BELT SHARPENING SYSTEM • TRANSLUCENT WOODEN VESSELS • BALL-IN-A-BOX

AMERICAN WOODTURNER

Journal of the American Association of Woodturners

MILK PAINT

TURNING SIX DIAMONDS

FISHING THE OUTER REACHES

THE WORSHIPFUL COMPANY OF TURNERS

December 2012 vol 27, no 6 • woodturner.org

Gun Lamp

John Lucas

This project started because my son took a job in another state and moved away from home. He wanted to take his rifles, but did not have a place to secure or hide them. I thought about it for a while and came up with the idea of a gun lamp in which to store guns.

I have built several "gun hides" for friends, including a coffee table that holds rifles, a Deacon's bench with a secret locking seat, and a dresser on rollers that had a fake back. Those items were large and would not fit in my son's small apartment *and* they weren't turned. I am a turner now, so I wanted to create something exotic. I started making sketches. I'm pleased with the results, but the lamp needs a taller lampshade; I have not yet found one tall enough.

The lamp is 48" (122 cm) tall and 17" (43 cm) in diameter and contains 400 pieces of wood. I used air-dried maple and walnut. The challenging part was making the body of the lamp—it has thirty-two 45"-long compound-mitered staves.

I purchased my first-ever Forest-brand tablesaw blade for this project—I needed the most accuracy I could get from my saw. The jig I built for cutting the miters worked perfectly.

Cutting them was not that difficult; gluing them up was a real challenge. I glued in pairs using a special shopmade jig that a fellow woodworker from the WoodCentral online forum recommended; it saved tons of time and frustration.

I temporarily glued the door in place using a paper joint so that I could turn the whole assembly as one. The paper joint allowed me to remove the door after turning.

After I turned the body, the rest of the construction was straightforward segmented ring turning. The top ring is held in place by a locking mechanism. After the lock is released, this ring rotates about 15 degrees and then comes off, releasing the door, which is pinned at the bottom and free at the top.

The cabinet will hold three rifles and two handguns. I painted the interior with Krylon StoneFlek paint and finished the exterior with Minwax wipe-on poly using lots of hand sanding. ■

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

American Woodturner (ISSN 0895-9005)
is published bimonthly by:
American Association of Woodturners
222 Landmark Center
75 5th St W
St. Paul, MN 55102-7704
office: 651-484-9094
toll free: 877-595-9094
fax: 651-484-1724

email: inquiries@woodturner.org
website: woodturner.org
gallery website: galleryofwoodart.org

Yearly membership in the American Association of Woodturners is $53 USA, $58 Canada, and $68 overseas and includes a subscription to *American Woodturner*. Electronic-journal AAW membership, $43

Send dues to:
American Association of Woodturners
222 Landmark Center
75 5th St W
St. Paul, MN 55102-7704 USA

Or join online at woodturner.org

Periodicals postage paid at St. Paul, MN, and additional mailing offices.

POSTMASTER: Send address changes to AAW, address listed *above*.

Publications Mail Agreement No. 40064408
Return undeliverable Canadian addresses to:
Express Messenger International
P.O. Box 25058, London BRC
Ontario, Canada N6C 6A8

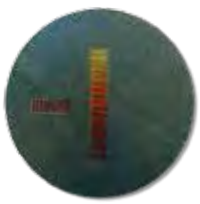
Printed in the USA by
Quad/Graphics, Saint Cloud, MN

MIX
Paper from responsible sources
FSC® C084269

Inside This Issue

December 2012 vol 27, no 6

FEATURES



AMERICAN WOODTURNER

Journal of the American Association of Woodturners

ASSOCIATION NEWS

WOODTURNERS CHATTER

GALLERY

COVER

Cover – Kimberly Winkle, *Salmon Candlesticks*, 2010, Poplar, milk paint, graphite, brass, 12" × 4" (30 cm × 10 cm), photo by John Lucas

Back Cover – Martha Collins, *Weaver 9 Bracelet*, 2011, Twelve different species of wood, hand-dyed maple veneer, ebony edges, 400 pieces, 2¼" (57 mm) dia, photo by Mark Frey

EDITORIAL

Editor Betty Scarpino
317-254-1374
editorscarpino@gmail.com

Editorial Advisors Kip Christensen
Denise DeRose
John Giem
Malcolm Zander

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

Jaime Thompson
Production Management

EDITORIAL SUBMISSIONS

Send article ideas to:
editorscarpino@gmail.com

For tips on article submission and photography requirements, visit woodturner.org/products/aw.

MEMBER SERVICES

For address changes or journals damaged or lost in the mail:
Contact the AAW office at inquiries@woodturner.org or call 651-484-9094 or 877-595-9094 (toll free).

Index to previous articles:
Download a free complete *American Woodturner* index (PDF format) at woodturner.org/products/aw.

To order back issues:
Order past issues of *American Woodturner* at woodturner.org/products or call 651-484-9094 or 877-595-9094 (toll free). Back issues are also available in PDF format on CDs and online for AAW members at woodturner.org.

ADVERTISERS

For rates and specifications, contact:
Pierre Productions & Promotions, Inc.
Erica Nelson
763-497-1778
erica@pierreproductions.com

Betsy Pierre
763-295-5420
betsy@pierreproductions.com

The AAW does not endorse any product featured or advertised in this journal.

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 woodturner.org/resources/safety.htm. Following them will help you continue to enjoy woodturning.

From the Editor

I recall telling a fellow woodturner many years ago that I would *never* paint anything I made. I preferred the natural color of wood—why add paint to an already beautiful object? In my thirty-plus years of working with wood, I have changed my mind on this, as well as on several beliefs and opinions I formerly held.

Only months after making my bold statement, I challenged my thinking and used milk paint for the first time. . . and have been painting with it occasionally for almost fifteen years. Why? I wanted to add blue eggs to a bowl, and that led to other uses of color. The metaphor of eggs as a beginning for experimenting with color is not lost on me.

My industrial arts professor told us: *It is unacceptable to paint wood*. As a student, I didn't challenge this mandate. However, with more experience and experiences, I have come to understand that our beliefs consist of statements, repeated over and over until a belief or opinion is formed. Had that instructor been differently inclined, I could just as easily have started with a positive influence about painted wood: *Wood is a perfect material to paint*. Opinions and beliefs can evolve.

Whatever your opinion, learn as much as possible about the techniques you use so that when you experiment, your work will look its best. There is room within the AAW for all approaches of finishing to flourish: Jim Rinde's translucent finish (pages 45–51) provides an inner glow to his wood vessels and Kimberly Winkle's milk-painted candleholders (pages 28–32) are boldly outstanding. Read about both in this issue—and let it be a stepping stone to consider challenging your own beliefs and opinions.

—Betty Scarpino

President's Letter

The Board of Directors recently conducted a randomized survey that went out to about one-fourth of our members. Thank you to everyone who responded and to Dennis Fuge who used his professional skills to analyze the results.
A few highlights drawn from survey responses:

- Average age of a member is 62, and 93.5 percent are male.
- More than three-fourths have an associates degree or higher.
- The median number of years of turning experience is eight, and 88 percent describe themselves as "passionate" about woodturning.
- About one-third use the website on a regular basis.
- Just under half have attended a symposium and 45 percent have been to a regional symposium.
- The journal is rated as the top membership benefit, followed closely by AAW's support of its more than 350 local chapters.
- Eighty-seven percent are satisfied with the AAW and 90 percent would recommend the organization to woodturning friends.
- Our most typical new member is a recently retired Baby Boomer, well educated, middle income, and male.
- Numbers for female members—while still small (6.5%)—are up over a few years ago.
- Eighty-five percent have children, giving us the opportunity to pass woodturning on to the next generation.

Many respondents had constructive critiques and thoughtful suggestions that will guide us in the future. We have an experienced management team in place. Executive Director Phil McDonald is full of energy and ideas. His recent membership campaign is showing excellent results.

AAW's budget is divided into three primary categories: journal, symposium, and office operations. Your dues directly support the journal and office. Attendees to the symposium pay for the related costs and symposium revenue usually adds to our bottom line. To ensure that future symposiums are viable for everyone, we have strengthened procedures to inspect potential sites and review contracts. From the survey, we know that lengthy drive times and expenses are the main reasons for not attending the symposium. We move the event around the country in five-year rotations to be near members in all geographical regions. We will keep hotel and registration costs as reasonable as possible.

An involved membership is key to AAW's continued success. Talk to your woodturning friends about joining the AAW. We provide training and education in all aspects of woodturning to the global woodturning community through *American Woodturner*, international symposiums, and our website.

The AAW is a tax-exempt organization—contributions are fully tax-deductible. Consider making a year-end charitable gift and think about including the AAW in your estate planning. AAW's future is bright!
Thank you, and best wishes for a joyful holiday season and a happy new year.

Dale Larson

Dale Larson

10 REASONS TO ATTEND THE AAW 27TH INTERNATIONAL SYMPOSIUM

TAMPA, FLORIDA JUNE 28–30, 2013

Woodturning is undergoing phenomenal growth and the AAW leads the way in providing technical and artistic information for hobbyists and professionals. Our international symposium is an excellent opportunity to watch world-class demonstrators share their techniques, find out about the latest innovations in tools and materials, and be inspired by the Instant Gallery and other exhibits. Join us in Tampa, Florida, to experience in person the creative passion of woodturning while enjoying the company of others who share your interests.

1 EXCELLENT VALUE

Held during three full days in the heart of central Florida's signature vacation destinations, the Tampa symposium packs in more high-quality learning opportunities for woodturners than any other event. The only difficulty may be deciding what to see first! Sign up early for discounted registration and to access group-rate hotels. At the symposium, you will receive a full-color handout book that includes techniques and insights from demonstrators.

2 WORLD-CLASS DEMONSTRATIONS

Simply put, no other event will offer as many opportunities to learn from the best turners in the world. With almost sixty rotations a day for three days and more than eighty of the most talented and inspirational demonstrators sharing their knowledge, you will have more opportunities than anywhere else to observe, ask questions, and interact with top experts.

3 LEARN NEW SKILLS

Personally tailor your experience by choosing the demonstrations and panel discussions that hold the greatest possibility to learn the tips and techniques you need for woodturning success.

4 WORLD'S LARGEST INSTANT GALLERY

The Instant Gallery is enormous—bring three pieces of your work to share! Themed exhibits will draw collectors and galleries from across Florida, an opportunity for your work to be noticed and to view pieces created by the world's most inspirational artists.

5 MORE THAN FIFTY VENDORS

The tradeshow will include more than fifty vendors. See and test the latest tools, equipment, and woodturning supplies. There is no substitute for holding tools in your own hands and having experts demonstrate tricks and techniques. Wood—there will be truckloads of treasures to select from!

