenon to fit the jaws of your chuck (*Photo 4*).

Now reverse-mount the blank so you can turn the inside of the screen. Bring the tailstock up for support as long as you have sufficient space to turn safely. Turn a flat rim, about $\frac{1}{8}$ " (3mm) wide. Aim for a consistent wall thickness, and continue the smooth curve down to its center, just as you would with a shallow bowl (*Photos 5, 6*). The wall thickness depends on the type of piercing you want to do.

To remove the outer spigot, I reverse-mounted the screen once again, this time holding it in large plate jaws, or bowl jaws. A vacuum chuck would also work well. Turn away the temporary tenon and complete the smooth curve on the outside of the screen (*Photo 7*). If you are aiming for thin walls, you may need to temporarily take the screen out of the jaws to check wall thickness with a caliper.

After sanding the outside and with the screen still mounted, you have an opportunity to sketch a design for piercing. To function as a decorative lamp with enough light shining through, aim for at least 10 percent of the front screen to be pierced.

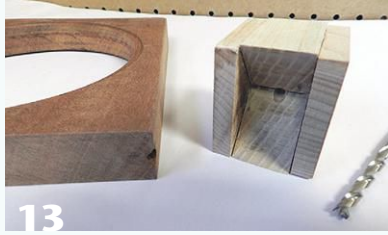
Repeat this turning process for the back screen, but without the piercing.

Turn the frame and base

Frame

To mount the wood for the frame and base, I attached a sacrificial scrap of plywood to a faceplate. You could also mount the plywood using a chuck. Before mounting the frame, ensure the material is planed flat and cut square. I mounted the frame to the plywood disk using a seam of hot-melt glue along all four sides. Use your live center in the tailstock to help center the work. ►

Drill corner hole



13 A handy shopmade corner drilling jig ensures a straight hole through the corner of the frame. This hole will allow for wiring to pass from the frame to the post and then down to the base.

Drill a $\frac{5}{8}$ " (16mm) hole through the center of the frame (*Photo 8*). Then widen the center area to $3\frac{1}{2}$ " (9cm) diameter, $\frac{5}{8}$ " deep; this will be the cavity that will accommodate the electronic parts (*Photo 9*). You need only a parting tool and a small bowl gouge to hollow the cavity. Make sure the cavity has straight sides and a flat top. Next, cut out the $5\frac{1}{2}$ " (14cm-) wide base with a parting tool, carefully reducing the lathe speed just before the tool cuts through (*Photo 10*). Set the base aside.

I used a parting tool to form a $\frac{1}{8}$ "-deep recess in the frame to accommodate one of the screens. Check that the screen has a snug fit in the recess (*Photos 11, 12*).

To separate the frame from the plywood disk, place the assembly in a microwave for a few seconds to melt the glue or use a heated knife to cut through it. To turn the

Drill and plug sensor hole



14

Drill the hole for the motion sensor through the base. During turning, a temporary dowel is put in place to reduce tearout.



15



16

recess on the opposite side of the frame, remount the work using a jam chuck, possibly supported by hot-melt glue.

When the frame is completely turned, mark the front and back, as well as the top and bottom corners. Any residual hot-melt glue can be removed from the frame using a heated kitchen knife or with rubbing alcohol.

With the design of this lamp, the post connects to the bottom corner of the frame. A $\frac{3}{16}$ " (5mm) hole is required in the bottom corner of the frame, so a cable can be passed through it and down the post. To drill this hole, I used a shopmade corner jig, as shown in *Photo 13*. The jig centers the drill bit on the corner of the frame.

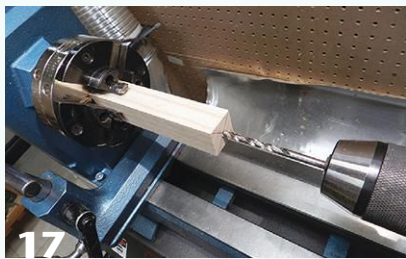
Base

The base, which had been parted from the frame material, gets a slightly domed

top. But first, drill a $\frac{7}{8}$ " (22mm) hole through the base, up from inside the electronics cavity, about $\frac{3}{16}$ " from its edge (*Photo 14*). Plug the drilled hole with a dowel to prevent tearout while shaping the top of the base. Any waste wood can be used for this sacrificial dowel.

I mounted the base using my chuck in expansion mode, opening the jaws into the turned recess in the bottom. Now the top of the base is ready for turning. Pay attention to the wall thickness, particularly at the widest part of the recess, where you are more likely to break through accidentally. A small hole in the dowel serves as a welcome guide to wall thickness (*Photos 15-16*). Also, check the fit of the motion sensor to decide if further turning is required. To function properly, the screen of the motion sensor

Drill post



17 Drill a hole all the way through the post. The author drills halfway through, then flips the work and completes the hole from the other side.

Turn post



18

Before turning the post, cut a notch in its top end, so it will later mate up with the corner of the frame. Temporarily remount the notch using hot-melt glue, so you can mount the work between centers. Turn a tenon and flange at the bottom end.



19

needs to protrude slightly above the surface of the base.

Turn the post

The post connects the base to the frame and serves as a conduit for an electric cable. To fit properly, the top of the post must mate with the square corner of the frame, while the bottom end must fit into the $\frac{5}{8}$ " hole in the center of the base. A turned flange at the bottom of the post sits on top of the base.

I mounted the post material in my chuck, using pen-blank type jaws, and drilled a $\frac{3}{16}$ "-diameter hole about halfway through the blank (*Photo 17*). Reverse the blank in the chuck and drill from the opposite side. This method reduces the risk of a longer drill bit drifting off center.

While the post is still a square blank, mark and cut out a small corner at one end, but don't discard the cutout corner piece (*Photo 18*). Reattach the corner piece temporarily using hot-melt glue, then mount the post on the lathe between centers, with the bottom end near the tailstock.

After roughing the post blank round, turn a tenon at the bottom end to fit the hole in the base. Form a flange for a seamless connection with the top of the base (*Photo 19*). Remove the post for an actual check of the tenon's fit. Remount it between centers and shape the top end of the post, gently reducing the thickness of the two "wings" that will contact the sides of the square frame. Shape the rest of the post as you like, leaving a minimum of $\frac{7}{16}$ " (11mm) diameter.

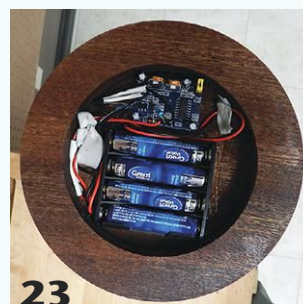
Assembly

Feed the LED cable through the frame, post, and base, as shown in *Photo 20*. About 3' of LED strip will wrap around twice inside the frame. Glue the LED strip in place with spray adhesive, starting from the location of the cable hole (*Photo 21*). Once the available area inside the frame is covered, you can cut any extra LED strip between any two lights.



Adhere LED strip

After passing the LED's connecting wire through the frame, adhere the LED strip inside the frame.



Install electronics in base

Glue the wood components together, then install the soldered electronics in the recess in the base. Not shown, the author covers the recess with a piece of mouse pad material, using screws to allow for future access.

This is a good time to check the function of the LEDs by temporarily connecting the strip to the battery pack. A reflective foil can be added to the inside of the back screen for improved light intensity.

Attach the post to the base with epoxy. To glue the post to the frame, I held the frame upside down in a vise (*Photo 22*). Make sure the hole for the motion sensor points to the front of the lamp.

Check the fit of both screens before gluing them to the frame. The front screen can be glued with a few dots of hot-melt glue from the inside of the frame after the screen is pressed in place. Then add a few dots of glue on the recess and press the back screen in place.

Check that the connected (soldered) electronic parts fit within the cavity of the base. With the lamp clamped upside down in the vise, put the electronics in place and connect the cable of the LED strip. After checking its function, glue the wired components in place with dots of hot-melt glue (*Photo 23*). For improved stability of the lamp when standing, I covered the electronics by

screwing a piece of mouse pad under the base. This will also allow access to replace the batteries.

Now it is time to give yourself a pat on the back and place the new lamp somewhere to enjoy the light when someone walks into the room!

Kai Muenzer has been an international turning demonstrator and teacher since 2012. His signature projects often combine art with function and can be viewed at kaimuenzer.com.

You read the article—now see the video!

Kai Muenzer has created a helpful video, covering the soldering and assembly of the electronic components of this touchless lamp project.

View the video at tiny.cc/touchlesslamp or scan the QR code with your mobile device.



Make an ELLIPTICAL VESSEL

Beth Ireland



The pattern fence: a borrowed concept

When I was new to woodturning, I never tossed bowls away simply because I had turned through the bottom. They went into my “parts” bin, and when I had time, I would mess around with them, trying to figure out what they could be. Striving for perfection is great, but each item you make becomes precious, and you are less likely to explore alternative possibilities. Creativity comes from alternative possibilities.

A Beth Ireland/Tom Buchner collaboration.



In the early 1980s, my woodworking mentor taught me about pattern fences and how they are used in cabinetmaking. Later in my career, I used a pattern fence to make staves for coopered columns. And about six years ago, I adapted the concept to make elliptical vessels from turned bowls.

I take classes in as many non-turning-related subjects as possible. When I took metal-smithing classes, I was not thinking about metal smithing, I was thinking, *How can I bring these techniques to my woodturning practice?* When taking archeology classes, I was thinking, *How do these objects from antiquity relate to my woodturning practice?* As an architectural woodturner, I have spent lots of time standing at a lathe, a bandsaw, and a table saw, thinking about the objects I am making. That is how the adaption of the pattern fence for making the elliptical vessels

came about. I was messing with my box of “holey” bowls, and that week’s job was coopering columns. I was using the pattern fence to make staves but thinking about the bowls in my parts bin. The two came together in my head, and I started adapting and experimenting that night.

What is a pattern fence? It is a simple jig that allows you to cut a straight edge on a workpiece that does not have a reliable working edge. Typically in woodworking, a straight edge is cut by referencing an existing edge against a fence, resulting in a straight, parallel cut. To make elliptical vessels, the idea is to cut the center out of a bowl and fit the two outer pieces together. But a bowl does not have a straight, or working, edge to run against the bandsaw fence, so you must create one. A pattern fence facilitates this process.

A temporary straightedge

Begin with the bowl you want to work with. If you rough-turn a lot of wet bowls, I am sure you have a

Good candidates



Cracked or otherwise defective bowls are good candidates for making elliptical forms. The center section will be cut away.

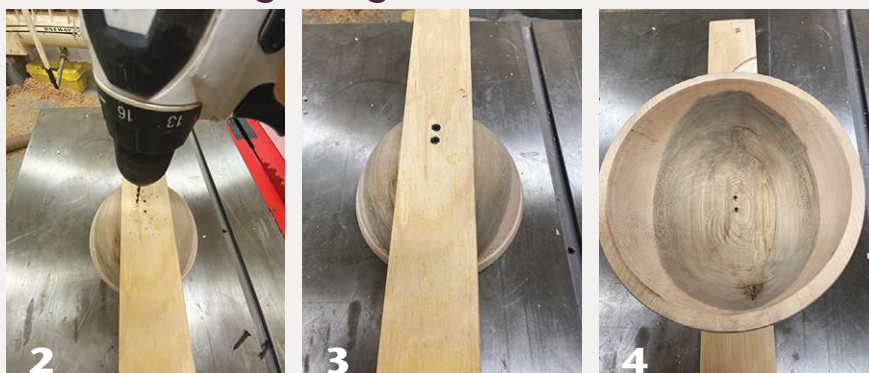
few lying around that have cracked on the rim, or possibly you went through the bottom.

Once you have identified a bowl to use, think about the final shape you want. You will be cutting a parallel strip from the middle of the bowl. The wider the strip, the narrower the final two side pieces will be, with sharper, steeper angles. The thinner the strip, the rounder the glued form will be.