6 GIVE BACK TO OTHERS

Donate a turned item to benefit a charitable cause—double your support by purchasing a turned item for $25.

7 SOCIALIZE

Step out of your shop and tap into the vast network of AAW woodturners. This is the place to make lasting connections with people who share your passion for woodturning. Friday night is Special Interest Night—pen turners, segmented turners, jigs and fixtures, and more!

8 CRAFT ROOM

The craft room will include more than ten demonstrations and eleven rotations. This is an excellent opportunity to interact with other partners of woodturners and to view a range of creative expressions. It's fun and it's free.

9 YOUTH PROGRAM

Bring a child or grandchild to sow the seeds for a lifelong love of woodturning that will leave lasting memories.

10 FREE OR INEXPENSIVE ATTRACTIONS IN THE TAMPA AREA

- A rich collection of art galleries
- Port of Tampa Harbor Tours
- Sunken Gardens
- Tampa Zoo and Clearwater Marine Aquarium
- Craftsman House
- Museum of Science and Industry
- Little Manatee River
- Shell Island
- Clearwater Marine Aquarium

For additional information, visit woodturner.org/sym/sym2013/index.htm. See you in Tampa!

HOTELS

When you make a reservation, mention that you are with the American Association of Woodturners.

Tampa Marriott Waterside Hotel and Marina
1/10 mile from Convention Center
700 S Florida Avenue, Tampa, FL 33602
888-789-3090 or visit resweb.passkey.com/go/WOOD
$139 single/$139 double/$159 triple/$179 quad

Hyatt Regency Tampa
211 North Street, Tampa, FL 33602
813-225-1234 or visit
resweb.passkey.com/go/AmAssnWoodturnersAnnualSympos
$119 single/$119 double/$144 triple/$169 quad

Embassy Suites Tampa
513 S Florida Avenue, Tampa, FL 33602
813-769-8300 or visitembassysuites.hilton.com/en/es/groups/personalized/T/TPAESES-AAW-20130623/index.jhtml
$139 single/$139 double/$149 triple/$159 quad

Call for Entries
2013 Annual Juried Member Exhibit
Currents

Inspired by the sun-kissed shorelines, gulf breezes, and sparkling waters of Tampa, Florida, the 2013 theme is "Currents." The theme is intentionally open to interpretation so sharpen your tools and get those creative juices flowing! Participants are encouraged to interpret the theme for themselves and to use any definition of currents for inspiration. All AAW members are eligible to enter this juried exhibit.

"Currents" will premiere in June at the AAW international symposium before traveling to the AAW Gallery of Wood Art in Saint Paul and other possible venues. This is a touring exhibition; work must stay with the show until its conclusion.

Sales: A 45% commission will be charged on sales made during the exhibition.

Entry Dates: Entries will be accepted on the AAW website (woodturner.org/sym/sym2013/) until February 3, 2013. All applicants will receive email notification by March 31.

Entry Fee: $30 for up to three submissions. You may submit up to three pieces, but no more than one piece per artist will be accepted for the exhibition.

Guidelines

- Work must be created at least in part on the lathe.
- Work must have been created in the past twenty-four months.
- There is no size limit, but only a few oversized pieces will be accepted due to space and shipping requirements. *Oversized* is defined as shipping in a box that exceeds 108" (207 cm) in overall dimension (2 × width + 2 × depth + length).
- An artist statement describing how the piece fits the theme is required. Entries may be edited for length and clarity.
- You may upload up to three images per piece. Include one view of the overall piece. Additional detail images or alternate views are optional. Uploaded images must be in JPG format and 2100 pixels on the longest side. (There are free image-resizing sites on the Internet. Step-by-step instructions for using iPiccy.com and picmonkey.com will be included on the online entry page.)
- A full-color exhibition catalog will be available. Artists whose entries are selected will receive a complimentary catalog.
- Shipping or delivery to the Florida venue is the responsibility of the artist. The AAW will pay return shipping fees. Work will be insured while in the exhibition and during return shipping.

Questions? Contact Tib Shaw at the AAW Gallery of Wood Art, tib@woodturner.org or 651-484-9094.

Nancy Borger, *Sand Dollar Sun Hat,* 2011, Boxelder, acrylic paint, bleach, 3¾" × 4" (9 cm × 10 cm)

Chapter Collaborative Challenge 2013

For AAW's 27th international symposium in Tampa, Florida, the chapters and membership committee will again sponsor a Chapter Collaborative Challenge (C^3).

Each AAW chapter is invited to submit one collaborative work created by as many chapter members as possible, with a minimum of six participants.

The complete rules for entry can be found in the August 2012 issue of *American Woodturner*, as well as on the AAW website at woodturner.org/sym/sym2013/.

The pieces will be prominently displayed during the symposium in an area near the Instant Gallery. During the symposium, attendees will be invited to select, by ballot, their choice for Best of Show and their favorite piece in each of the three categories. Votes will be tallied prior to the banquet, during which the winners will be recognized.

This year, in addition to plaques awarded for the winner in each category, the AAW will provide one free symposium registration to each chapter that wins an award.

Apply for an AAW Educational Opportunity Grant

AAW's Educational Opportunity Grant (EOG) fund continues to be strong, thanks to the wonderful generosity of donors and buyers at our annual symposium auction. Funds are available for worthy proposals. ***To be eligible, applications must be received by December 31, 2012. All AAW members are eligible to apply*** (except for recent recipients). You can complete the application form and review the guidelines at woodturner.org/resources/eog/.

The committee will not consider applications that are incomplete or vague. Please take care when applying. The following tips will help you with your application:

- Complete the application online at woodturner.org/resources/eog/. Only online applications will be accepted.
- Provide sufficient information so EOG committee members can clearly understand what you are requesting and how you intend to use the funds. Please be as concise as possible to make your points direct and clear.
- Include details of how you will use the funds. Specific needs should be itemized. Funds will not be granted for miscellaneous, incidental, or unspecified expenses.
- Explain your educational goal or experience you wish to obtain. Keep in mind that these grants are for educational purposes. In particular, please explain how others will benefit as well.

Grants are limited to $1,000 for individuals and students and $1,500 for local chapters, schools, and nonprofit organizations. Your budget may exceed these limits; however, your grant request should not exceed EOG limits. For special situations, at the discretion of the EOG committee and the AAW Board, grants are available in larger amounts. In addition to EOGs, the committee will award ten certificates for registration to AAW's international symposium.

If you have questions, contact the EOG committee chair or the AAW office. The AAW Board encourages you to take advantage of this membership benefit. ■

Kurt Hertzog, EOG committee chair
kurth@woodturner.org

AAW Board of Directors Election Results

Congratulations to Kurt Hertzog for being reelected and to Rob Wallace and Lou Williams for being elected to the AAW Board of Directors. Each person will serve a three-year term beginning in January 2013.

Serving as a volunteer on the AAW Board of Directors requires a significant commitment of time, and we appreciate the willingness of all six candidates to put their names forward for the election. Thank you.
—Dale Larson, AAW Board President

Prize Drawing for AAW Members

One of the many benefits of membership in the AAW is our monthly prize and year-end grand prize drawings. Thank you to the vendors who donated this year's prizes, which include tuition scholarships, $100 certificates, sanding supplies, DVDs, chucks, grinding jigs, and lathes!

When you patronize our vendors, please thank them for their support of the AAW. Visit our website at woodturner.org/org/mbrship/drawings_winners.htm to see each month's prizes and winners.

At the end of 2012, we will draw another name from our membership roster to give away a Powermatic 3520B lathe. That winner will name a local chapter to win either a JET 1642 or five JET mini-lathes. The Powermatic and JET lathes are donated by Walter Meier Powermatic/JET. Included is free shipping in the continental USA, or up to a $500 allowance for international winners.

2012 Donors
(Others may be added during the year.)

Anderson Ranch Arts Center, andersonranch.org

Arrowmont School of Arts and Crafts, arrowmont.org

Craft Supplies, woodturnerscatalog.com

David Ellsworth, ellsworthstudios.com

Easy Wood Tools, easywoodtools.com

Hunter Tool Systems, hunterwoodturningtool.com

John C. Campbell Folk School, folkschool.org

Mike Mahoney, bowlmakerinc.com

North Woods, LLC, nwfiguredwoods.com

Oneway Manufacturing, oneway.ca

Thompson Lathe Tools, thompsonlathetools.com

Totally Turning/Showcase Symposium, totallyturning.com

Trent Bosch, trentbosch.com

Walter Meier Inc. Powermatic/JET powermatic.com and jettools.com

Woodturning Design magazine, woodturningdesign.com

Tips

Sanding curves on spindles

To help create a fair curve when sanding coves, I used to use a selection of different-sized dowels. For a curve on a small finial, I would wrap abrasive around the sharpened taper on a pencil.

To allow for the varying diameters on a complex finial, I turned a 1½"- (38 mm-) diameter cone about 4" (10 cm) long, and it has proven to be a versatile sanding aid. I wrap the cone with a piece of sandpaper and match the diameter with the turning. Where the curve is tighter, I simply move the cone to match the new diameter. To expose fresh abrasive, rotate the cone.
—Joe Larese, New York

Share your turning ideas!
If we publish your tip, we'll pay you $35. Email your tips along with relevant photos or illustrations to editorscarpino@gmail.com.
—Betty Scarpino, Editor

Repair small spindles

A simple solution for repairing small, hard-to-hold and/or align pieces of spindle-turned items (the stem of a goblet) is to use sewing thread to hold the joint together, and then use thin CA glue to secure the joint.

Tie a slipknot in the thread, align the pieces, tighten the slipknot over the broken pieces, and wrap a few coils of thread around the broken area. A single layer is enough. Sparingly apply thin CA glue to the broken area and allow time for the glue to cure. The glue will penetrate and repair the joint. Return the item to the lathe and sand away the thread and excess CA glue. Adequate sanding will allow most finishes to be applied.
—James L. Pruitt, Arkansas

Foam mat cushion

Want to protect your finished turnings from dings or disaster when buffing? Drape a foam kitchen floor mat over the bed ways, then buff. The foam also makes good backing for sanding discs.
—Ed Larson, California

Handy awls

I always seemed to misplace my awls. I had a similar problem with pencils, so I scattered a dozen around my shop. Awls cost a lot more than pencils; I needed an economical solution.

Notice-board pins can function as awls to make a small hole in wood and an entire package is a fraction of the cost of an awl. I put a pin near each pencil and now there's an awl everywhere.
—Charles Mak, Alberta, Canada

Foam backing

Periodically I have to replace the rubber backing pad and the hook-and-loop disk on my sanding mandrel. The cost for those two items is about $10. I found a way to do it for about a dollar.