In the example shown here, I started with a bowl that was turned wet and had dried to an oval (*Photo 1*). I wanted to remove the crack at one edge, but I also needed to take out a strip from the middle in such a way that the two remaining pieces would be as close in shape to one another as possible. To split this oval bowl symmetrically *and* remove the crack, I needed to remove a strip at least 1¾" (4cm) wide. I like my elliptical vessels narrower and sharper looking, so in this case, I decided to remove 2½" (6cm). From a scrap piece, I ripped a temporary straightedge 2½" wide. Make sure to leave your straight-edge long; mine was about 24" (61cm).

The rough-turned bowl I used had a foot, so I could use the flat surface on the bottom of the foot as a reference to measure each side and ensure the two would be equal. If you are using a round bowl, you can use any

Attach a straightedge



Cut a long straightedge with parallel sides and attach it to the bottom of the bowl. Ensure the straightedge is centered. Predrill and screw the long strip to the bowl.

Make an overhead pattern fence



An overhead pattern fence, clamped to the bandsaw fence, allows the bowl to pass under it. (Note: The single hole in this fence is just for hanging it on the wall. If you want to use large holes rather than notches to position the clamps, more than one would be needed.)

remaining tool marks as a guide. Spend the time needed to get both sides as close to equal as possible, as there will be less sanding required after you cut them. I darkened the bowl foot edges with a pencil so it would be easier for me to compare visually.

Predrill and screw the straight-edge onto the bowl (*Photos 2-4*). Predrilling makes it easier to maintain the careful alignment you have achieved. Don't worry about screws going through and out the other side, as they will not come near the bandsaw blade. I use short sheetrock screws. If the center is missing from ►



Adjust fence position



7 Position the bowl to be cut on the bandsaw table, rim down, with the straightedge against the pattern fence. Adjust the bandsaw fence so that the blade is aligned with the opposite side of the straightedge.

Cut one side



8 The author cuts away one side of the bowl, being sure to keep the straightedge firmly against the overhead fence.



your bowl, place the holes out on the edges, where you know you will catch some wood. Now you basically have a bowl on a stick. Make sure the bowl is firmly attached.

Make a pattern fence

Now you will need a fence to run the straightedge against, and this is where the pattern fence comes in. The pattern fence—I call this variation an “overhead fence”—is just a straight piece of wood that is wider than the sides you are cutting off, say half the width of your bowl. I cut two notches in the pattern fence, so I could clamp it to my existing

bandsaw fence without the clamps sticking out farther than the edge (Photos 5, 6). As an alternative, you could also drill a couple of large holes in the pattern fence. If your bowls are big and wide, it is best to position the clamping pressure closer to the bandsaw fence; drilled holes could be of benefit in that scenario, as you wouldn’t have to cut deep grooves into the edge of the fence.

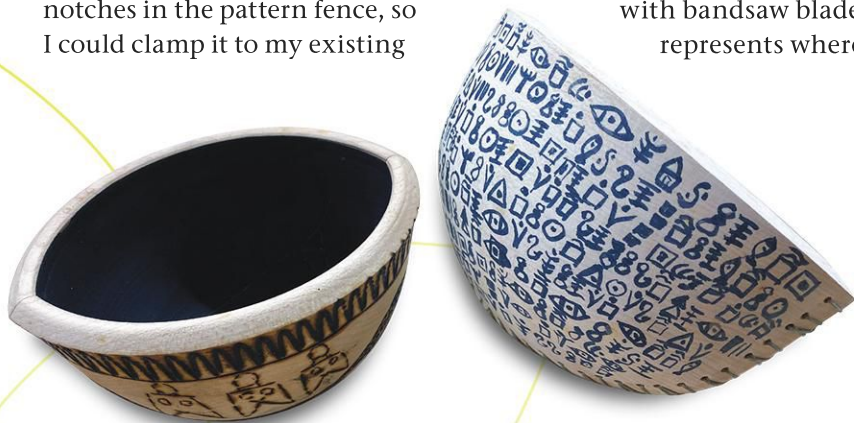
The idea is to run one edge of your “stick on a bowl” against the edge of the overhead fence. The opposite edge must be exactly aligned with bandsaw blade, so it represents where the blade

will cut (Photo 7). Adjust the position of the bandsaw fence accordingly and lock it in place.

Cut away bowl sides

With the overhead pattern fence mounted and the bandsaw fence positioned, it is just a matter of keeping the straightedge against the pattern fence as you slide the bowl into and past the blade (Photos 8, 9). After cutting one side of the bowl away, flip the whole piece around and cut the other side. This will leave you with the middle section (waste material) still attached to the straightedge (Photos 10, 11). Of course, this curved element can go into your “parts” bin for future creative possibilities.

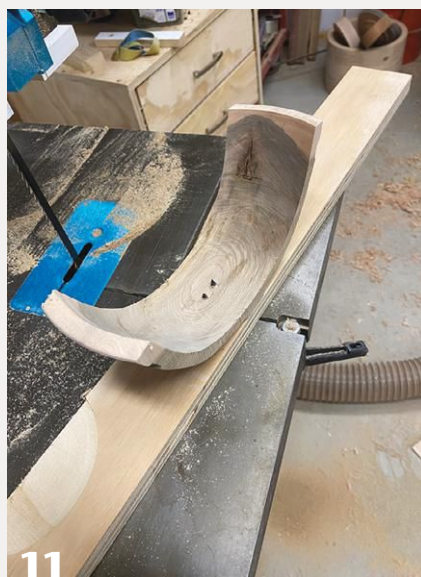
Note that for both cuts, the bowl rim is securely registered against the bandsaw table. Never cut unsupported round or “rocking” pieces on the bandsaw, as this would pose a safety hazard. Since I made the straightedge long, I could grab it



Cut the other side



Rotate the bowl 180 degrees and cut the second side away, again keeping the straightedge against the overhead fence.



The center section still attached to the straightedge. What can this waste material become?

Evaluate glue joint



Hold the two sides together and evaluate the glue joint. Here, some gaps show, and the left side is a little bigger than the right side.

on either side, without my hands coming close to the blade. For this kind of cutting, use a stiff blade that will not flex. I typically use a $\frac{1}{4}$ ", $\frac{3}{8}$ ", or $\frac{1}{2}$ " (6mm, 10mm, or 13mm) blade with 4 tpi (teeth per inch), but any stiff bandsaw blade will work.

Prepare gluing surfaces

Now you have the two halves of an elliptical form that should be close to a perfect fit. But no matter how hard you try, there is always a little adjusting to do. Hold the two pieces together and evaluate the seam (Photo 12). You will probably have a wider gap at the bottom of the form. Now notice the top edges. If one side hangs over a little, you will need to sand it a little more than the other side.

To prepare the newly cut bowl edges for gluing, sand them on a flat surface (see *Flattening Board sidebar*). When you look at the soon-to-be-glued edges, you will see blade marks from the bandsaw. You will need to

Sand gluing surfaces



Pencil marks help you to see where your pressure is when sanding. Use a flat sanding board to true the surfaces and make them equal in size.



sand these marks off to get a clean glue joint. Draw several pencil marks on both glue surfaces and sand on the flat surface, keeping the pressure as even as possible (Photos 13, 14). When

all the pencil marks are gone, you know you have a flat surface. Now check the fit for size. If one side is bigger, keep sanding that side until the two parts fit together perfectly. ►



Glue sides together

Now comes the gluing. I like to use spring clamps for odd-shaped pieces such as these elliptical forms. I use Ulmia or Collins brand spring clamps. They are expensive but really come in handy during glue-up. I have purchased cheaper brands and ended up throwing them away.

Spring clamps come with a tool that opens them so you can put them in place. When you let go of the tool, the clamp squeezes securely (Photos 15, 16). I take mine to the grinder and sharpen the tips. They do leave a little mark, so if that is not acceptable on your finished piece, duct tape works well as a clamp, provided the fit of your glue joint is good. I use Titebond II for almost all of my regular glue-ups. Wipe off the glue squeezeout inside and out with a damp cloth.

Elliptical form as sculpture

I often use these elliptical forms in sculptural work, adding parts together and embellishing them. Sometimes, I do not glue but sew the pieces together instead. See where your creativity leads you—these forms are ripe for imaginative play.

The real trick is to find something to do with the leftover center section. I have lots of them in my “parts” box, just waiting for inspiration to strike. ■

Glue and clamp



15



16

The author applies wood glue to one edge, then clamps the sides together using spring clamps. Wipe off excess glue inside and out. When the glue dries, let the creative fun begin!

Flattening Board

I made a dedicated flattening board from a sink cutout from a countertop, but you could use any board that is flat. Attach strips of self-adhesive sandpaper (80 or 120 grit) to the flat surface (I use Klingspor sandpaper). Clamp the sanding board down securely. This setup is great for flattening many things in the shop, from tools to guitar parts. When you need to change the sandpaper, use a heat gun or hair dryer to loosen the grip and peel off the worn abrasive. Then replace it with new strips of sandpaper.



Beth Ireland, a professional architectural woodturner and sculptor with more than thirty years of experience, lives and works in St. Petersburg, Florida. She teaches the two-month Turning Intensive at The Center for Furniture Craftsmanship in Maine, as well as workshop classes at major craft centers around the country. For more, visit bethireland.net.



Shopmade Dust-Hose Fittings

Bill Wells

In addition to my lathe, I regularly use another half-dozen power tools in my shop—all of which generate dust. Like most woodworkers, I rely on shop vacuums to collect dust from tools. Problem is, there is little standardization between hose sizes, fittings, and tool connection ports. Even accessories for vacuuming the floor won't always fit the hose. I have a bucket of hose adapters, but most do not fit any of my tools. But since I have a lathe, I have a solution to the problem: I can easily turn custom-sized adapters.

I first realized this solution when I purchased a new miter saw. I could not find a hose or adapter to fit the dust port on the saw. But I discovered that a standard 2" (5cm) PVC pipe elbow did fit nicely over the port. I turned an adapter in wood so that one end fit over the pipe elbow and the other fit the vacuum hose (*Photo 1*). I now have wood adapters throughout my shop and don't have to search through a bucket of fittings, or worse, order a new fitting and hope it fits.

Turn an adapter

Dust-hose adapters can be turned quickly. Start with a blank about 3" (8cm) long and at least ½" (13mm) wider in diameter than the hose or tool fitting, whichever is larger. I turn most adapters from pre-made dowels (*Photo 2*). I have found that lengths of

2"-diameter dowel are available at most home centers, and 3" dowel can be ordered online. Adapters for 2½" and 1½" (6cm and 4cm) vacuum hoses can be made from these two dowel sizes.

Turn a tenon on each end of the blank and mount the blank in a chuck. Next,

drill a hole halfway through the blank, using a Forstner bit that is slightly smaller than the outside diameter of the hose you will be connecting (*Photo 3*). Then, carefully enlarge this hole so that the hose fits snugly inside (*Photo 4*). Rather than measuring, it is better to check the fit often with the actual hose.

Reverse the blank and repeat the process for the tool fitting. Finally, reduce the diameter of the adapter, leaving a wall thickness of about ¼" (6mm).

Helpful Hint: Whenever possible, make your wood adapter to fit *over* (rather than *into*) the hose and fitting, so you won't further restrict air flow. ■

Bill Wells is a retired engineer living in Olympia, Washington. He has worked with wood most of his life and is now a member of Woodturners of Olympia. Bill welcomes comments at bill98502@msn.com.

A custom solution



1 The author turned a wood adapter to connect his dust hose to a 2" PVC elbow attached to his miter saw. The adapter fits *over*, not *into*, the hose and PVC fitting.

Dowels as blanks



2 Store-bought 2"- and 3"-diameter dowels are perfect for making most hose adapters.

Drill and fine-tune fit



3 Drill halfway into the dowel, then widen the hole using a hollowing tool. Stop the lathe and confirm a snug fit of the hose or tool fitting. Flip the adapter around in the chuck and repeat the process for the other side.