First clean off the old backing pad (I use my disk sander). Next, cut a 2" (5 cm) backing pad from a koozie (a foam drink cover, available free everywhere). Glue it to the mandrel using either CA or epoxy. Cut a 2" hook-and-loop disk and glue that to the backing pad. I buy large rolls from a home improvement store. If you buy the sticky-back material , you can just stick that to the pad.
—Paul M. Kaplowitz, South Carolina

Preserving finish

I found that if a can of Waterlox is set upside down, the finish would not gel or dry out. I made a wood block with a hole in it to keep the container upright, upside down. The cap needs to be tightly secured to prevent leaking.

My understanding is that at the cap end there is now no air so the finish stays liquid and at the top (the bottom of the can) there is air, but there can be no evaporation. I've used this method for about a year and the finish is still good.

—Jim Brinkman, Texas

Microwave-drying green wood

For several years I have been drying wood in a microwave. I tried drying as most articles suggest by heating on defrost, waiting, weighing, and drying again. I used many combinations of heat and wait times. I even set a couple of turnings on fire (no flame but considerable smoke).

I believe I am onto a solution, which has worked well for several turnings (sweet gum, maple, cypress, golden rain tree, and Catawba). I reasoned that for the bound water to break through the cells, the water must be heated past the boiling point (some turners boil their wood for hours). At the same time, the outside of the wood must not dry faster than the inside or significant cracks will occur.

To introduce moisture to the outside of the wood, I place a mug of water in the microwave, along with the rough-turned piece. For a 10" (25 cm) bowl, ½" (13 mm) thick, I set my microwave on high for 15 minutes. *Microwave strengths differ, so take care!* For thinner pieces, I reduce the time.

After the oven stops, I wait until the piece is completely cool before opening the door so that the outside surface of the wood can absorb some of the moisture from the steaming mug of water. This could take more than an hour. If the wood is still warm when removed from the oven, the outside will dry too fast and cracking and warping will occur.

My moisture meter should read less than 10 percent, but if not, I return the piece to the oven for one-half to three minutes, but you must be the judge of how long to set the timer for the wood you are drying and the strength of your microwave oven.

When the wood is sufficiently dry, I remount it onto my lathe and finish it. I can apply finish and complete the turning in one day. Some pieces develop minor surface cracks, but nothing I cannot fix with sanding dust and CA glue.

This method also kills insects.

—W. Custer (Bill) Smith, Florida

Flatten a board

The article on rimmed bowls in the April issue (vol 27, no 2) points out the occasional need for a perfectly flat surface on the rim of a bowl or top of a box. Here is my method of achieving the necessary flat surface.

First, get several 6" × 48" (15 cm × 122 cm) sanding belts. I use 80-, 100-, and 120-grit belts. Next, make a 6"-wide piece of stiff and flat ¾" (20 mm) plywood board that fits just inside the belts. Do not make it fit too tightly—belt lengths are not exactly the same.

Finish turning your bowl or box and use a tool to obtain as flat a surface as possible on the rim. Then, with the lathe running at slow to medium speed, hold the belt-covered board with both hands against the spinning rim. Span a third to a half of the bowl and keep the board perpendicular to the lathe's axis. Use low pressure and let the belt abrasive do the work removing the wood. Within a short time, the rim surface is flattened completely and uniformly around the circumference.

A finer grit belt can be used to dress up the surface, if desired. This method avoids the need to check for flatness across the diameter with a straight edge or any off-lathe hand sanding. If a separate rim piece or segment ring is being added, the same technique can be used on the mating surface to achieve an excellent glue joint.

Note the dust collection system hose at the lower left, positioned to capture the dust. By adjusting the relative position of the board with respect to the spinning rim, virtually all the dust plume can be directed into the hose mouth. ▸

—David Lutrick, Washington

Revolving lathe-tool storage unit

After 20 years away, I'm back to woodturning. I dug out my turning tools and also bought new ones. I no longer have a huge two-car-garage shop with wall and floor space, so I devised a compact bench-top storage tower that is 17" (43 cm) tall.

The base is made from two ¾"- (20 cm-) thick squares of plywood, 10" (26 cm) square. It spins on a 6" (15 cm) lazy Susan. The tower is made out of ½" (13 mm) MDF and is 6" square, leaving just enough room for plastic pipes. I screwed the pipe sections to the tower, except for the four corner pipes, which I glued to the two adjacent pipes using plastic model cement.

I made the eight ¾" rails used to secure the chisels out of ½" MDF. They are drilled to accept ⅜" cups. Small rare-earth magnets placed in the cups hold the chisels straight and secure. I screwed the side rails to the tower so they can be moved up or down if I acquire tools that are significantly different in length.

The drawer sides are made out of ½"-thick MDF and the bottoms are ¼"- (6 mm-) thick MDF.

I added rubber bumpers under the base so I would be able to slip my fingers under when moving the tower.

—Serge Duclos, Canada

Editor's note: The ends of turning tools are sharp. Be aware of the potential danger with cutting edges uncovered and pointing upward.

Catchy safety posters

I suggested to our club's shopkeeper that we put up safety posters. He pointed out that we had some already; I had never noticed. So, I had my grandson make two that would be noticed. I'm sure other turners have grandchildren.

—Bob Pastel, New York

Thickness measuring gauge

Measuring the thickness of ornament globes in the shoulder region near the opening through which the globe is hollowed is difficult, if not impossible, to do with commercially available thickness gauges. My solution was to make a caliper-type gauge with a specially contoured end that enables it to easily accomplish this measurement. The opposite end of the caliper has a conventional contour that reaches all the remaining regions of the globe.

I made my gauge using 1/16"- (1.5 mm-) diameter hardened steel wire to ensure sufficient stiffness. I wrapped the wire around the shank of a small screwdriver to form the pivot points for the arms and then bent the arms to the required shape. A small roundhead machine screw and hex nut join the two arms.

If you have the capability of cutting light gauge sheet steel or aluminum, a similar and smoother-operating gauge could be fabricated. Nevertheless, the wire construction produces a gauge that readily accomplishes the job. ■

—Warnie Lore, West Virginia

Calendar of Events

February issue deadline: December 15

Send information to editorscarpino@gmail.com

David Fry, *Boxelder Pot*, 2004, Boxelder, 10" × 13" (25 cm × 33 cm)

From the exhibit "Turned and Burnt," at Luther W. Brady Art Gallery, The George Washington University, Washington, DC.

Alabama

January 18–April 7, "Shadow of the Turning," exhibit of new work by Binh Pho, Mobile Museum of Art. For more information, visit mobilemuseumofart.com.

Arizona

February 22–24, Desert Woodturning Roundup, Mesa Convention Center. This 5th biennial symposium, hosted by the Arizona Woodturners Association features Richard Raffan, Malcolm Tibbetts, Michael Hosaluk, Molly Winton, David Marks, John Lucas, J. Paul Fennell, Matt Monaco, and Rex Burningham. The event includes a pen-turner gathering, live and silent auctions, vendor area, instant gallery, and door prizes. Following the symposium, Richard Raffan will teach a hands-on workshop. Further information is available at desertwoodturningroundup.com or call 480-620-5185.

Florida

February 1–3, Florida Woodturning Symposium, Lake Yale Baptist Convention Center. Demonstrators include Hayley Smith, Jimmy Clewes, Brian McEvoy, Jerry Kermode, Rudolph Lopez, Gerhard Schwenke, Larry Hasiak, and Don Geiger. Dixie Biggs, Lee Sky, Bruce Hoover, James McClure, and Steven Marlowe offer hands-on workshops. The event will include a vendors' area and a craft room. Register online at floridawoodturningsymposium.com.

June 28–30, AAW's 27th international woodturning symposium in Tampa. For more information visit woodturner.org.

Georgia

April 26–28, Southern States Woodturning Symposium, Clarence Brown Conference Center, Cartersville (new venue). Featured demonstrators are Keith Gotschall, Dick Sing, Al Stirt, and Jacques Vesery. For further information, visit southernstatessymposium.org or contact chair/registrar Marsha Barns at 828-837-6532 or ml.barnes@bmemc.net.

Idaho

February 23 and 24, "Idaho Artistry in Wood," Boise Hotel and Conference Center, Boise. Competitors from all skill levels are invited to submit woodcarving, scrollwork, fine woodworking, and pyrography for display and judging. The show will feature demonstrations, vendors, raffles, auction, and banquet. For registration forms and more information, visit idahoartistryinwood.org.

Minnesota

Through December 28, "A Walk in the Woods," Gallery of Wood Art, Landmark Center, Saint Paul. Ongoing exhibit is "Touch This!" featuring fascinating facts about wood and woodturning, as well as pieces that you can touch. For more information, visit galleryofwoodart.org.

New York

March 23 and 24, 10th annual Totally Turning symposium, Saratoga Springs City Center. Demonstrators are Mike Mahoney, Binh Pho, Ernie Conover, Kurt Hertzog, Steve Sinner, Steve Worcester, David Nittmann, Lyle Jamieson, Harvey Fein, Bruce Hoover, Mike Souter, Joe Hermann, Jeffrey Noden, Jerry Sambrook, and Giles Gilson. For more information and registration, visit totallyturning.com.

Ohio

May 17–19, Northeastern Ohio Scrollsaw & Woodworking Picnic, Quirk Center, Cuyahoga Falls. The event features scrollsaw, carving, pyrography, and turning classes and demonstrations. Jason Swanson will demonstrate woodturning and offer a class. For more information, visit northeasternohioscrollers.yolasite.com.

Tennessee

January 25 and 26, Tennessee Association of Woodturners' 25th anniversary woodturning symposium, Marriott Hotel at Cool Springs, Franklin (just south of Nashville). Featured demonstrators include Dixie Biggs, Jimmy Clewes, John Jordan, John Lucas, and Mike Mahoney. Upcoming details on tnwoodturners.org or email tawsymposium@aol.com or call 615-973-3336.

Utah

May 16–18, Utah Woodturning Symposium, Utah Valley University, Orem. With more than 90 demonstrations to choose from and a full schedule of special events, there is something for everyone. Interact with demonstrators, Nick Arnull, Mark Baker, Dennis Liggett, Andy Cole, Cynthia Gibson, J. Paul Fennell, Mark Supik, Mick Hanbury, David Drescher, Vic Wood, John Wessels, Dale Nish, Mike Mahoney, Kip Christensen, Alan Lacer, Mary Lacer, Tim Heil, Joe Herrmann, and Kurt Hertzog. For additional information, contact Susan Hendrix at utahwoodturningsymposium@gmail.com or visit utahwoodturning.com.

Virginia

May 17 and 18, Mid Atlantic Penturners Gathering, Woodcraft of Richmond. The event includes demonstrations, vendors, instant gallery, contests, pen and blank swaps, door prizes, and socializing. Free and open to the public. Follow us on Facebook at Mid Atlantic Penturners Gathering or for more information visit midatlanticpen.com.

Washington, D.C.

October 8–December 21, "Turned and Burnt," at Luther W. Brady Art Gallery, The George Washington University. The exhibit features Pre-Columbian artifacts and woodturned vessels. For more information, visit facebook.com/BradyGallery. ■

Bedan, Trembleur, and Multiaxis Turning: Jean-François Escoulen on DVD

I love watching Jean-François Escoulen turn wood; I could watch him all day. In fact I recently did watch him all day, via a three-DVD video program published by the UK company, KTMP, under the general title *The French Collection*.

Escoulen is a master turner from France, a man with forty years of daily work experience in front of the lathe. He is also an alumnus of the prestigious International Turning Exchange, and a world traveler who appears frequently at major turning symposiums and teaching venues. His own work, as you can see in the *Collection* segment at the end of volume 2, DVD 2, is bewildering and quite otherworldly.

The packaging does not prepare you for what is on these DVDs, and the onscreen navigation is not helpful either, so here it is: The 90-minute volume 1 shows how to use the bedan, how to turn a trembleur, and how to duplicate a turning. The two DVDs in volume 2—totaling almost two hours—are entirely about eccentric turning, Escoulen's specialty.

Spindle gouge and bedan

Escoulen is incredibly slick and quick with the spindle gouge and bedan. He seems able to turn anything with just those two tools. His spindle gouge is the same tool familiar to all of us, with a fingernail grind and a small secondary bevel, although he prefers an extra-heavy and extra-deep cross section for multiaxis work. His bedan, however, is a stranger in American workshops. It is simply a square bar of tool steel ground to a single square-end bevel, like the top half of a wide parting tool. In Escoulen's hands, it does everything: rounding down from square, precise shaping and detailing, and smooth planing to achieve a gleaming wood surface, everywhere you would use a skew, and more.

He explains that the bedan is held bevel-up on an above-center toolrest, and that it cuts from the two corners, not so much from the center of the edge. The back is dead flat, and it has to be dead sharp. I was lucky enough to see Escoulen in action at the AAW 2012 symposium in San José, and I came home with a shiny new bedan of my own. But I had only been able to make it catch and dig in until I studied volume 1 in this DVD set.

Trembleurs and string steadies

The trembleur—a classic exercise for turners in France—is an amazing and improbable creation: A spindle turned to form a sequence of spheres, eggs, vases, and teardrops separated by long and unbelievably slender necks. The demonstration trembleur on this program is about 2' (60 cm) long with a maximum bead diameter around 2" (5 cm). The necks between beads skinny down to less than ⅛" (3mm). Although they're not shown on this disk, Escoulen has turned trembleurs 3' and 4' (90 and 120 cm) long that are so fragile they must be confined inside, and supported by,

Escoulen's multiaxis turnings look like creatures from another dimension.

Photo courtesy the artist

Jean-François Escoulen, untitled box, 1996, Plywood, dye, 10" (25 cm)

a close-fitting glass tube. He says ivory trembleurs can be turned to the diameter of a horsehair, "but ivory is a problem because we have no elephant in France."

Along with uncommon skill and patience, the trick to making a trembleur seems to be the ingenious string steady. On these disks, Escoulen is working on a huge Oneway lathe using the standard Oneway spindle steady. This lush setup allows him to work at the far end of his spindle without tailstock support. But after he has turned a few beads and slender necks, the workpiece is in extreme danger of whipping around and breaking. This is where the string steady comes into play. Like the standard steady, it's an adjustable armature that surrounds the workpiece. But where the conventional steady has blocks or wheels bearing on the wood, the string steady's armature doesn't directly touch the wood. Instead, Escoulen loops and ties a length of waxed nylon thread around and around the workpiece and a set of four studs in the steady. It looks pretty snug and the string—the same as shoemakers use—doesn't stretch, so this unlikely arrangement actually does work. He adds additional string steadies as he goes, always around the slender necks to support one or two heavy beads in between. At the end of the job, with the trembleur parted from the driving headstock, Escoulen simply cuts the strings to release the trembleur.

Eccentric turning

Both DVDs in volume 2 of *The French Collection* are focused on eccentric turning and feature the Escoulen eccentric chuck, a shiny $500 gizmo. In eccentric turning, the workpiece gets turned several times, each time on a different axis. The result is a vocabulary of shapes that you would not imagine the lathe could produce, including oval sections, golf clubs, and solid pieces that bend in the middle. The intro segment, however, demonstrates the concepts by way of a three-axis turning where Escoulen uses

Jean-François Escoulen is pleased with the trembleur he made at the AAW's international symposium in San José in 2012.

Photo: John Kelsey

conventional ring centers to produce a bent, baroquely futuristic chess piece.

Preliminaries out of the way, Escoulen then mounts his own special chuck, a two-inch collet with internal counterweights that can be shifted relative to the lathe axis, and delivers five projects that could not be made any other way. The projects include ergonomic handles for a corkscrew and bottle opener, a lidded box, and two goblets on bony crankshaft stems. There is also a slideshow of Escoulen's own work, amazingly ingenious multiaxis forms that resemble nothing on earth so much as jellyfish and undersea creatures, or maybe they are schmoos jetting around the planet Franconia.

Ingenious string steadies support the trembleur on the lathe. Escoulen makes all these shapes with the bedan and spindle gouge.

Photo: John Kelsey

Video quality

As video productions, these DVDs are uneven. Under the direction of Kevin Tickle at the Hunters Lodge workshop in England, the two-camera setup produces many excellent close-up shots of tool use and flying shavings. The sound is good, and Escoulen himself is a wry and amusing gnome. His French accent is easy to understand (although some sentences do warrant a replay), and I found his presentation charming and easy to follow. On the minus side, the workshop is cluttered and visually distracting, the program's titling and on-screen navigation is amateurish at best, and while there are many great close-up tool shots, we never see the turner's stance, how he plants his feet and moves his body. Similarly, the finished projects are not shown until the end of each segment, and some of these things are so alien that I just could not tell where he was going until I got there and then I had to run the sequence again. You could argue that this is the French teaching style, Jean-Paul Sartre and all of that, but I don't think so; it just reflects hasty video not fully thought through.

If you are a tool junkie looking to try a bedan, or if you would like to test yourself with a trembleur, volume 1 of *The French Collection* is for you. If you are tempted by the wicked, weird shapes Escoulen can make, or lusting to own his nifty eccentric chuck, try volume 2, both DVDs. And, if you just like to watch a master turner at work, get all three DVDs and settle in for the day. *The French Collection* is not as thrilling as the *Lord of the Rings*, but for some of us, it's just as absorbing. ■

—John Kelsey lives in Lancaster, PA.

The two-volume set (three DVDs) *The French Collection* can be ordered through ktmp.co.uk, chucksplus.com, or skillspublishing.com.au/.

Powermatic 3520B Storage Cabinet

I know I am somewhat compulsive when it comes to organization. I guess that comes from my years as an engineer: My left brain has to get things organized before my right brain can be creative.

My shop is in my garage, where I also keep two cars; the need for storage is evident, should you see it. I make a lot of cabinets and furniture and have accumulated tools and more tools. Every surface on the walls is filled, so I am always looking for ways to increase and maximize storage space. Woodturning is relatively new for me, but I seem to have caught up with the more seasoned turners—at least in tools! I need more storage and that's where this Powermatic cabinet is useful.

Transition from shelves to cabinet

After I purchased my lathe, I built the shelf that Powermatic recommended. Time passed and that shelf was accumulating stuff and was not very convenient. Next came a work tray under the lathe bed *(Photo 1)*. The construction was straightforward: I fastened two vertical boards on each side of the lathe stand between the existing shelf and the bottom of the lathe bed. I then made a tray using MDF, fastening drawer slides to the tray and to the uprights. I put a trim piece on both the front and back of the tray so things would not roll off. I use that tray to hold tools that I use often during turning: toolrests, a diamond stone, and others. From that tray, it was just a matter of time before I realized an opportunity for more storage: the cabinet.


1
A simple work tray predated the storage cabinet.


2
The storage cabinet is in place. I allowed room for a sawdust collection vent in front and dust collection behind the lathe.


3
A variety of drawer sizes accommodate most tools I use for turning.


4
I left the back of one drawer open so that the lines from a vacuum pump can run through it into the drawer.

The cabinet

Photo 2 shows the cabinet in place, sized to slip into the opening. *Photo 3* shows some frequently used tools. Cabinet dimensions are in *Figure 1*.

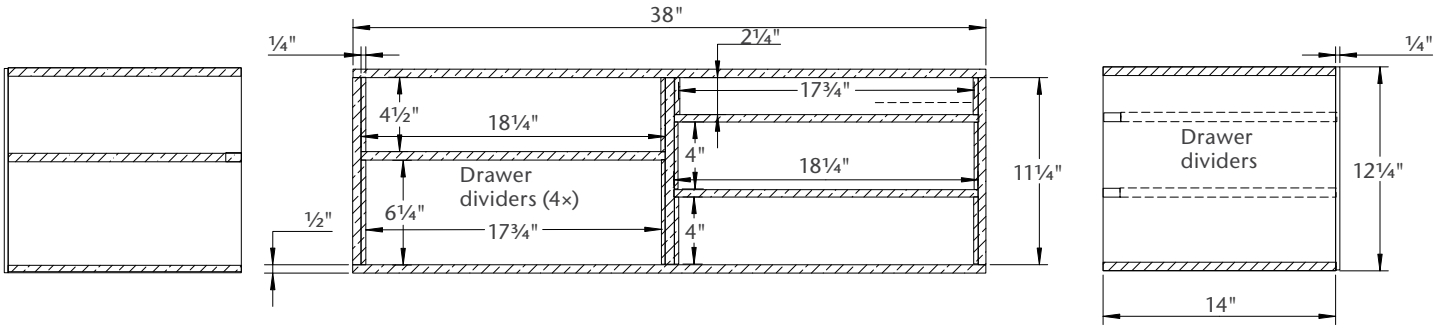
The existing shelf, work tray, and the space available behind my lathe dictated the outside dimensions. I designed the height and number of drawers to accommodate the tools I typically use when turning. The drawers are all the same width to make cutting the pieces easier—vary these dimensions according to your needs. The deepest drawer holds my vacuum pump. The 4½" (11 cm) drawer holds four-jaw chucks, drive centers, and adapters. The skinny drawer houses various rulers, calipers, and gauges.

My objective was to construct the cabinet using just one 5' × 5' (150 cm) sheet of ½" (13 mm) Baltic birch plywood, along with some ¼" (6 mm) plywood I already had available. With a bit of finagling and sacrificing some building techniques, I managed to achieve the objective. I used a software program called CutList Plus (cutlistplus.com), which helped me lay out the pieces of plywood before assembling them; the sizes of the pieces you need are entered as well as the wood you have, and it does a layout on the plywood and prints it. A huge timesaver. But, you can do your layout the old-fashioned way.