PRODUCTION PROJECT

Converting a STUMP BURL INTO BOWLS

Dale Larson



I turn a lot of Western bigleaf maple and Pacific madrone. Both trees can produce large stump burls, whose grain pattern is what I call pin burl, where the burl grows out from a central point in the tree. This is a different type of burl than what I generally see in birch and cherry, whose grain tends to grow more in a circular pattern. In February 2020, I bought a madrone stump burl; it weighed about 3,000 lbs and measured roughly 5' x 7' (1.5m x 2.1m). This is the story of

how I processed that stump burl to maximize the number of beautiful bowls I could get from it.

Slab it

The first step was to turn the burl over so that its bottom was facing up. I used a pressure washer, chainsaw, and axe to clean the dirt and rocks off the bottom surface.

I then walked around the stump and evaluated its grain to determine how to get the best patterns in turned bowls. I used yard sticks and

crayons to lay out slabs, which were 5" to 7" (13cm to 18cm) thick. Then, using an old chain on my big chainsaw, I cut down through the first 5" to 7" of the roots (*Photo 1*). This is where I was most likely to find rocks and dirt.

Once I got through the first layer of the stump, I put a new sharp chain on the chainsaw because I wanted to ensure I'd get straight cuts through

Cut slabs



1 With the stump burl upside down, the author lays out slabs and cuts only part of the way in.



2 A sharp chain ensures straight cuts the rest of the way through. Slabs are cut off each side in alternating fashion to keep the work balanced.



3

Form bowl blanks



4 Circles of varying sizes are drawn on each slab using a large compass. The best burl figure is positioned for maximal effect.



5 The blanks are first rough cut with a small chainsaw and then made round at the bandsaw.



6

the rest of the wood. I then cut on alternate sides, removing one slab from each side of the burl to keep it balanced (*Photos 2, 3*). I almost always hit dirt and rocks, so re-sharpening was a given.

Make bowl blanks

With the stump cut into slabs, I worked on one slab at a time to lay out the bowl blanks (*Photo 4*), using a water-soluble ink pencil and a compass. My rule of thumb was to lay out the best bowl blank first and then proceed to less attractive parts of the slab. I then cut the bowl blanks out with a small chainsaw (*Photo 5*).

Once the bowl blanks were rough-shaped with the chainsaw, I took them to the bandsaw to cut them round (*Photo 6*). There are always pieces of scrap that are too small for bowls; I cut these pieces into rounds to be used for spheres and hollow forms (*Photo 7*). As long as the wood showed nice burl patterns, I saved it down to the size of pen blanks.

To help preserve wet pieces that I couldn't immediately rough-turn and prevent them from cracking, I placed the bowl blanks in large stock tanks filled with water (*Photo 8*). The blanks can be stored in water for quite a while; I have left

wet blanks in water for a couple of months without the wood degrading. However, it is a good idea to add bleach to the water to discourage the growth of insects and fungus. I use plastic tanks. If the wet wood is stored in tanks made with iron, it will react with the tannic acid in the wood and discolor the wood a dirty gray color.

Rough-turn the bowls

With all the blanks rounded and safely stored, I was ready to rough-turn the bowls. I started by mounting a bowl between centers (*Photo 9*), something I learned from John Jordan. When I first started turning wood, I would mount the rough blank using a faceplate. Roughing out between centers has the advantage ►



7

Other turning blanks

Pieces too small to become a bowl are not wasted but prepped for other projects such as hollow forms and spheres.



8

Temporary holding tanks

To prevent the rest of the bowl blanks from cracking while each one is rough-turned, the author submerges them in water. Blanks can be preserved in this manner for months without degrading.

Turn the outside



9 This blank's lower half was rough-shaped using an electric chainsaw to further improve its balance on the lathe.



10 The outside profile is shaped using a bowl gouge. Note the chucking tenon on the foot. Since this project involves batch processing, several bowls are turned to this stage before proceeding.



A bottom that is too thick won't allow the wet blank to move as it dries, and this makes the blank more likely to crack.

of letting me adjust the alignment on the fly, so I can position the best figure in the blank or, if I find a flaw in the wood, turn away parts I don't want. The idea is to keep all your options open for as long as you can (*Photo 10*).

For a processing project such as this, I generally rough out fifteen to twenty bowls a day. I first work between centers and do all the outside profiles (*Photo 11*), before hollowing the rough bowls.

To hollow these stump burl bowls, I re-mounted them in a chuck,

using the tenon I had formed on the foot. Again, when I started turning green wood, I would screw a faceplate to the bottom of the rough blank to hollow the bowl. But screws use up valuable wood and can leave black marks on wet wood due to the iron in the screws reacting with the timber's tannic acid. By using a chuck to rough out the bowls, I can avoid this problem. (I do, however, use a faceplate to mount bowls for finish-turning when they are dry.)

If the wood is very valuable or beautiful, I use the McNaughton system to core out smaller bowls (*Photos 12, 13*). The other two systems I have seen on the market are the Oneway coring system and the Woodcut system. Each has its advantages. I like McNaughton because I can vary the shape of the core. The downside of the McNaughton system is that it is less predictable. And with this stump, I ruined a beautiful 14" (36cm) bowl by coring too deeply.

After I cored the blanks, I cleaned up the inside of the bowls with a

bowl gouge, striving for consistent wall thickness (*Photo 14*). I learned from production turner Mike Mahoney that the thickness of the bottom of the rough bowl should be the same thickness as the walls. A bottom that is too thick won't allow the wet blank to move as it dries, and this makes the blank more likely to crack. As with other steps in the process, I cored and hollowed several bowls in batch mode (*Photo 15*).

Stabilize and dry the bowls

With Pacific madrone, I use one of two methods to stabilize the rough-turned bowls. At this point, the wood has a lot of internal tension, and if I simply left the blanks to air-dry, they surely would all crack. One way is to turn the wet madrone very thin and then let it move and warp as it dries. Christian Burchard and Helga Winter have done this very successfully, creating beautiful forms. The wood dries without cracking and gains an interesting texture due to the movement.

I turn functional salad bowls and, for the most part, want them to remain symmetrical. So I stabilize the bowls—preparing them for drying—by boiling them. My boiler consists of a square stainless-steel tank (*Photo 16*). I use firewood to heat the water to boiling and then put in

MORE ON BOWL CORING!

EXPLORE!

For a thorough write-up on the various coring systems available (McNaughton, Oneway, and Woodcut), see John I. Gies' February 2013 article, "Bowl-Saver Systems" (vol 28, no 1, page 36). Log on at woodturner.org and use the Explore! search tool.



Core and hollow



12 Since this wood is highly prized, the author takes a core of it to make a smaller bowl.



13



14

The bowl walls are then rough-turned to consistent thickness.

as many bowls as the tank will hold. Making sure all the bowls are fully covered with water, I boil the bowls for 2 to 2½ hours and then remove them and spray them with cold water until they cool down.

I have learned that once madrone is boiled in this manner, it behaves like other woods and can be dried without much cracking. If I were more of a scientist, I would find out why this process works and experiment with boiling times. Somehow, the cooking must take the stress out of the wood; perhaps it crushes the cell walls or affects the lignin. I simply know that it works for me.

After boiling the bowl blanks, I moved them into my shop and placed them on dry stickers on the floor. I set up a box fan to keep the air circulating (*Photo 17*). Drying bowl blanks in this manner takes about seven months. Watch the blanks regularly for either cracking or spalting. If the wood is cracking, it is drying too quickly. If it is spalting, it is drying too slowly. Make adjustments accordingly.

I have also learned that I can finish-turn these blanks at any step of the drying process. The texture and feel of bowls that are finish-turned wet can be wonderful.

The nice thing about cutting up a big piece of wet wood like a stump burl is that the pieces get lighter at every step! And by cutting up the wood myself, I can control the grain pattern and final appearance of the finished bowl. ■

Dale Larson has been turning bowls for forty-three years. He is a founding member and past president of the Cascade Woodturners in Portland, Oregon. Dale served on the AAW Board from 2009 to 2014, both as symposium chair and president. He now serves on the AAW Board of Advisors, the Ethics Committee, and the Turners Without Borders committee.

Wheelbarrow of bowls



15

In batch mode, several bowls are cored before proceeding.

Boil and dry



16

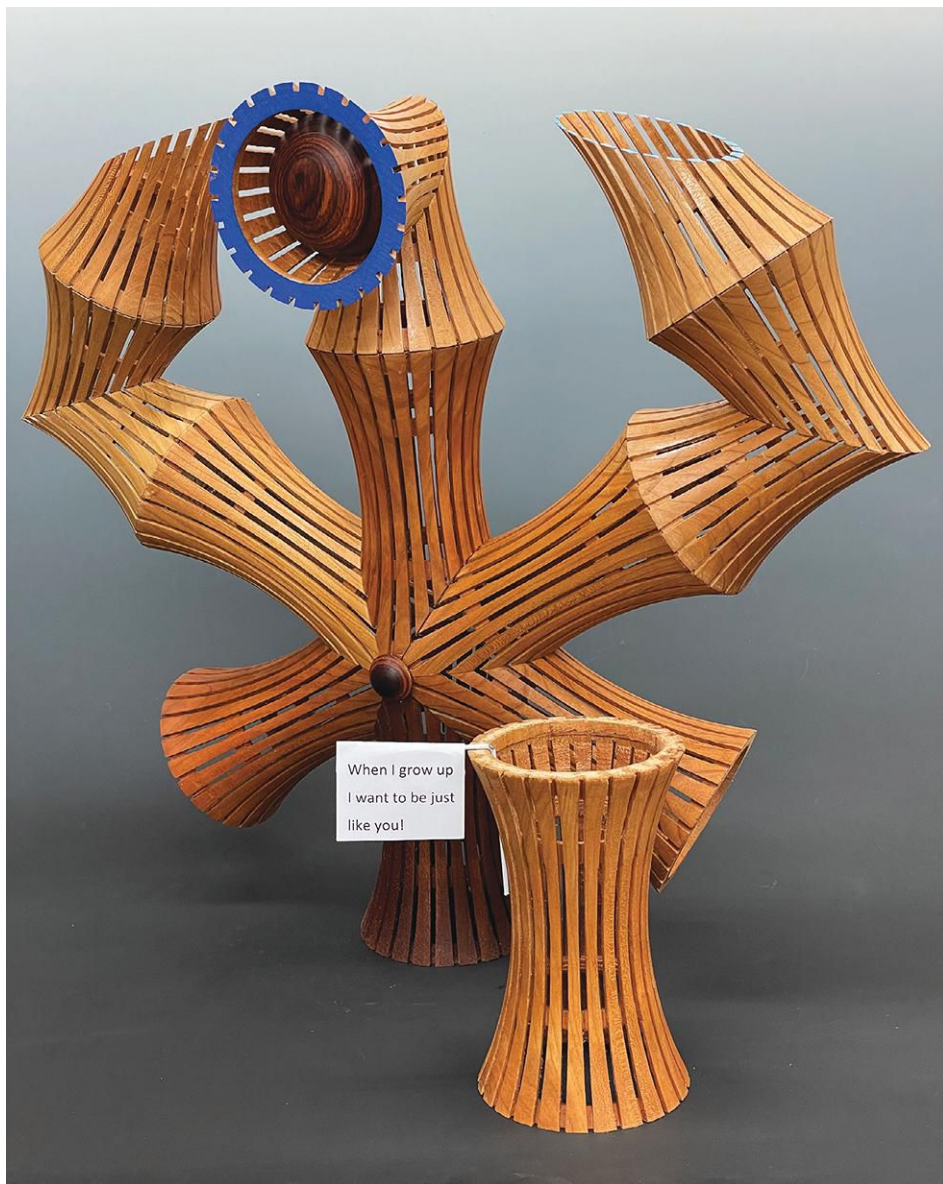
The author's boiler, a homemade stainless-steel tank heated with firewood. Boiling the rough-turned madrone helps to stabilize it so it won't crack during drying.



17

The boiled bowls are set out to dry, and a box fan circulates the air. Now the time pressure is off. The bowls can take months to dry, but they can be finish-turned at any time.

IN THE SPIRIT OF EXPLORATION



When I grow up
I want to be just
like you!

My enjoyment comes from the pursuit of the *idea*, and the challenges it creates.

Harvey Fein

Those who know me would say I'm in love with the mechanics of things. I need to know how things are made. While in college, I earned spending money as a machinist and used to imagine that when I retired, I'd work in a machine shop again for fun. But a much better future announced itself to me when, in 1997, a friend gave me a wooden bowl he had made and then showed me how he had made it. Holding the gouge in my hand for the first time, I knew woodturning was for me. I bought my first lathe that very afternoon.

Many years ago, when New York City was hosting the World's Fair, all the roads around the Fairgrounds were torn up. I remember there was a big sign that read, "You can't make an omelet without scrambling a few eggs." Sometimes progress looks like a scrap bin full of failed attempts. You have to bite to chew. Have I broken many eggs? You bet, but I've also enjoyed some really great omelets. For as long as I can remember, I've always been on the lookout for new ideas, which leads me to my next observation: "Recognizing a good idea is as good as having one."

Evolving ideas

In my early woodturning days, I challenged myself to find a way to insert pieces of a contrasting wood on the rim of an open-form bowl (*Photo 1*). This direction evolved into the elaborate routing fixture and accessories that enable me to make the work I am

inspired to make. The jig components continue to evolve, as I discover new forms I want to try.

Sometimes new ideas come to me as fully completed objects, and all I have to do is make them. Sometimes I'll see someone else's work, copy it, and then add my own variations. And sometimes I have no idea where an idea came from. The body of work described here falls into this last category.

I've never considered myself a great craftsman. It's always been about the processes, and not necessarily the product. My enjoyment comes from the pursuit of the *idea*, and the challenges it creates. None of the pieces in this article are perfect, though not for lack of trying. But each one taught me something, so I consider them successful.

A new direction

Living and working in New York City, with my woodturning shop at our weekend home in New Jersey, I had very little time to experiment at the lathe. Then, in March of 2020, at the start of the pandemic, my wife and I decamped there for what we thought would be a few weeks. Over the following seven months, I enjoyed a lot of shop time.

For several years, I made vessels like the one shown in *Photo 2*, but I felt it was time to move on. But to what? With the extended shop time, I spent a month or two just “messing around” with various shapes and forms, destroying an enormous amount of wood. Almost everything I do is done with a router, so I was looking for different ways to use it to make a new form.

I had a small log of Indian rosewood and turned it to a 4" - (10cm-) diameter cylinder, using my router as a cutter. I then hollowed the cylinder by drilling with a 3" (8cm) Forstner bit (*Photo 3*). Because the margin of error in my processes is so small, less than $\frac{1}{32}$ " (0.8mm) end to end, the piece couldn't be turned by hand. Falling back on

Previous iterations of router work



The author's early and subsequent work at the lathe involved the use of a precise router setup.



A slotted cylinder



A router serves as the cutter.



The cylinder is slotted and hollowed.

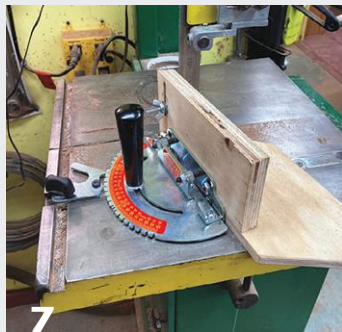


what I know—my router setup—I cut a $\frac{3}{32}$ " - (2.4mm-) wide slot about $\frac{3}{32}$ " deep, down the side of the now 12" - (30cm-) long tube. Hollowing it out and leaving supporting ribs, again a familiar practice, I cut twenty-three more slots using the indexing head on my lathe (*Photos 4, 5*). Now I had a 4"-diameter tube with twenty-four slots, big deal (*Photo 6*).

I have never been a cut-and-glue kind of maker, but after no small amount of consideration, I took the slotted cylinder to the bandsaw and cut it into three pieces at 45 degrees, rotated them 180 degrees, and glued them together, giving me a “Z” shape ▶



Cutting precise angles



The 12"-tall cylinder is cut to precise angles using an Incra jig at the bandsaw.

(Photos 7-9). As soon as I saw what I had, I knew there was an idea here. As I like to say, file away the idea (FATI).

Now came the really hard part. I have no feelings or experience creating abstract forms. Where to go? What to do? How do I expand on the idea? The answer is, talk to people, Google, Google, Google, and make a lot more wood shavings trying to figure it out.

The next iteration

One thing I learned early on was that to get the slats to line up after cutting and rotating, the tolerances had to be *much* tighter than I was accustomed to. I set myself the time-consuming task of perfecting this process. If there is any upside to the pandemic, it's that it afforded me the time to experiment and explore.

I eventually settled on a design that would test my acquired skill—a rendering of my wife's initials, FMF. It took three tries, but the result confirmed my expectations about the form. I added a brass strip in a central slot to help define the shape (Photos 10-12). To date I've now made nine keepers, with many more ideas in my head. As I make each piece, I look for ways to simplify the process—not to speed it up but to minimize the chance for errors.

Play brings answers

Each successive piece has presented different issues, by design. The piece shown in Photos 13 and 14 was originally constructed as three

individual segments, with the idea of stacking them, or something. I did not have a clear idea of where it was going. Then, my granddaughter and great grandchildren came to visit. Some of the toys they brought along were little pop-together animals. The minute I sat down to play with them (both the kids *and* the toys), I saw the solution to the piece I was working on. FATI. The idea was to cut the “popping” parts out of the toy and create three articulating segments. The photos show just two of the many possible configurations.

While this articulating piece opened new possibilities, I realized I had removed too much material from the inside, so internal rings were not possible. Redesign! The solution was shallower, partial-depth slots and milk paint in the slots and on the open ends (Photo 15). I liked the smooth interior of the open ends and felt I was starting to understand the process. FATI.

A new form



A piece of yarn woven through the piece adds definition. A motor and stand allow the piece to rotate.

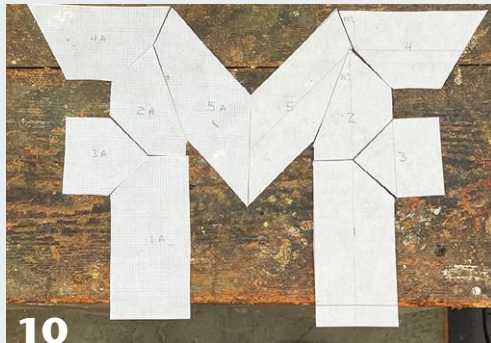
The challenge I set for my next piece was to get all the angles and lengths of segments exactly the same. This required a new Incra miter gauge and two days of tuning the bandsaw. Because the Incra gauge has positive stops, I was able to consistently reproduce my desired angle on all parts. A little brass and leather provided the finishing touches (Photo 16).

For my next act, I ordered a few boxes of 2"-(5cm-) diameter mailing tubes, from which I made maquettes; it is much easier to cut cardboard than wood (Photo 17). FATI. The idea of premade elements opened another avenue of exploration. I found that $30^\circ =$ six sides, $36^\circ =$ five sides, $22.5^\circ =$ eight sides. And I still had plenty of cardboard mailing tubes to play with. What a deal!

I recently celebrated my 80th birthday. I was reminded of a poem by C.P. Cavafy, “Ithaka.” Thinking back over my twenty-five years of woodturning, I am thankful for all the voyages of discovery I’ve embarked upon, the ports I have been privileged to discover, and all the wonderful people I have come to know. Woodturning, like life itself, is an opportunity for exploration. ■

Harvey Fein was born in 1940 and raised in Brooklyn, New York. He spent his working years as a manufacturer of window coverings. In 1997, he took up woodturning as a hedge against retirement. Home run. He can be reached at harvey@harveyfein.net.

Exploring further



10



11



12

Moving the idea ahead with more segments—the initials of the author's wife. A line of brass accentuates the letters.

Articulation affords interaction!



13



14

Playing with great-grandkids' toys lead to articulating segments, allowing for a multitude of configurations.

Now with smooth interior ends



15

One idea leads to another. Partial-depth slots allow for smooth, more refined insides.

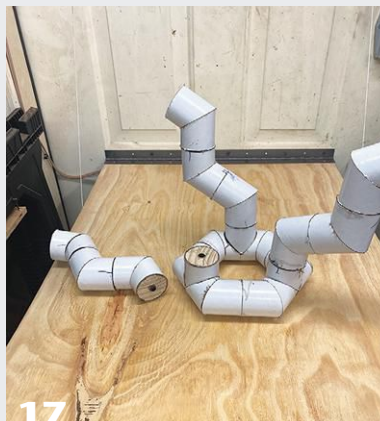
What's next?



16

A creative, open-minded journey + acquired skills lead to new forms. The author could not have made this piece without all that came before it.

Playing with mailing tubes



17

Cardboard mailing tubes serve as disposable material for making maquettes. What other iterations are possible?



EMERALD ASH BORER

“The Most Destructive Forest Pest Ever Seen in North America”

Janine Wang



5382310

Photo: USDA APHIS



The emerald ash borer (EAB) is an invasive wood-boring insect threatening more than nine billion ash trees in North America. Millions of dead or dying ash trees have been removed since the pest was first detected in 2002 in the Detroit, Michigan, area. This burrowing beetle, named for its distinctive color as an adult, has few natural predators and is now found in thirty-five states and five Canadian provinces.

As many of us who work with wood have noticed, there is an abundance of ash lumber available for woodturning and flat work. But while EAB infestations have fed this abundance, they also bring the end of ash's availability that much closer. In the area where

I live, Philadelphia, EAB infestations could wipe out the region's ash population in five to ten years.

To learn more about this important topic, I spoke with Robin Osborne, Communications Coordinator for the Department of Entomology at Michigan State University (MSU). She works with Deborah McCullough, Ph.D., a forest entomologist at MSU, who has been working on EAB research and management since EAB was first

discovered in 2002. Following is our conversation in Q&A format.

Janine Wang: What does the emerald ash borer do to trees, exactly?

Robin Osborne: EAB attacks and kills most North American ash species. Adult beetles lay eggs on the tree bark, and the larvae from these eggs bore into the ash tree's phloem tissue. As they develop, they consume greater

Of utmost importance is not moving infested ash wood—especially firewood—to other locations.

amounts of active phloem tissue of this ring-porous tree species. An infested tree will show characteristic S-shaped tunneling patterns (called galleries) just beneath the bark, and D-shaped exit holes on its surface.

JW: What can we do about it?