Case construction

The overall dimensions of the case are 38" wide, 12¼" high, and 14" deep.

The top and bottom are the same size: 14" × 38" while the sides and the middle vertical piece are 14" × 11¼". The horizontal drawer dividers in the front are ½" × 1" × 18¼". The front-to-back dividers are ½" × 1" × 13". I would normally use ¾"



Side view, left Front view Side view, right

Figure 1.

material for the sides and middle vertical piece and dado the dividers into the ¾" material, but since my objective was to use all ½" material, that was not possible. So, I used ¼" plywood spacers between the drawer dividers. Those spacers then support the dividers. I used ¼" plywood to enclose the back, except where the vacuum pump lines enter and exit *(Photo 4)*. In addition to helping rigidity, the back prevents wood chips from getting into the drawers. Speaking of drawers...

Drawer boxes

Photos 5, 6, and *7* show several views of a typical drawer. Note that I used 14" European-style drawer slides for all the drawers. If you want to use full-extension slides, there is no change to the dimensions.

All the drawer boxes are the same width (16⅞") and depth (14"). The height of the drawer boxes needs to be 1" less than the opening between the dividers. This allows for the drawer slides to be set into the slides mounted on the cabinet. Note that the actual horizontal opening of the drawer spaces is 17¾", but you need to allow 7/16" on each side of the drawer for the drawer slides.

The construction of the drawer boxes can be accomplished in several ways. I dovetailed the front and rabbeted the back—I had to use my dovetail machine! The back could be dovetailed also, but I chose to dado the sides and recess them. I used ¼" plywood for the drawer bottom and cut a ¼" × ¼" dado, ¼" up from the bottom and slipped the plywood into the slots.

Drawer fronts and assembly

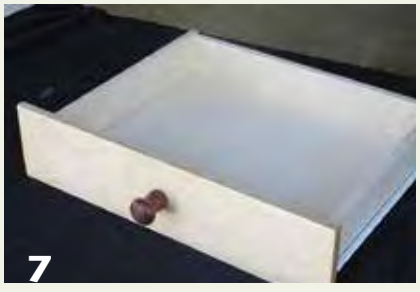
The width and height of the drawer fronts are ⅜" wider than the drawer opening dimensions. This allows for 3/16" overlap on the drawer dividers. To position the fronts, I used double-stick tape and once positioned, I used several screws to permanently secure them.

I primarily used Titebond glue, the regular yellow woodworking type. And, to help things stay together while the glue dried, I used clamps and air-gun nails.

You will need four knobs readily available from your local hardware store—just kidding! This is the only time you get to use your lathe on this project, so go for it. I made mine all the same, but you can be more creative.

I made this cabinet to suit my needs—the space available under your lathe and your requirements may be different. If nothing else, be inspired to make a storage cabinet for your miscellaneous shop gadgets and supplies. So, uncover your table saws (piled with plywood and used as a workbench?) and start getting organized today! ■

Jim Brinkman lives in Austin, Texas, and is a member of AAW and Central Texas Woodturners Association.



Three views of a drawer.

Turning Above the Treeline
Iqaluit Project

I had very little woodworking experience and did not begin turning until later in life. In the early days, I had a stressful job as a mental health nurse and found that a couple of hours making wood chips fly was therapeutic. As my hobby turned to obsession, I ventured into the world of craft sales so that our home was not overwhelmed with bowls, candleholders, and various art objects. This eventually led to involvement with arts and crafts organizations. I became the organizer and first president of the Prince Edward Island (PEI) Wood Turners Guild, and am currently president of the PEI Craft Council, as well as treasurer of the Canadian Crafts Federation (CCF).

In 2010 at the CCF annual meeting in Winnipeg, Manitoba, we decided to hold the 2011 meeting in Iqaluit, the capital of Nunavut. The Nunavut Arts & Crafts Association (NACA) then extended invitations to various artisans on the CCF Board of Directors, including me, to demonstrate our craft during our time in the territory.

This posed some major challenges for a woodturner. The geography could not be ignored: Nunavut is about as far north as you can go in Canada, well past the treeline, which means *no trees grow there*. This also means that without trees or a local supply of wood, no wood lathes live there. In addition, there are no roads that connect north to south. All wood and equipment would have to go by sea or air. The shipping costs for this venture were going to be huge. NACA was willing to help, but major fundraising was needed.

Raising funds

Back home on our little island of 144,000 people, I began to solicit help. I am a good turner but am not mechanically inclined. My friend Warren Gillis, however, is a farmer with years of experience in automotive and mechanical assembly and repair. Would he like to go to Iqaluit to help with this turning project? Warren accepted immediately. We then phoned turning guru from Nova Scotia, Don Moore, and his partner Maureen Simpson, to see if we could form a group for this venture. Maureen had spent time in Nunavut during her nursing career and quickly became interested. Don questioned my sanity but hopped aboard. We had a team.

Warren turns and carves, but agreed to be setup and equipment manager while the rest of us would hold demonstrations and workshops for three days prior to the event. We would each apply for grants and do local fundraising. Any equipment and wood we took to Iqaluit would be expensive to ship back, so we decided we could leave a lathe and tools there and some of the stone carvers might start turning soapstone. We had a plan.

Don and I began looking for funding and sponsors. His first positive response was from Peter Kennedy, Director of Sales, General International Manufacturing Company Ltd. Peter told us their management team was behind this project 100 percent. He instructed us to make a shopping list of our needs from their website. With that, we had a lathe, grinder, air cleaner, and tools. Maureen, Don, and I have General lathes, so our comfort level demonstrating on this excellent equipment was high. Further success with corporate sponsors came from Jerry Hammock and the folks at King Arthur Tool Company in Florida.

Warren had little experience with fundraising, but by approaching local businesses in PEI, he raised more than $1,500! The team also received support from the ministry of Culture and Tourism, PEI, and the PEI Craft Council. We were on a roll.

Participants inspect the lathe, learning how it holds the wood.

Two Nunavut residents, Jolly Atagoyuk *(l)* and Eric McNair-Landry, participate in the workshop.

The workshop participants were enthusiastic about its potential for the arts in Iqaluit.

Tom Dean discusses the finer points of turning with Jerry Ell, a stone artist from Iqaluit. (Onlooker in orange: James Lavoie)

Michel Robillard, Andrew Maher, Eric Nair-Landry, Tom Dean and Warren Gillis.

Challenges, setbacks

Most projects have their challenges and sometimes, even tragedies. Maureen was informed that the cancer she had battled had metastasized, and she would need more treatment. Then, Don and Maureen's travel funding application was unsuccessful. We were down to two turners to do the demonstrations. Next came difficulties in shipping our crates of tools and materials. When we originally inquired about sea transport, the arrival time was indefinite. Flying the supplies in was the only option. Warren called our local airport cargo and was given dimensions to build crates, but when we arrived to ship them (one week before our departure), we were sent home to rebuild them. Someone had given us the wrong sizes; the crates were too big. The 100-kilometer trip home was very quiet.

On to Iqaluit

On June 29, 2011, with the crates rebuilt and on their way, Warren and I flew to Ottawa, had a one-night layover, and then flew to Iqaluit. It was Warren's first experience flying, but other than white knuckles during takeoff, he was fine. My first impressions of Nunavut were of a stark and barren place, lots of rock, few paved roads, and ice still in the harbor. Not a tree to be found! An unwelcoming sight for squirrels, woodpeckers, or a couple of old woodturners like us.

Our opinions of this place began to change the next day when we went hunting for our equipment. Grass, wildflowers, and lichen grow abundantly, and Iqaluit has stone carvings and sculpture on almost every street. People we met were smiling, friendly, and helpful with directions.

Eventually, we found our crates in some tents beside the fire hall. Outside, there was a stone carving competition and demonstration with many Nunavut carvers and their apprentices transforming soapstone, jade, marble, and granite into bears, fish, and shamans. Looking around, it was easy to forget that assembled in this rock-strewn field were some of the finest stone carvers on the planet.

We collected our crates and began assembling the lathe and dust collector in the demonstration building. Within a morning we had the wood chips flying and a small crowd of NACA employees and other exhibitors taking in the sights. Our demonstrations and workshops were to start on July 2. We spent Canada Day enjoying the festival events and got up the next morning hoping for good attendance.

All our demonstrations and workshops for the next two days were full. The first morning we welcomed a mix of women and men. Keeping the content basic, we concentrated on describing equipment and lathe terminology, then moved on to different ways to attach pieces of wood or stone to the lathe using chucks and faceplates. I briefly discussed spindle turning, but concentrated on making simple bowls from dry pieces of cherry, maple, and red pine. Warren and I allowed most of the participants to try using gouges and to do some sanding to get a feel for the lathe and the chisels. During the afternoon workshop, we finished three bowls and gave them to participants. All through the day we had a steady number of the festival crowd come through, including many of the carvers in the competition.

The second day was as successful and busy as the first. Most of the participants were interested and asked questions. Some were even interested in forming a turning guild when we mentioned that General Manufacturing's lathe and tools were being donated to NACA.

I spent the next few days in meetings and Warren went touring with our camera. We attended the gala festival dinner and auction at the Frobisher Inn and were amazed with the finished pieces from the carving competition. We left Iqaluit on July 9 and headed home.

Expanding the project

At home, I reflected on our Iqaluit experience. Nunavut has a population of approximately 33,000, of which one-third make a substantial part of their living from arts- and craft-related activities. Competition among the carvers, especially the younger ones, is intense because of ▸

Dusk over Iqaluit lights the evening, but summers in the North are bright because the sun never fully sets.

Iqaluit's neighboring community, Apex, houses about sixty families, a church, a school, a women's shelter, and the historic Hudson's Bay Company building.

limited tourism and a small local market. If they could learn to turn stone or bone, this diversification could help. I called Warren, Don, and Maureen to see if a new project to further what we had started could begin. Unfortunately, Maureen passed away in September, so all thoughts of a return to Nunavut were placed on the back burner.

In January, 2012, the PEI Wood Turners Guild hosted one of Canada's finest wood artists, Michael Hosaluk. Don Moore agreed to drive Michael and the CCF's Administrative Director, Maegen Black, from Halifax, Nova Scotia, to Charlottetown, PEI. During the drive, Don and Maegen talked extensively about the first Iqaluit turning venture and at lunch, all three expressed an interest in participating in a 2013 project. Our idea is to take a larger group of well-known, highly skilled turners to Iqaluit for ten days, with much more equipment and wood. Our goal is to help willing local artists make a transition into stone and bone turning and to leave enough equipment that an active turning guild can survive. We are still in the planning stages, but are quite positive it can happen. Anyone interested in participating or supporting this project can contact me at touchdown@islandtelecom.com. ■

Tom Dean is a retired psychiatric nurse who lives with his wife Kathy in Tyne Valley, PEI. He is well known on the east coast of Canada for his wood art and his involvement with woodturning and craft organizations.