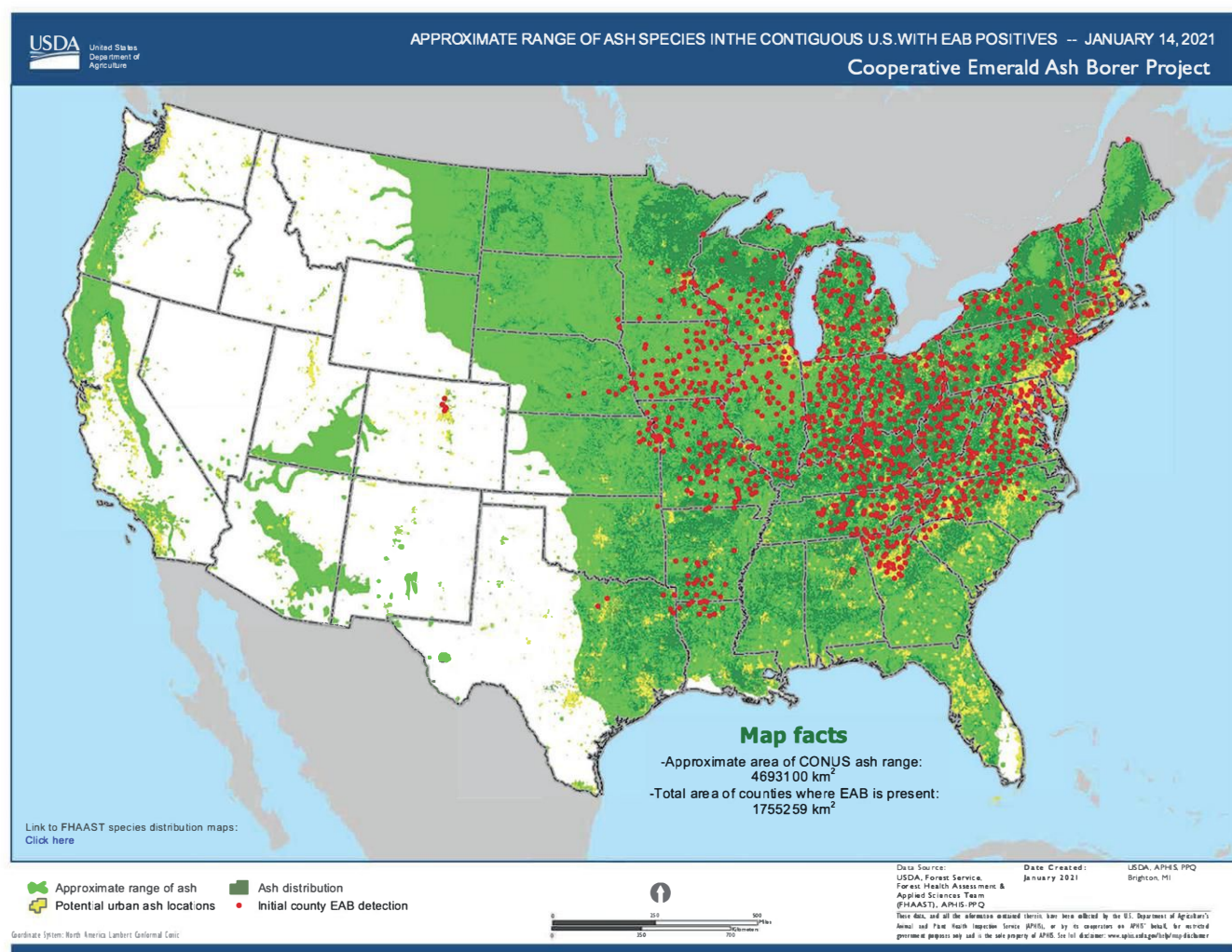
RU: Homeowners can help by carefully monitoring their ash trees for

signs and symptoms of EAB throughout the year. These include bark flecking in the upper branches of the tree (from woodpeckers), severe die-back of the tree's upper branches, and bark cracks, which often reveal S-shaped galleries beneath. If you see signs and symptoms of the borer, you can either decide to treat the ash tree or remove it.

Also of utmost importance is not moving infested ash wood—

especially firewood—to other locations to prevent spreading the pest to other areas. Firewood is not a regulated item, and it is easy to move without detecting the pests that it may harbor. Because of the human movement of goods (which has gone on since people have roamed the earth), there's no doubt that invasive species will continue to spread. World trade has definitely had an effect on the escalation of ►

Range of ash trees and EAB infestation



Range of ash species overlaid with EAB positives, as of January 14, 2021.

Image courtesy of USDA APHIS

EAB larvae



Mature fourth-instar larvae, or “J-larvae,” of emerald ash borer in pupation cells in the outer sapwood of an ash tree. For EAB with a one-year life cycle, J-larvae are found in fall, winter, and early spring in the outer sapwood or outer bark.

Photo: Houping Liu, Michigan State University, Bugwood.org

invasive species. Some of these species may find a foothold in the area they invade and become a problem; others may not.

JW: What does this mean for the future of ash trees?

RU: EAB is now considered the most destructive forest pest ever seen in North America. The scope of this problem will reach billions of dollars nationwide if not dealt with. There are sixteen known species of ash trees in North America, and this pest has the capability to kill them all.

JW: How would this change the landscape of North America?

RU: According to the USDA Forest Service, ash tree canopy makes up approximately two percent of forests and woodlands in the United States, or more than eight billion ash trees. Because ash has been a popular tree species planted in municipalities, subdivisions, farm windbreaks, etc., those areas are also at high risk. Percentages of ash trees in urban forests range from between 20-30% to as much as 50%, according to research from Purdue entomologist Cliff Sadof.

JW: What would recovery look like?

RU: That’s a tough question. In December 2020, the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) changed the way it deals with EAB, saying that domestic quarantine has not proven effective in stopping its spread. This means no more regulatory activities, including

issuing permits, certificates, and compliance agreements, and conducting investigations of suspected violations. In other words, people can do what they want with ash trees and ash wood since there are no federal regulations on ash materials. States do have the ability to invoke quarantines or other regulatory edicts if they so choose and [if they] have the money and manpower to enforce the regulations.

Since so little information was known about this pest before it was discovered in North America, and considering it had probably been here since the early 1990s, it has been difficult to manage.

JW: In Philadelphia, we also have a horrific infestation of spotted lanternflies. Do you think we will continue to have epidemic incidents like the EAB (e.g., Dutch elm disease, chestnut blight)? What distinguishes the EAB from previous tree diseases and infestations?

RU: Spotted lanternfly is a problem, and no doubt it will be a problem nationwide at some point, but with enough outreach and education to landowners, growers, and forestry specialists, it can be controlled to some extent.

A spotted lanternfly is much more visible than an emerald ash borer, which is tiny (adults fit on a penny) and green. Ash tree infestations are usually the first sign that EAB is in an area because it’s not something big, conspicuous, and bright red that people can see. Once that happens, ash trees can survive if insecticides are used (usually through injections or soil drenches), or homeowners have the option of cutting them down. But our forests are a different story. EAB

D-shaped exit holes



Emerald ash borer adults chew D-shaped emergence holes.

Photo: Debbie Miller, USDA Forest Service, Bugwood.org

Since so little information was known about this pest before it was discovered in North America, and considering it had probably been here since the early 1990s, it has been difficult to manage.

is hard to treat by spraying; nor is it economically feasible to cut down or treat every infested ash tree in a forest.

JW: What else makes EAB different?

RU: It got a foothold in North America years before it was discovered. [And since] there was little information about the pest, researchers had to start from scratch. It's difficult to see adults because of their size and color, and they burrow under the bark, where it's hard to detect them.

JW: What do you have to say to woodworkers and woodturners, who have such a close relationship with trees?

RU: Because they have such a good working knowledge of how important trees are to our ecosystem and economic base, woodworkers and woodturners can be a great source for spreading the word about EAB and educating others who may not realize what an issue it is. As an example, Native American black ash basket makers have worked hard to get the word out about EAB and are even working with the Smithsonian to make it part of displays and presentations. [They] also talk about the threat of EAB to

their livelihood at workshops and presentations and when they sell their artwork.

Knowing what an impact EAB can have on their craft and getting the word out to those who use or are interested in their products is a really great way for woodworkers and woodturners to help.

JW: Where can we go for more information and to get involved?

RU: Emeraldashborer.info (EAB University) has so much information—credible, reliable resources that can give background

information, research, and management activities, as well as helpful links. [This resource] has some great webinars from knowledgeable sources that can be used in presentations, meetings, and the like to help spread the word. I suggest browsing the various webpages on the site, as well as using the “Search” feature to find information that may be useful.

There is also an emerald ash borer Twitter page (twitter.com/emeraldashborer) that highlights the latest news around North America pertaining to EAB and some of the other wood pests of concern. ■

Special thanks to Robin Usborne and Michigan State University.

Janine Wang is a woodworker and production specialist based in Philadelphia, Pennsylvania. She teaches at craft schools across the Eastern U.S. and is a part-time faculty member in the Bucks County Community College Department of Fine Woodworking.

A month's maturation



The gradual maturation of EAB pupae to the adult stage. This process takes about a month.

Photo: Debbie Miller, USDA Forest Service, Bugwood.org

Telltale EAB “galleries”



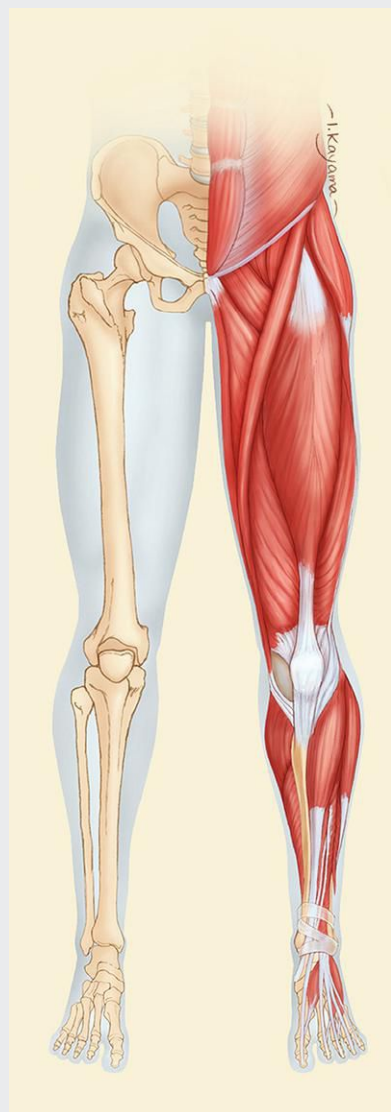
Ash borer galleries beneath the bark of an ash log.

Photo: Janine Wang

Legs Are for More Than Standing

Rich Foa

The lower extremity



The major bones, joints, large anterior muscles (red), and tendons and ligaments (white) of the lower extremity.

Illustration: Studio Kayama

In a few countries today—and in times gone by—woodturners have worked while seated on the ground. The invention and development of the motorized lathe seems to have brought most of us to our feet. We, who can, now stand to turn. We rely on our legs and feet for erect posture, balance, and mobility. And our legs provide the mechanical support needed for fluid movements of our upper bodies, arms, and hands. It is easy for many of us to take these abilities for granted, but just like any complex mechanism, our bodies are subject to wear and tear and, over time, require maintenance and repair. This article is about how our legs work to enable the fluid movement we need to turn effectively and about the most common lower foundation problems that can limit our lathe work.

Our legs are made of an amazing combination of bones, joints, ligaments, muscles, tendons, cartilage, nerves, and blood vessels. The major joints—the hip, knee, and ankle—involve the articulations between eight different large bones. Adding twenty-six bones in the foot, the total comes to thirty-four from pelvis to toes in each of our lower extremities. Of course, between every two bones there is a joint held in place by one or several ligaments. More than fifty muscles and their tendons control the positions and movements of

these joints. Every muscle is, in turn, controlled by nerves that command contraction or relaxation and by others that precisely register motion, tone, and position in three-dimensional space. Movement is smoothed by strategically placed cartilaginous cushions and lubricated by the release of fluid held in sacs or bursae. All of these structures are nourished by blood delivered through an intricate network of arteries and veins. Given the number of moving parts, it is not surprising that our legs are vulnerable to injury stemming from use and age alone.

Joints

The hip is a ball-in-socket joint that allows for multi-directional movement, similar to the shoulder but with greater strength and less mobility. By comparison, the knee is basically a hinge, permitting flexion but limiting extension and rotation. The ankle joint is a hybrid—mostly a hinge allowing flexion up and down, but also permitting rotation and some lateral tilt. The bones of the toes offer movement that approximates that of our fingers. These elements work together to augment our thrust and balance, both key to successful turning. While the larger and more powerful muscles of our hips, knees, and ankles establish and maintain our position at the lathe, the smaller movements of the foot allow us to

While the larger and more powerful muscles of our hips, knees, and ankles establish and maintain our position at the lathe, the smaller movements of the foot allow us to make the subtle adjustments necessary for good tool control.

make the subtle adjustments necessary for good tool control.

Potential issues

The muscles of the legs are arranged into anterior and posterior (front and back) compartments. The muscles within each compartment work in concert to move or stabilize the joints to which they are attached. However, when muscles of the anterior and posterior compartments contract simultaneously, joints are locked in position. This is sometimes necessary for stability, as when standing on the rung of a ladder, but it is often counterproductive and fatiguing, as when standing rigidly at the lathe while concentrating on the control of a gouge with only the hands or wrists.

The nerves and blood vessels are sorted into bundles that innervate and nourish each of the muscle compartments. As a result, injury to a specific bundle tends to have an impact on a specific movement or sensations in a defined area. While blood vessels are more vulnerable to gradual blockage, as from atherosclerosis, nerves are more susceptible to external pressure. Neurovascular impairment is often quick to develop and to reverse itself, as occurs when a foot “falls asleep” because legs are crossed. But not infrequently it is gradual, as can happen with constant or repetitive leaning against a workbench or lathe, which can put pressure on nerves, resulting in painful and long-lasting numbness.

Understanding leg function requires familiarity not only with the anatomy of joints and muscles but also with dynamic relationships between muscles, bones, body composition, and physical activity. Of course, our muscles weaken when not used and can be strengthened through exercise. Increased muscle work also increases bone density, and there is a complex relationship between muscle mass, fat mass, and bone strength. The net effect is that high body fat (and the inflammation that occurs with it) weakens bones, counteracting the benefits of exercise. Older adults also must deal with sarcopenia, the still poorly understood phenomenon of age-related muscle loss. A universal but variable consequence of normal aging, sarcopenia occurs despite exercise. All of this is relevant to our success at the lathe because of the impacts on our strength, standing tolerance, and mobility.

Anonymous Case Study

P.R. is an experienced 74-year-old woodturner who typically spends two to three hours at the lathe without interruption. On occasion, he turns for as long as four or five hours.

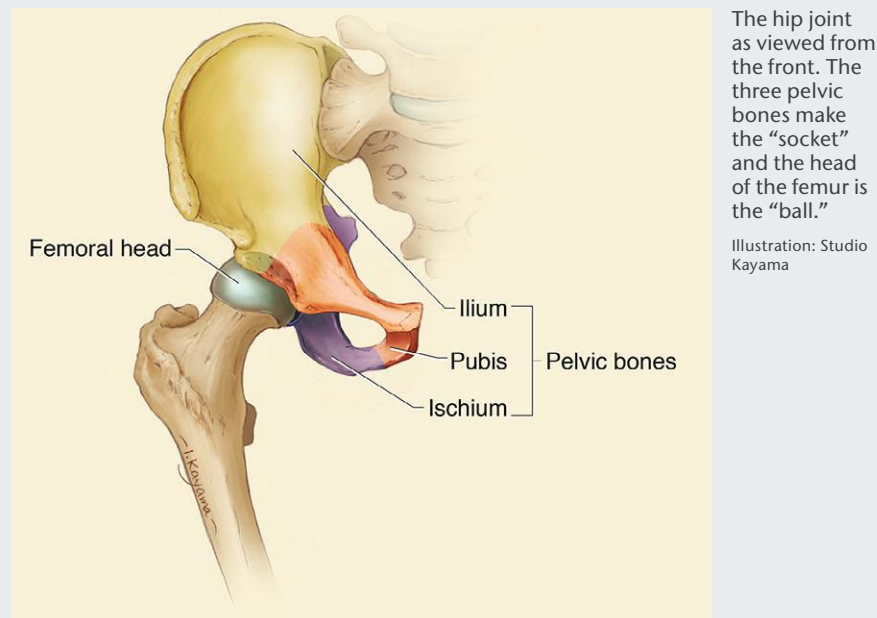
At 18, P.R. tore ligaments and cartilage in the inner aspect of his left knee while skiing. He underwent immediate state-of-the-art surgery that, at the time, did not include repair of the anterior

cruciate ligament (ACL), which keeps the knee joint from slipping anteriorly. He did well through his 20s, but knee instability developed in his late 30s. Over subsequent years, P.R. endured multiple “twists,” resulting in painful joint swelling and had “taps” to remove the fluid. At age 50, he had arthroscopic surgery to remove degenerated cartilage. Sometime later, his left leg started to bow outward at the knee, and he developed a recurrent pain in his left hip that was often more bothersome than lingering knee pain. At age 70, he strained his knee in an ill-advised basketball game with a grandson. New X-rays showed degenerative arthritis of the left knee corresponding to the location of his injury and surgery many years earlier. His hip X-ray was normal, and hip pain was attributed to bursitis from an unbalanced gait.

While P.R. is usually unaware of knee or hip pain while turning, he has noticed a tendency to plant his feet while standing at the lathe and then to limp when stepping-back from the ways. While he knows the importance of snugging his tool handle against his hip and shifting his weight from one leg to the other for optimal control, he can do this only when he focuses his attention on these techniques. P.R. noticed that when he is focused on what he is turning, rather than how, ►

P.R. noticed that when he is focused on what he is turning, rather than how, his weight shifts are neither smooth nor automatic.

The hip joint

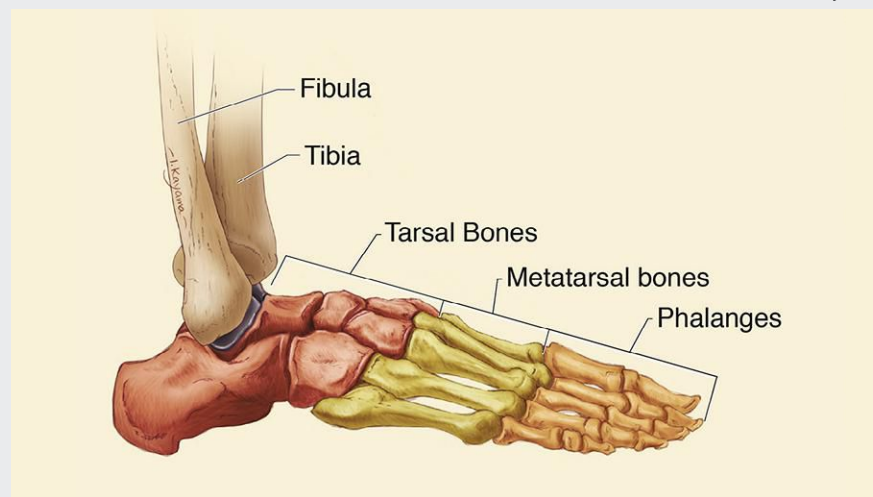


most of his weight on his right leg. Shifting his weight at the lathe is unnatural and requires conscious effort, which distracts him from what he is making. His tool control is consequently too dependent on what he does with his upper body alone. P.R.’s arthritis has yet to limit his time at the lathe, and joint pain is not yet a factor. To maintain his woodturning tolerance and slow or prevent worsening, the best thing P.R. can do is an exercise regimen away from the shop that focuses on strength, endurance, and flexibility. And to improve his woodturning skills, P.R. needs exercises at the lathe that emphasize redistribution of his weight, balance, and fluidity of movement.

Diseases and treatments

Inflammation of a joint is termed “arthritis.” It has numerous causes, ranging from mechanical wear to trauma to immune system injury and infection. Arthritis can begin slowly and progress gradually, or it can be abrupt in onset and rapidly destructive. The most common form of arthritis is osteoarthritis, which is generally due to mechanical wear and is gradually progressive. Osteoarthritis of the hip and of the knee are the most common joint disorders in the U.S. and the leading causes of disability. As many of us know, the symptoms are pain, stiffness, decreased joint motion, and muscle weakness. These may lead to a cascade of secondary effects that include decreased physical activity, increasing pain, fatigue, deconditioning, impaired sleep, depression, and disability. Common risk factors beyond age include excess weight and occupational hazards such as constant standing or lifting and moving heavy objects—wet logs included.

Ankle and foot bones



his weight shifts are neither smooth nor automatic. Instead, he centers his weight over his right leg, rotates slightly toward the headstock, and lets his hands and wrists take over tool control. Shapes, especially beads and coves, suffer the consequences.

P.R. relates a classic history of knee arthritis developing over many decades following a predisposing injury. He now has chronic problems of joint deformity, gait changes, and secondary inflammation at the hip. He habitually stands with

Treatments for hip and knee arthritis broadly overlap. The most effective long-term strategies include exercise and weight reduction. For those who are overweight, diet plus exercise is without question superior to diet alone or exercise alone. For knees, low impact, land-based exercise with the goals of increased range of movement, increased strength, improved balance, and aerobic fitness is the key. Walking and stair climbing, if possible, are critical elements. And a variety of stretches to maximize joint mobility are invaluable. Aquatic exercise programs offer the added advantage of minimizing the effects of weight and are, if available, better for hips.

Medications may be necessary and, if required on a long-term basis, must be used carefully. For the knee, prescription topical non-steroidal anti-inflammatory gels are now considered the preferred drugs. If unavailable or inadequate, non-prescription oral anti-inflammatories such as ibuprofen or naproxen are the next options. For the hip, acetaminophen may be superior to the oral anti-inflammatories. Attention must always be paid to medication side effects and maximum allowed daily doses. Steroid injections into the joints, difficult for the hip, provide only short-term pain relief but may allow someone to start an exercise program. Arthroscopic removal of cartilage from the knee is not considered to be of long-term value, but it may be needed if cartilage fragments “lock” the joint. Knee and hip replacements are now increasingly done for advanced disease.

Of course, arthritis may also develop in the ankles and feet. But problems in these areas more commonly stem from ligament or tendon sprains and strains. These generally require an initial period of immobilization with a boot or

brace followed by a gradual program of exercise to restore range of movement. A cane, crutches, or a walker may be helpful to take weight off the injured joint following the initial injury. Prolonged and ultimately chronic pain or joint instability may result from neglecting to immobilize the ankle or foot adequately or for a long enough time at the beginning. The rupture of tendons, such as the Achilles tendon, and bone fractures may require more aggressive initial treatment, including surgery.

Avoidance of musculoskeletal problems involving our lower extremities is not always possible. But initial neglect of acute injuries or denial of the early manifestations of age-related processes will only increase the likelihood of chronic problems that limit our ability and enjoyment of woodturning. Early and consistent treatment is important.

Final thoughts

The AAW currently has about 15,000 members; a little over 90%

are men, and 8% to 9% are women. I would estimate that 70% of the men and 30% of the women are older than 60. This means that as many as 9,000 of us who are men and 500 who are women have reached the age when we are most vulnerable to developing hip or knee arthritis or to the other common musculoskeletal problems mentioned here. Some of us are symptomatic, while many are not—yet. For those already experiencing pain, stiffness, or weakness, our turning is likely to be affected in subtle ways or worse. For everyone, exercising and controlling weight should be a long-term strategy to keep us healthy and to increase our time and pleasure at the lathe. ■

Rich Foa is a retired neurologist. He has been turning for about a decade. Formerly president of the Chesapeake Woodturners, Rich currently lives and works in Traverse City, Michigan, and is a member of the Northwest Michigan Woodturners Club.

Proper Biomechanics at the Lathe

Articles I have published in this “What Aches?” series typically are accompanied by a sidebar article offering practical advice on how to deal with physical challenges in the shop setting. In this case, however, I’ll refer you to Eric Lofstrom’s *Woodturning FUNDamentals* article and video about the biomechanics of turning and body movements essential for proper tool control. The first half of his video, pertaining to the importance of our legs in successful turning, is particularly relevant to the lower extremity challenges you just read about.

EXPLORE!

Log on at woodturner.org and use the Explore! search tool to find Eric’s article, which was published in the May 2018 edition of *Woodturning FUNDamentals*: “Biomechanics and Body Movement at the Lathe.” To view Eric’s video, visit tiny.cc/Lofstrom or scan the QR code.



GREG GALLEGOS

Catching the “Waves”

D Wood

Photos by Greg Gallegos, except where noted.

The history of humankind has been a process of building. Except for the initial seed that occurred a very long time ago, each invention builds on what came before. The word invention stems from the Latin *venire*, meaning “to come,” creating the definition “to come upon, to discover.” *Coming upon* implies finding an existing fact or entity and using or adapting it. Thus, the notion of an invention being new is hyperbole.

The lathe, for instance, progressed from a tool known to the Egyptians, Assyrians, Greeks, and Romans as early as 300 BC. Illustrations show rotation being achieved by two workers, one of whom provided the power for turning. Later, the treadle lathe made the second person redundant. Advances over centuries enabled today’s electric-powered machines that turn metal, glass, and wood, yet it is questionable to assert that Jacques de Vaucanson invented the all-metal slide rest lathe during the Industrial Revolution. The lathe, as a technology comprising a sharp device removing material while it spins on an axis, came about long before Monsieur Vaucanson.