Master stone carver Paul Maliki participates in the Nunavut Arts & Crafts Association's public outdoor stone-carving workshop in July 2011.

A sculpture by Paul Maliki is displayed in the permanent sculpture garden next to the Nunavut Arctic College on Iqaluit's main street.

Not all the carvings in Iqaluit are by local artists—some carvers come from far and wide to work with the master carvers based here and leave their mark on the city. This work, titled *Rebirth*, was made by British Columbia artist Maarten Schaddelee.

Reflections on Safety by a Chapter President

Hilda Carpenter's excellent article, "On the Edge of Disaster, Safety in Woodturning," in the August issue (vol 27, no 4) caused me to reflect. I never thought of myself as accident-prone. After all, I have made it to age 65 with everything pretty much in one piece—and no serious accidents.

When I look at my hands, however, I see a black-and-blue fingernail and small scars from a host of mistakes. I have a small bump on my right shoulder, the result of a large turning that made an unscheduled dismount. My wife says I am nuts over woodturning, but she also sees how much I enjoy it. I am getting better every week, thanks to outstanding mentoring and first-rate instruction. I am a committed woodturner who turns five days a week.

Last year, my AAW chapter elected me president; this is a serious responsibility. One of my friends who introduced me to woodturning has started using an inhaler. "I guess I was breathing in too much wood dust," he told me. At a recent woodturning gathering, I was talking to an experienced turner and asked him why his hand and arm were heavily bandaged and in a sling. "I nearly cut my hand off in my bandsaw," he sadly said. Egad! That sent chills down my spine. Last year, there were two deaths from turning wood. At a recent class, an instructor announced that she no longer has a sense of smell, the result of too many fumes from epoxy resin. To what extent should I worry, for myself personally and as president of a local chapter?

Growth of woodturning

Our small chapter is growing. This past year, people not from the trades or unfamiliar with woodworking—a music teacher and a retired executive—joined. AAW membership is expanding steadily, broadening its base. Judging from what I see at the symposiums, most members are older with white, gray, or no hair. As an older turner, I have to be extra careful—I am not as sharp as I used to be: Wisdom must make up for decreasing agility.

Pascal Oudet from France demonstrates as an emerging artist at the AAW's international symposium in Hartford, 2010. He is wearing a faceshield. Personal protective equipment is a requirement for demonstrators.

Photo: Ed Kelle

There seems to be an assumption that most woodturners already know most safety procedures and they can pick up the rest from demonstrations or fellow turners. Even for the old guard, though, is this truly a reasonable assumption?

For younger turners, most have not benefited from high school shop class where they would have learned how to work with power equipment and been taught safe procedures. The AAW's increasing focus on attracting young turners must come with a component of safety instruction.

Culture of safety

I maintain that above all else, safety is an attitude that creates a culture of safety. A list of what to do and not do and gory tales of mishaps and disasters are good reminders, but that is only part of what it takes to keep us safe. I believe that it is possible to teach our fellow turners how to adopt an attitude of safety. Doing so will result in creating a culture of safety within an organization when everyone at every level buys into the concept and contributes his or her part.

Beginning at the local chapter level, every club member should have access to a first-rate safety training resource, specifically designed for woodturning. Proactively encourage new members to take advantage of the resource. The course, perhaps a series of videos, would include the basics: operating a lathe, dust protection and collection, tool handling, ergonomics, personal protective equipment, bandsaw basics, and chainsaw safety. Make safety a component of every chapter meeting. Insist that demonstrators exhibit an attitude of safety, for instance by wearing a faceshield (and then provide a proper microphone). Supply adequate lighting.

Our chapter meets at Peters Valley Craft Center, and we make safety a part of every meeting. Without beating it to death, we educate ourselves and share information about how to turn safely and manage risk. Every demonstrator is asked to include his or her thoughts on safety—and they all do so with enthusiasm! Our club's culture of safety has made a difference. Members tell me they are enjoying turning even more now.

We are just one small group, though. As a larger organization, the AAW can accomplish much more. I look forward to that happening through the newly formed safety committee. I encourage the committee to instill a culture of safety within every aspect of the organization: journal, website, symposiums, and local chapters.

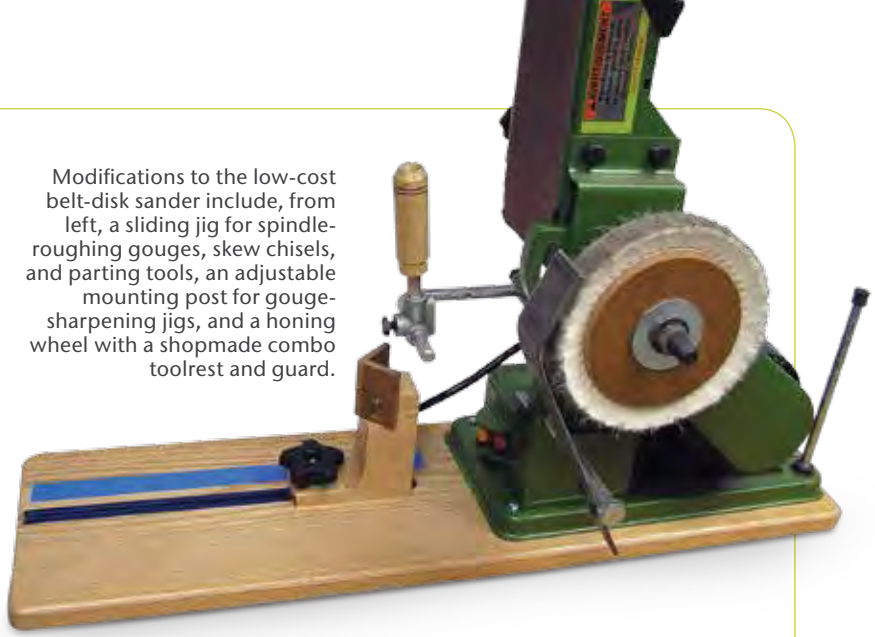
I welcome your thoughts and suggestions. Email me at edgar.brannon@me.com. Safe turning! ■

—Ed Brannon is president of Water Gap Woodturners in Pennsylvania

D.I.Y.

Belt Sharpening System

Jim Echter



Modifications to the low-cost belt-disk sander include, from left, a sliding jig for spindle-roughing gouges, skew chisels, and parting tools, an adjustable mounting post for gouge-sharpening jigs, and a honing wheel with a shopmade combo toolrest and guard.

While researching sharpening systems for woodturners, belt systems piqued my interest. For years I have been sharpening on an 8" two-wheel dry grinder equipped with a jig for gouges on one wheel, and an adjustable-angle platform for scrapers on the other. But the argument for a flat grind instead of the usual hollow grind made sense to me, so I decided to buy a belt-disk sanding machine and modify it to my purposes.

1

A catalog photo showing the Harbor Freight belt-disk sander fully assembled. Watch for a sale coupon before you buy it.

2

For this modification, unpack the parts but do not mount the disk sander or its table. Also, remove the back cover and bottom dust port, the sanding-belt guard, and the drive-belt cover.

I possess the frugality gene, which means I needed to find a machine within my limited tool budget. Luckily a couple of members of my local AAW chapter, who also have the frugality gene, discovered that an effective system could be built using an imported belt-disk sander. So off I went to the Harbor Freight store with my 20% off coupon from the Sunday newspaper. I came home with their combination 4" × 36" belt/6" disk sander, catalog number 97181, for about $100 *(Photo 1)*. The modifications included:

- dismantling the sander table for parts to make a jig-mounting post for gouge sharpening *(Photos 2, 3, 4, 5, 6, 17)* ▸

Jig post and socket

3

Dismantle the disk sander's side table and extract these parts, which we used to make a post and socket to hold jigs for the abrasive belt.

4

Assemble the salvaged parts like this.

5

(5) Install the parts into the front table hole and tighten the side screw. Between the side screw and the front screw, the post can be positioned to suit the sharpening jig you use.

6

Turn a jig socket to slip over the upright post; my post was .470" in diameter so I could drill a ½" hole. The jig's ball pivot fits into the socket on top of the turning. *Photo 17* shows how this works.

Honing disk and guard

7

The ½" arbor will need a nylon spacer to connect it to the metric disk shaft. Drill out the spacer to match the disk sander side shaft. Drill clearance holes to match the arbor set screws.

8

Use the long bolt and the ⅛" steel bar to make the combo toolrest and guard for the buffing wheel. Drill two 5⁄32" holes in the mounting bolt. Drill 13⁄64" clearance holes in the steel bar.

9

Tap the 5⁄32" holes in the bolt for two 10-32 × ½" machine screws for mounting the steel guard bar.

10

Run the long bolt into the hole in the machine base, then screw the steel bar to it. Bend the bar at 2" for about 30° or what looks right against your wheel.

11

To stiffen the buffing wheel, turn a pair of support disks from ¼" hardboard and back them up with the fender washers. These disks are about 4½" in diameter.

- extending the disk-sander shaft to mount a buffing wheel for honing (*Photos 7, 11*)
- making and mounting a combo guard and toolrest for the honing wheel (*Photos 8, 9, 10*)
- making an adjustable tool holder for spindle-roughing gouges, skew chisels, and parting tools *(Photos 12, 13, 16)*
- twisting the drive belt to reverse the direction of the sanding belt and honing wheel *(Photos 14, 15)* With this setup, the belt and disk both run away from the sharp tool edge, eliminating the risk of a dangerous catch. Bowl and spindle gouges can be sharpened in the same manner using the same jigs as you would with grinding wheels. Since the belt runs away from the edge, a quick touch to the buffing wheel, charged with polishing compound, will remove the wire burr. Once you start using this system to sharpen metal tools, never sand wood with it. Wood dust and metal sharpening sparks do not mix. And always remember to wear your safety glasses.

The beauty of this system is that you can change belt grits quickly. Use a coarse-grit belt to change the profile of a tool and a fine-grit belt for putting on a fresh sharp edge. Charge the buffing wheel with an abrasive polishing compound. Just a light touch will remove the wire edge and you are quickly back at the lathe, enjoying the sweetness of a sharp tool.

Getting started

This system was easy to build. It took longer driving to my local hardware stores to purchase the parts than the actual build time. Listed below are the parts I had to buy, a grand total of about $20 less the arbor, which I already owned.

- One 12 mm × 130 mm bolt
- Two 10-32 × ½" machine screws
- One .500 OD × .385 ID × 1" nylon spacer
- One 6" buffing wheel and polishing compound
- One ½" arbor
- One 1½" wide × 1⁄8" thick × 9" long steel bar stock
- Two ½" fender washers
- One 8" × 28" hardwood board
- One 12" T-Channel
- One T-Bolt
- One Knob to suit
- Five #8 × 1¼" panhead screws for mounting sander to board ■

Adjustable tool holder

12

The sliding V block that holds the handle of the tool being sharpened is a piece of 1½" maple with ¼" hardboard scraps forming the pocket. It slides in a 12" length of T-channel in a routed groove that is centered on the abrasive belt (not on the board).

13

Drill a ¼" hole for the T-bolt and plastic locking knob, and drill a second hole near the front for a small piece of ¼" dowel to help track the V block. Marks on the blue tape index the V block for different tools.

Reverse direction

14

To reverse the direction of the sanding belt and honing wheel, loosen the motor bolts and twist the drive belt into a figure eight. Remount the drive-belt cover.

15

Tighten the motor mount bolts but let the motor twist as much as it can to minimize wear on the twisted belt.

Jim Echter is a professional turner who lives near Rochester, NY. He specializes in making tools for fiber artists, turning custom architectural pieces, and teaching. Jim's home club is the Finger Lakes Woodturners Association, and his website is truecreations.biz.

The machine in action

Here is the machine in action, sharpening a skew chisel. For easy repeatability, the sliding V block indexes against marks on the blue tape. I removed the rubber feet from the sander and used five #8 x 1¼" panhead screws to mount the sander on the wooden base.

The Tru-Grind gouge-sharpening jig pivots in the socket turned into the top of the jig-holding sleeve.

Pioneers of belt sharpening Jon Siegel

(Above) Woodcraft introduced the belt-buff concept 40 years ago with this Mark II system.

(Left) On the Big Tree Tools flat-platen belt machine, both sides of a skew chisel can be ground and sharpened from a single jig position. The belt machine works equally well if the edge of the skew is straight or curved.

Photo courtesy Guild of New Hampshire Woodworkers

Woodcraft Supply popularized the belt-buff sharpening concept in the 1970s with their Mark II system, which featured a 2" (5 cm) belt running over a large round contact wheel. Today, those machines are collectors' items. When new, they were expensive—$1,400 when corrected for inflation. After using the Woodcraft machine and liking its results, I decided to make my own. It needed to be portable for teaching, to have a flat platen instead of a round contact wheel, an incrementally adjustable pocket jig, and a much lower speed.

I retained several things from the Woodcraft design: a five-second belt change, pocket jigs instead of a platform, the ability to sharpen and buff on the same machine, and upward belt travel, away from the edge. This quest led me to converting low-cost imported 4" × 36" (10 cm × 90 cm) belt sanders. I sold more than 200 through my company, Big Tree Tools LLC.

Last year, we decided to stop making the machines. Woodworkers continued to ask about them, however, and I reconsidered how I could further the belt-sharpening revolution. I have assembled a team to design a new and better belt machine that will be capable of sharpening most woodworking hand tools. Having already built hundreds of the previous models, we have good ideas about what we need to improve.

Advantages of a belt machine

Converting woodworkers from wheels to belts involves big changes, but the advantages are huge:

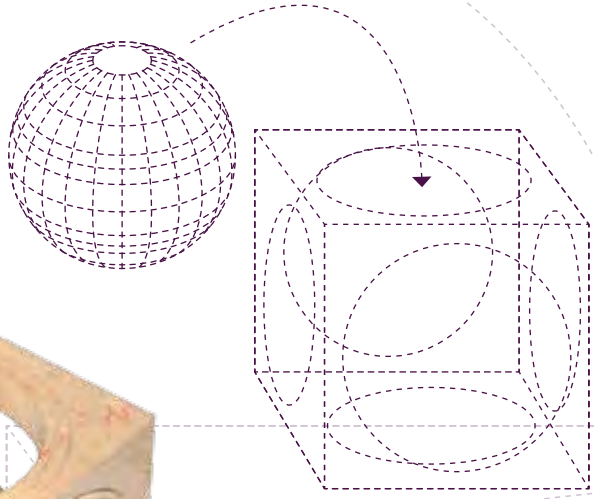
- Grinding wheels run too fast, overheating the steel, intimidating beginners, and sometimes causing accidents.
- It is time-consuming to change the grit in a grinder wheel system; turners will settle for using the same grit for everything, which limits versatility. Belts can be changed in five seconds.
- With a belt-buff system, chisels can be sharpened in ten seconds (including setup and deburring). This eliminates sharpening procrastination and fosters turning with truly sharp tools.
- A belt-buff system virtually eliminates time-consuming hand-honing, while accurate jigs assure repeatable setups that allow you to remove the minimum amount of metal.

Our new machines will be ready for market late next year. In the meantime, consider following our approach, as developed by Jim Echter in his DYI belt-sharpening system article. You will be delighted to have evolved beyond the stone age of sharpening.

Jon Siegel can be contacted at big@proctornet.com.

BALL-IN-A-BOX

James L. Pruitt



Making a ball-in-a-box requires a reasonable amount of precision. The size of the box and the ball are not important—the diameter of the ball, however, needs to be larger than the holes in the sides of the box. If you have never turned a sphere, I suggest you do so before attempting this project.

To make a ball-in-a-box, you will need a scroll chuck with flat jaws *(Photo 1)*. Also, you will need to make a platform jig and two small cup centers *(Sidebar)*.

Mark the cube

Begin with a block of wood that is a cube—all sides should be the same dimension. I used a 3" (8 cm) cube. The species of wood is up to you, but the wood needs to be dry. Find and mark the exact center of one side (face) of the cube. Center punch this location. In the upper lefthand corner, mark the number 1; this face will be *side one*.

Draw pencil lines parallel to each edge of the cube on all sides, ½" (13 mm) in from the edges. Number the remaining sides of the cube, two through six, in the upper lefthand corner (relative to the lefthand corner marked with 1).

Center the cube onto the chuck

Lightly press the cube onto the flat jaws, positioning the revolving tailstock center in the center-punched location of side one *(Photo 2)*. Align the corners of the wooden cube with the spaces between the flat jaws of the chuck.

Check for concentric mounting by positioning the toolrest close to one side of the cube. Turn the headstock spindle of the lathe by hand, and check to see that the distance between each of the four faces of the cube and the toolrest is the same *(Photo 3)*. Adjust the tailstock centering as necessary to obtain a concentric mounting.

Centering guide blocks

In order to hold the cube onto the chuck during the various turning processes and keep it centered at all times, you will need to construct an open-cornered box. Create this box by screwing strips of wood onto the jaws

1 A four-jaw chuck with flat jaws.

2 After drawing lines onto the cube, lightly press it onto the jaws.

3 Check for concentric mounting.

of the chuck. I use 1½" (38 mm) pine, 1½" wide. These centering blocks are mitered at 45° on each end. The short end of the miters should be ¾" (19 mm) less than the side of the cube *(Photo 4)*.

Apply a strip of double-faced tape to each of the flat jaws just outside of the wooden cube *(Photo 5)*. Press a centering guide block onto each strip of tape *(Photo 6)*.

Remove the chuck and assembly from the lathe and screw each guide block onto its jaw. I used 1½" hex-head sheet metal screws *(Photo 7)*. I recommend drilling pilot holes for the screws. Make sure these guide blocks do not move in the process.

Pick a corner of this centering jig and mark it some way *(Photo 8)*. The number in the corners of cube should always register on this mark when using the centering jig during the turning procedures. This will ensure that the cube is centered if you need to work on this side again later. These numbers can be used to sequence the faces of the cube as they are turned.

Fully seat the cube into the centering jig and apply moderate pressure with the chuck and tailstock. Draw a circle just inside the previously drawn parallel lines. Do this on all six sides *(Photo 9)*.

After making sure the chuck jaws are tight, the chuck is securely screwed onto the lathe spindle, and the tailstock is supporting the cube, round the corners of the centering blocks for safety *(Photo 10)*. I used a bowl gouge. (Take care to keep your hands and tool away from the revolving corners of the cube.)

Begin cutting the cube

With the tailstock in place and the scroll chuck tightened, position the toolrest to be able to turn a groove in the first face of the cube. Cut away some of the wood to just inside the drawn circle, but do not cut all the way to the circle yet *(Photo 11)*.

Next, cut a groove. Use a small skew chisel or a spear-point scraper, and both should be used as scrapers. Position the tip of the tool next to the penciled circle ▶

Cut four centering guide blocks.

Apply four strips of double-sided tape, one on each jaw.

Press a centering guide block onto each strip of tape.

Using hex-head sheet metal screws, attach the guide block onto the chuck jaws.

Pick a corner of the guide block and mark it in some way.

Fully seat the cube into the guide blocks, apply moderate pressure with the tailstock, and draw a circle just inside the previously drawn parallel lines.

After making sure the chuck jaws are tight and the chuck is securely screwed onto the lathe, round the corners of the centering blocks for safety.

Cut away some of the wood to just inside the drawn circle.

Add decorative beads to the face of the cube.

Sand the beads.

After cutting the groove in side two, light should begin to shine through where the grooves intersect.

(just inside the circle). Cut straight in so that the groove will be parallel to the adjacent side of the cube. Cut to a depth of 1/16" (1.6 mm) deeper than the line on the adjacent side—9/16" (14 mm) if the lines are 1/2" (13 mm) from the sides of the cube.

Cut this groove as smooth as possible, and then enlarge it to the pencil line. Turn a small radius on the groove next to the pencil line. This is a good time to cut a decorative bead or two on the face of the cube, if you want *(Photo 12)*. Sand the beads *(Photo 13)*.

I made this specially profiled spear-point scraper out of an old file.

Free the ball using a rotary tool.

Platform jig and cup centers

Construct a platform. The distance from the bottom of the cube to the bed of the lathe determines the height of the platform.

The platform is constructed so that the cube can be easily clamped to the top.

For final shaping of the ball, you need to be able to turn it while the cube remains stationary. A platform jig will accomplish this. With the cube in the scroll chuck centering blocks, measure the exact distance from the lathe bed to the bottom of one face of the cube. Construct a platform out of plywood or pine to that exact height *(Photo a)*. A strip of wood clamped to the platform, parallel to the lathe bed, helps position the cube on the platform.

This platform does not need to be fancy, but it must be able to be secured to the lathe bed. Bolt it to the lathe bed. Next, there must be a way for the cube to be secured to the upper surface of the platform. The platform is open in the back to allow for a clamp to be positioned there *(Photo b)*.

Make two cup centers to hold the ball between the headstock and tailstock for turning *(Photo c)*. These need to fit inside the holes on the faces of the cube. One needs to fit into the Morse taper of the headstock spindle and the other will mount onto a revolving tailstock center.

Cup centers, one for the headstock, the other for the tailstock.

Repeat this procedure on each side of the cube. After cutting a groove in side two, you should begin to see some light where the grooves intersect *(Photo 14)*.