Another woodturning tool can be traced back to 1886, when the existence of electromagnetic waves was identified by Heinrich Hertz in Germany. This knowledge led to Radio Detection and Ranging (radar) deployed by the British during WWII to detect enemy airplanes. Then in 1946, Percy Spencer, an engineer working near radar equipment, found a melted chocolate bar in his pocket. He surmised that radio waves might be used for cooking, and his patent, US 2,495,429,



Photo: Russell Gallegos

lodged on January 24, 1950, claimed, “My present invention relates to the treatment of foodstuffs, and more particularly to the cooking thereof through the use of electromagnetic energy.” The microwave oven was *come upon*. Subsequently, microwaves were applied to the transmission of sound and data and incrementally gave rise to the Internet.

I have been acquainted with and written about woodturning for several decades and hadn’t encountered a microwave oven in its vicinity until I met Greg Gallegos in April 2021. Greg is a self-taught turner who credits Richard Raffan with giving him the idea to dry wood via electromagnetic energy. His openness to Raffan’s suggestion suited his personality. He thought, “Okay, cool. Sounds fun.”

Although I later learned that the microwave is commonplace in woodturning, Greg credits its significance in his career as a professional artist: “I definitely think the microwave is part of my success. The speed of drying pieces definitely helps with moving product to market faster, which equals quicker turnaround and profits. I wouldn’t give it *all* the credit—I could still do everything I’ve done, but it would just take longer. It definitely appeals to my instant gratification personality. I would have stuck with woodturning no matter what, but it adds an element that is truly magical sometimes.”

Instant delivery

Instant gratification is a pejorative expression that applies to consumers

who want to feel pleasure through immediate shopping and buying. Yet the expression is Greg's self-described attraction to woodturning. He was introduced to the lathe during high school woodshop classes, where he loved the colors, grain, and odor of wood, and preferred turning to joinery because numbers and calculation are not his forte. He purchased a Delta midi-lathe while working in jobs like groundskeeper, golf course maintenance, and climbing poles for AT&T. What appealed was quick results in a creative medium. Greg has natural artistic talent, having painted and drawn previously—even selling work in galleries—but the process of production through to exhibition was lengthy. Personal circumstances dictated that he use his innate artistic sensibility in another way.

The economic recession in 2008 affected the labor force, and Greg was made redundant. He took Raffan's advice to heart: "Like Richard said in his book, you should apprentice yourself for a good five years and do nothing but turning before you even think about selling your work. I did that; I turned every day and still do." Having displayed his turned objects at craft fairs, he decided to take advantage of his forced leisure to become a fulltime woodturner. Greg is a solo parent with four children to feed and clothe, which meant a decision to be self-supporting needed instant results. The lathe and the quick-dry microwave were ideal tools on which to build his business.

Other technologies assisted the launch of Natural Selection Studio, Greg's business and website. Greg availed himself of Etsy, which came into being in 2005, thereby eliminating time-consuming marketing and in-person sales. Rather than incur debts with a photographer, he invested in a camera, seamless background paper, and lighting. His photography ensured that customers could see exactly what they were purchasing. With the advent of Instagram in 2010,

The lathe and the quick-dry microwave were ideal tools on which to build his business.



Sensual Moments,
2021, Milo, acrylic
paint, 3¼" x 3¾"
(8cm x 10cm)

Greg could control his sales as well as meet other woodturners electronically. And being fully immersed in "e-tail" by the time COVID-19 reared its devastating head, he just kept turning and feeding social media outlets with images of his objects.

A matter of form

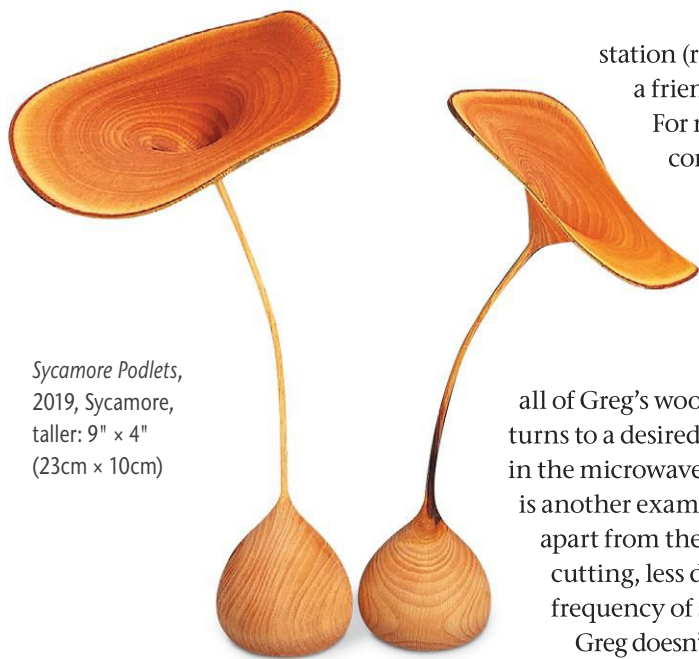
Greg is a master of form, with an eye and acuity to line that seems innate. He attributes this ability to his drawing skills, yet he doesn't sketch before securing wood to the lathe. He says, "Most of the things come out of my head on the spur of the moment. The only time I sketch anything is to see how I need to mount it on the lathe to do a certain thing." His forms are confident, well balanced, and appealing, rendered, for the most part, *au naturel*. Greg is assertive about his intent: "I strive for forms that are balanced and proportionally satisfying. Everything starts there. You can do anything else as far as decoration, texture, and color, but the form has to be there. Even when I'm turning green vessels to put in the microwave for drying and encouraging



Sensual Moments II,
2021, Cocobolo, 5½"
(14cm) diameter

movement, that form has to be there before any movement takes place."

When he applies color, it complements or provides a bold contrast to the organic tones. The combination of a flawless silhouette and exacting placement of color or texture contributes to the appeal of Greg's vessels. For example, *Sensual Moments* places emphasis on the grain of milo wood as it sweeps around the vessel. Whereas the natural figure is in a consistent direction, the carved rim waivers and is off center. Finishing the interior with black is an inspired choice, drawing ►



Sycamore Podlets, 2019, Sycamore, taller: 9" x 4" (23cm x 10cm)

station (recycling depot), or a friend's rural property.

For many years, financial considerations precluded the purchase of special wood species, a lesson in making the best from what is available. Almost

all of Greg's wood is green, which he turns to a desired thickness and dries in the microwave. Turning green wood is another example of instantaneity, apart from the benefits of easy cutting, less dust, and reduced frequency of sharpening tools.

Greg doesn't use the microwave only to dry a recently-turned piece: "If I'm bleaching it, coloring it, using different kinds of mixtures to get a different color, I use the microwave to dry that out. I'm constantly using it as a tool to speed up drying." His familiarity with the oven has been achieved through trial and error and repetition. He warns, "You can't just jump right into it because you'll end up burning a lot of pieces. Thickness plays a big part. A really thick piece in the microwave for very long will crack." Each type of wood and its moisture content, not to mention the idiosyncrasies of the oven itself, must also be taken into account.

the viewer into the container's mysterious depths at the same time as differentiating natural and man-made, exterior and interior. The piece is tiny—taking advantage of a seemingly insignificant bit of wood that might have been discarded—yet makes a big statement.

The microwave oven

Most of the wood is acquired within a five-mile radius of Greg's studio in central Michigan. He is not enamored with exotic timbers. His suppliers are farmers clearing land, a nearby transfer

This knowledge is a sensitivity built up over time, rather than technical data.

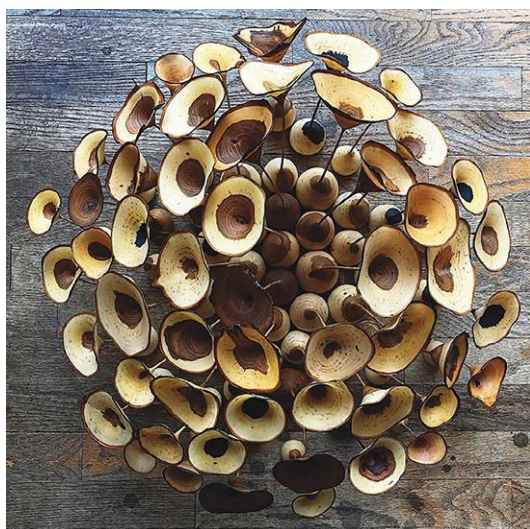
The microwave also affords opportunities for play. Each of Greg's *Podlets*, of which he's made thousands, is transformed from a stemmed turning by placing it in the oven with a weighted coffee mug on the middle of the stem. As it is drying, the weight of the mug will collapse on the stem and bend it. Greg notes, "It's kind of like steam bending, but microwave bending is faster." Since they are quick to turn and dry, the *Podlets* are part of Greg's wholesale range. They came about "because at one time, all I had was branches, so I needed to find something I could make with that wood. I'd made natural goblets before, so it wasn't a stretch to change the base a little." He adds that the *Podlets* make for a good demo, and as the images show, they can be elegant or quirky, each having its own personality.

Expertise with this method of drying means that Greg's only handicap is the size of a domestic microwave oven. When Percy Spencer developed his patent as an employee of Raytheon, the oven was called Radarange. It was suitable for commercial kitchens, having the size and weight of a refrigerator and a prohibitive price tag. By the 1970s, the oven was simplified, became more energy efficient,

and was affordable enough to become a standard household appliance. Were a microwave oven the size of a fridge available, you can be sure it would be on Greg's wish list.

Nature vs. nurture

The finesse with which Greg embellishes the natural wood deserves special mention. The *Obsidian* series takes advantage of the sapwood of a variety of timbers, highlighting it in juxtaposition with the heartwood. The use of black



Cherry Podlets, 2018, Cherry, various sizes



Obsidian Series, 2020, Black oak, acrylic paint, each approx. 7" (18cm) tall

acrylic paint might be a spur-of-the-moment decision, depending on the outcome of drying. Application of such intense color takes self-assurance and care. Maintenance of the texture of the species ensures that an ebony hue next to ivory is a natural progression that in no way diminishes the vessel. Greg recognizes his tendency toward instant gratification, but in taking risks, he also happens upon unique combinations.

Sometimes, instead of altering the sapwood, Greg darkens the heartwood to create contrast. Or the sapwood might be textured, distinguishing it from the smooth, polished maple or cherry. *Mon Amour*, which began as a yew root ball, has been brought into the light. Judicious enhancement of the turned wood changes the yew from pleasant to spectacular. Greg applies milk paint, baking soda (to darken certain woods), aniline dyes, Minwax Color Wash (a water-based stain meant for paper), vinegar-and-steel wool solution for oxidizing high-tannin woods, and acrylic paint to produce color. The effects are subtle or startling. Who would have thought that a wormy box elder burl could be altered by precision turning and a black edge, crafting a showpiece like *Far from a Failure*?

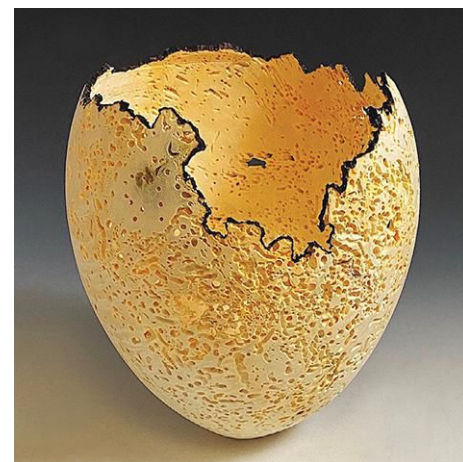
Another technique, which Greg is always up-front about, is imitation spalting. He points out that spectacular spalting is rare in green wood: “Most of what I get is fresh. This doesn’t mean you can’t find spalted wood in a tree that has just been felled. But the kind of spalting I try to emulate is another story. It’s not a common find.” He adds, “I do it because I enjoy pictures of spalted wood, like heavily spalted wood with really fine lines—not necessarily from a spalted point of view, but from a topographical point of view. You’re not going to get spalted wood like that every day, so why not try to emulate it? Because I wanted to see it. And that’s why I make anything—because I want to see it.”

Greg has taught his “spalting” method at various venues in Michigan. Beginning



Mon Amour, 2019, Yew root ball, 8" × 6½" (20cm × 17cm)

Far From a Failure, 2019, Wormy boxelder burl, 6½" × 5" (17cm × 13cm)



Day of the Cocoons, 2018, Sycamore, bleach, baking soda and water, diluted milk paint, largest: 3" × 6" × 3" (8cm × 15cm × 8cm)



Celestial Topography, 2017, Boxelder, bleach, baking soda and water, diluted milk paint, 5" (13cm) diameter

with a wood species that is bland, he uses a two-part bleach and paint mixture to lighten the wood. The patterns are based on images of actual spalting. In some instances, he applies diluted milk paint; in others, a solution of water and baking soda to age the wood. “Then I go around with small brushes and paint small spots all over or in larger areas. When that’s all dry, I usually sand it somewhat smooth with 400-grit [sandpaper].” Greg considers drawing the lines meditative and soothing, although concentration and

a steady hand are required when lines from fine-tip India ink pens—.003 up to .1mm—are the focus of the decoration.

An example of the pseudo spalting is *Day of the Cocoons*, in which Greg used sycamore branches to make a set of small pods. Frugality is often the mother of invention: Why waste timber when skill and intelligence can create an attractive grouping such as this? On the other hand, when you can afford to buy outstanding raw materials, like old-growth curly redwood, the end products, with ►



(Above) *Ethereal Surroundings*, 2017, Boxelder burl, water-based dye, 7½" (19cm) diameter

(Left) *The Delicate Caress*, 2021, Sugar maple, bleach, baking soda and water, diluted milk paint, 6¼" × 5½" (16cm × 14cm)

Winter Bloom, 2018, Pear, bleach, baking soda and water, diluted milk paint, 9" × 5" (23cm × 13cm)



their rich tones and chatoyance, are unsurpassed. But to do justice to nature's finest beauty, the maker's skills must match. It could be said that Greg has proved his mettle through years of turning every day, seeking instant gratification and a unique artistic vision.

Getting to know you

During the early years pursuing his vocation, Greg's only companion in the woodturning community was Mr. Raffan. Not only did the Gallegos children come first, thereby inhibiting attendance at clubs, workshops, and symposia, but becoming adept at turning took precedence over socializing and gathering information. It was not until 2018, when Ron Campbell invited Greg to demonstrate at a hands-on retreat, that Greg rubbed shoulders with demonstrators and students. Other demos and classes followed. Much to his surprise, despite his shyness, Greg enjoys teaching: "I feel more comfortable in my abilities. I have a lot of knowledge, I guess you could say."

With his children growing up and becoming independent, it is time for Greg Gallegos to venture from his studio. He realizes that the next phase is to "get your name out there and have people in your field, no matter what it is, talk about you because that's usually how [success] happens." His limited forays into the woodturning community have proven that "everyone is accommodating, nice, willing to do anything for anybody." This positive environment will undoubtedly welcome another talented turner, passionate about wood, into its midst. ■

To see more of Greg's work, visit naturalselectionstudio.com or find him on Instagram, @naturalselectionstudio.

D Wood designed and made furniture to earn a Diploma in Crafts and Design at Sheridan College in Canada and an MFA at the Rhode Island School of Design. In 2012, she earned a PhD in Design Studies from University of Otago.

MEMBERS' GALLERY

Manos Maravillosas

When four women get together to work on one project, the result has to be pure chaos, right? Wrong! Sally Ault, Linda Ferber, Ana Lappegard, and Janice Levi have known each other for over ten years. When the pandemic kept everyone separated and at home, they looked for a way to keep engaged and to stay active. All four women come from different backgrounds and live in different states, but with the magic of the Internet, they managed to come together.

All four women regularly teach woodturning classes, write articles, and demonstrate for various clubs and symposia. They continue to work together to create collaborative turnings, even if it has to be done remotely. Because there are eight hands working together, the women call themselves "Manos Maravillosas," or "Marvelous Hands."

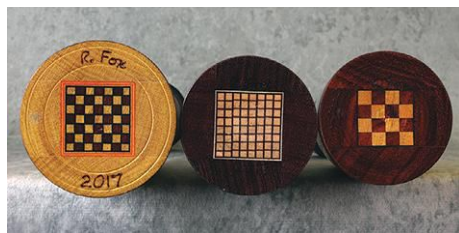


Garden of Dreams, 2021, Bradford pear, manzanita, carving, pyrography, acrylic paint, markers, colored pencil, 8" x 10" x 10" (20cm x 25cm x 25cm)

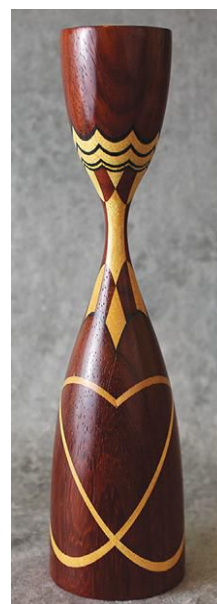
Rick Fox, North Carolina

I was a hobbyist woodworker for many years, but in 2006, I needed to make some half-columns for a grandfather clock. I bought a mini-lathe with a bed extension and took a class from Alan Leland. Years later, I found Frank Penta and the Chapel Hill Woodturners. Frank invited anybody to come to his shop on Fridays and he would mentor them. I jumped at the chance and have been greatly influenced by him ever since.

Frank loves to turn pieces from laminated blanks, and you can see I started down that route as well. Early on, my laminations began with a simple 1" x 1" (25mm x 25mm) core, wrapped with contrasting veneer and surrounded by larger pieces. Eventually, I cut smaller strips to form checkerboard patterns for the cores, which produce a more interesting effect when turned.



Candleholders in various woods. The endgrain view (left) reveals the laminations with checkerboard cores. When turned, the small squares appear elongated.



MEMBERS' GALLERY

Brian Rosencrantz, Florida

I draw inspiration from my experience as a student of archeology and time spent doing fieldwork in Peru. This is reflected in my *Keeper of the Harvest's Promise* series—my interpretation of what Native Americans might have wanted to incorporate in a vessel designed to hold the seeds for the next season's planting. They feature fertility, water, and earth symbols and are made from Eastern red cedar for its preservative properties.

Incorporating natural materials other than wood into my work, such as bone, antler, leather, stone, and found objects, gives added dimensions of texture and expression.

Additional inspiration comes from the process of turning itself. The geometry of arcs and manipulating circles within circles, resulting in complex three-dimensional forms, are their own creative force. Combining that with multiple iterations of assembly, turning, disassembly, and reassembly resulted in my multi-foil vessel series and clamshell boxes. I find that each creation inspires the next.

I'm drawn to the work of Michael Hosaluk, Stephen Hogbin, and Art Liestman and am particularly indebted to my personal mentor, Al Gruntwagin.



Cinquefoil Teapot, 2015,
Maple burl, quebracho Colorado,
6" x 7" (15cm x 18cm)



Lost Wood Clamshell Box,
2017, Maple burl, East Indian
rosewood, bone, 4" x 6" x 4"
(10cm x 15cm x 10cm)



Quatrefoil Bowl, 2013,
Swietenia mahagoni,
quebracho Colorado,
6" x 4" (15cm x 10cm)



Keeper of the Harvest's Promise 5,
Earth Mother, 2020, Eastern red cedar,
marblewood, suede leather, nephrite
jade (turtle carved by a Native American
artist), 3 1/4" x 8" (8cm x 20cm)



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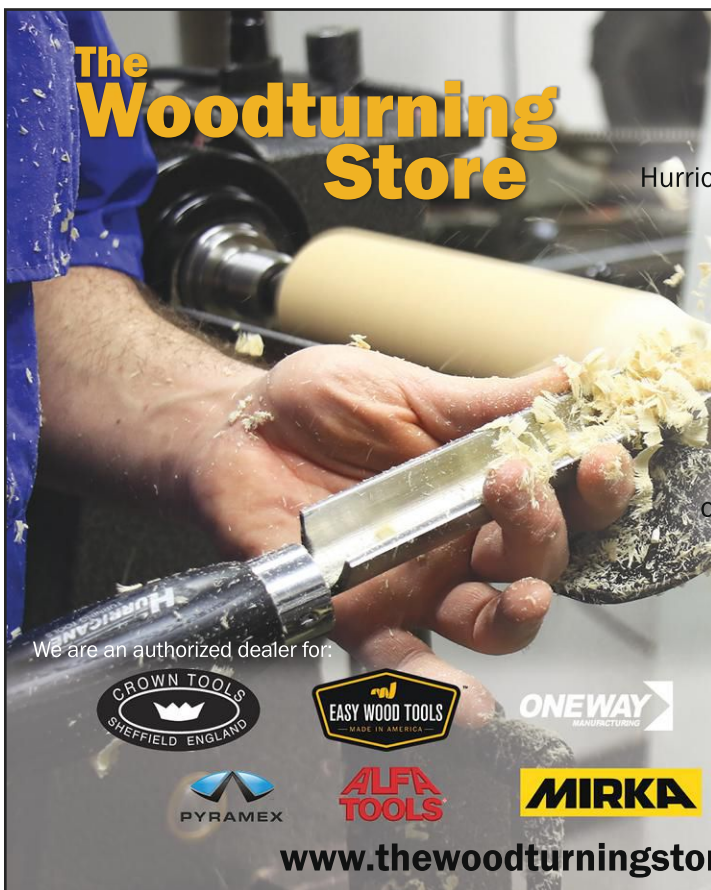
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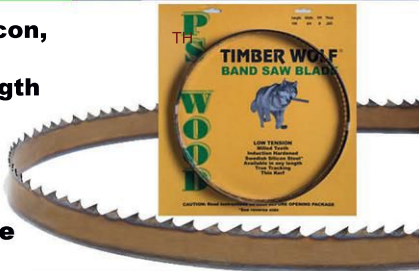
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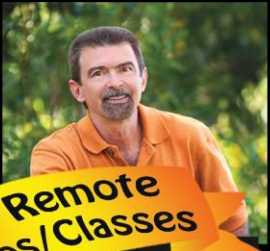


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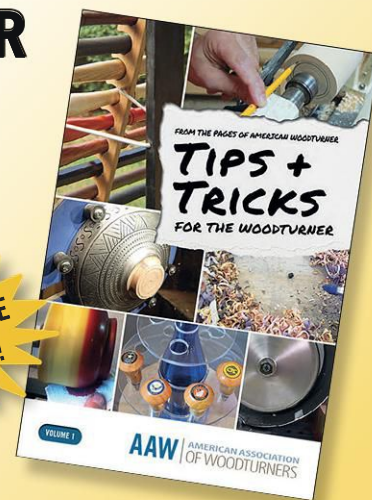
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Mike Jackofsky is a woodturner from San Diego, who specializes in hollow vessels. He strives for a balance between taking advantage of the beautiful and unique characteristics of the material and not letting it completely dictate the shape of the finished piece. While shape and form are of fundamental importance to Mike, the added challenge of hollowing thin vessels through a relatively small opening adds a degree of technical difficulty and reward.

Georgianne Jackofsky, Mike's sister-in-law, is an illustrator and graphic designer from New York. In 2013, she began collaborating with Mike, transferring her creative ideas and illustrative techniques to the art of pyrography. Her freehand designs are always informed by the shape and grain of the wood, so the resulting pieces represent a balance of natural material, form, and thoughtful embellishment.

For more, visit mikejackofsky.com and georgiannejackofsky.com.

(Top right) Navigator, 2016, Buckeye burl, pyrography, 10" x 12" (25cm x 30cm)

(Bottom right) Solar Flare II, 2019, Ash, 3" x 12" x 4" (8cm x 30cm x 10cm)



Turn and burn: a beautiful collaboration



Photo: Chris Bossardet