Rough turn the ball

The next step is to start shaping the ball. For part of this process, the tailstock assembly will have to be backed off, so take light, nonaggressive cuts when the end of the cube is not supported. Otherwise, use the tailstock assembly, with a bull-nose revolving center in it, as often as possible.

Position the toolrest at the tailstock end of the cube and reduce the diameter of the "future" ball about 1/4" (6 mm) (in the center of the cube openings) and then begin to form the ball on each side of the cube. You will have four sides of bowl turning and two sides of endgrain turning. A small bowl gouge works well for these cuts. Do not be too concerned about the shape or smoothness of the ball at this time—final shaping and smoothing of the ball come later. Do not, however, reduce the diameter of the ball too much.

After all six sides are done, check the ball and determine how much wood is holding the ball to the cube at the eight corner points. The next step is to safely remove as much of this wood as possible, using a spear-point scraper, a small skew chisel, or other narrow scraping tool. I made a specially profiled spear-point scraper out of an old file specifically for making this cut *(Photo 15)*. Be very careful and take extremely light cuts. Try to make this cut at a diagonal (45°) to the sides of the circle. Do not cut completely through the web holding the ball in place.

Final removal of the web, thus freeing the ball, is done with the cube removed from the chuck. Use a Dremel or other rotary tool. Do that at this time *(Photos 16, 17)*.

Final shape the ball

Make the platform and cup centers *(Sidebar)*. Attach the platform to the ways of the lathe and insert the cup centers into the headstock and tailstock. With the platform in place, put the cube on the platform and secure the ball between the cup centers. Turn the headstock spindle by hand to make sure the ball turns freely inside the cube—it should if the height of the platform is correct and the cube is centered over the lathe bed. Make adjustments if necessary, and then clamp the cube onto the platform *(Photo 18)*. Do not use excessive pressure.

Position the toolrest at the front of the cube and at a height so you can access the ball through one of the holes of the cube. Any of the six holes is okay to use. As long as the ball revolves freely inside the cube, do not make any further adjustments to the platform jig or the cube until after the ball is completely turned and sanded.

Now you can begin to final shape the ball. Use a small bowl gouge and skew chisel, which will be used as a scraper. Take very light cuts with sharp tools *(Photo 19)*. Here is where your practice turning a sphere comes into play. When turning a sphere, there is a shadow that must be turned away in multiple orientations to reach solid wood. Approach the shadow carefully with the bowl gouge and keep your eyes on the profile of the solid wood. As soon as the shadow is turned away, smooth the surface with a skew chisel used in a scraping mode *(Photo 20)*.

With the lathe still running, mark a pencil line down the centerline of the circle you just turned *(Photo 21)*. Stop the lathe and reorient the ball to a different turning quadrant, using the line that you just drew as a reference. This time, align the line parallel to the lathe bed. Repeat this turning sequence until no shadow remains in any quadrant of the ball. Retract the tailstock cup center and check that the ball will not exit through the holes in the cube.

Sand the ball

Remove the toolrest. Continue using the cup centers to hold the ball between centers. Sand the ball through the holes of the cube to the smoothness desired, reorienting the ball until the entire surface has been sanded *(Photo 22)*. I find that running the lathe in reverse makes the sanding safer and easier.

Remove the ball-in-a-box from the lathe and sand away any remaining pencil lines from all surfaces. Round over the corners and edges of the cube and sand the faces to the smoothness desired. You may also want to hand sand the inside of the box where the rotary tool was used.

Finish the ball-in-a-box using your favorite wipe-on finish. ■

James L. Pruitt has been interested in woodworking all his life. Before retiring from the aerospace industry, he started making pen and pencil sets for fellow employees, then following retirement, he took up woodturning in earnest. He is president of the Ozark Woodturners in Arkansas, where he regularly offers a two-day hands-on course for beginners. He has also taught a basic woodturning class at the Arkansas Craft School.

Photography by Tom Sharp

With the platform in place and the cube sitting on it, hold the ball between the cup centers.

Take light cuts with a small, sharp bowl gouge.

To refine the arc of the circle, use a skew chisel in scraping mode.

Mark a centerline on the ball.

Sand the ball, reorienting it several times to reach all surfaces.

The Magic of Milk Paint

Kimberly Winkle

Have you often heard of milk paint but don't know what it is or how to use it? I have used this product for many years to paint furniture and turned items. Milk paint gets its name because it contains the protein casein, which is found in milk. Milk paint has a long history with Colonial and Shaker furniture forms, but it can be used on practically any surface or format, including turned objects. Milk paint is beautiful as a solid color over a smooth surface or as a thin color wash. It can be layered to accentuate textured surfaces or to create the illusion of age. Let your creativity flow!

Milk paint is durable, versatile, eco-friendly, and comes in a delicious color palette that uses natural earth pigments *(Photo 1)*. Many woodworking companies carry milk paint, so a quick search on the Internet will reveal a variety of options for purchasing a supply.

Milk paint safety

Milk paint is sold as a powder, which is made up of a mixture of casein, clays, lime, and earth pigments, and is mixed with water before use. Because milk paint is made of fine powder particles, it is important to wear a dust mask while mixing the powder with water or when sanding dry paint. It is also advised to wear finishing gloves while working with milk paint to help protect skin from the alkalinity of lime, which is activated when water is introduced. The alkaline lime reacts with acidic milk casein to create the paint's binder. This catalytic reaction allows the paint to adhere strongly to surfaces, making it durable. Milk paint is volatile-organic-compound-(VOL-) free and is safe to wash down the drain.

Shelf life

Like milk, milk paint has a shelf life. In dry form, the paint will last indefinitely; however, it is important to store it in a dry container, such as a well-sealed jar—jelly jars are the perfect size *(Photo 2)*. Once water has been added to the paint, the mixture should be used within a day or two. It is best to mix only the amount you plan to use that day, if possible.

If you happen to have any leftover paint, or if your project will take longer than a day to paint, refrigerate the unused paint in a sealed container for up to three days. Over time, the alkalinity of the lime is lost, which turns it to chalk. Once this occurs, the catalytic reaction with the casein will not occur and the paint will not stick to the surface of the object you are painting: Do not use mixed paint that is older than a few days.

Mixing

Measure equal amounts of warm water and paint powder into separate containers. I like to use small ribbed disposable cups and tongue depressors for mixing the paint *(Photo 3)*. The ribs can be used as measuring lines and they also help to work out lumps in the paint.

Create a paste by gradually adding part of the warm water to the powder, while mixing with the tongue depressor *(Photo 4)*. As you mix, try to eliminate any lumps by pressing the paste against the sides of the cup with the tongue depressor. Continue to add the remaining water while mixing. Mix the paint thoroughly for several minutes, then let it sit for 15 to 20 minutes to allow the moisture to disperse completely. It may be necessary to add a bit of water if the paint has thickened during the waiting period. For most projects, the consistency should approximate the thickness of heavy cream.

Some of the lumps may not completely dissolve during the mixing process, so it is important to strain the paint into a clean container before using it. Straining will remove any undissolved lumps. I like to use a reusable wire mesh kitchen strainer to strain paint *(Photo 5)*. You can also use a paper mesh funnel, a piece of cheesecloth, or a piece of nylon stocking as a strainer. To strain the paint, simply pour the paint through the strainer and gently stir it around to help prevent the lumps from clogging the strainer.

Rooster Comb Box, 2011, Poplar, maple, milk paint, graphite, 8" × 20" × 8" (20 cm × 50 cm × 20 cm)
Photo: John Lucas

Creating colors

If you want a custom color, I recommend mixing the paints in wet form rather than in dry powder form. The colors darken slightly when water is added; it is easier to evaluate the color changes in the wet form. When mixing colors, always add dark colors to light colors since dark colors easily overwhelm light colors.

Milk paint utilizes earth pigments, so the color range is not as vibrant and saturated as chemical colorants. If you want to increase the brilliance of color in milk paint, universal tinting colors or other water-soluble pigments can be added to wet milk paint to increase color intensity.

Applying milk paint

I like to apply the paint with the piece mounted on the lathe *(Photo 6)*. This method is quick and easy because the object is securely held in place, eliminating any unsightly fingerprints. The spinning action makes application easy and even, and the toolrest keeps my hand steady. It is important to protect the bed of the lathe with a drop cloth before starting and to position the toolrest farther away from the wood—approximately three to four inches—than when turning.

With the lathe spinning in reverse at a low speed (200 to 250 rpm), begin applying the paint in even coats with a brush *(Photo 7)*. I prefer ▶

Milk paint comes in a variety of earth-tone colors.

Supplies include a package of milk paint (powder form), latex (or nitrile) gloves, dust mask, tongue depressors, small strainer, cups for mixing, foam applicator (or brush), and storage jars.

Ribbed cups, one for water and one for powder, and a tongue depressor make mixing easy.

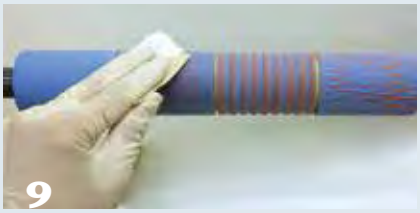
Create a paste by adding the warm water to the powder. Mix well for several minutes to remove lumps.

Strain paint through wire mesh strainer to eliminate any lumps.

Turn a spindle sampler of unpainted wood, mounted between centers of your lathe.

Apply a base coat of red paint to the spindle sampler.

After two base coats of Salem Red dry, apply two contrasting color topcoats (Federal Blue) to create special effects.



Sanding layers: A gentle sanding of colored layers of paint creates special effects.

Trio Candlesticks, 2009, Poplar, milk paint, graphite, 14" × 4" (36 cm × 10 cm)

Photo: John Lucas

foam brushes because they leave fewer brush marks and provide good coverage. It is best to apply several light to medium coats versus one thick coat, which will easily sag, drip, or pool.

It is not necessary to prime the material beforehand because the first coat of milk paint acts as the primer on most woods. If you are using a hard, close-grained wood such as maple, however, I suggest that you use Extra Bond in the first coat. Extra Bond is a product that is added to the first coat of milk paint to increase adhesion on nonporous or slick surfaces. The ratio for usage is one part Extra Bond to two parts mixed milk paint in the first coat only. Subsequent coats should not include Extra Bond.

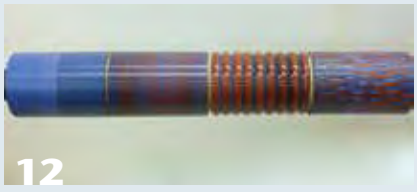
Allow each coat to dry thoroughly, which usually takes about 20 to 30 minutes or until the paint appears flat and chalky. After the first coat of paint has dried, lightly sand with 220-grit abrasive to smooth the surface and to remove any raised grain. Sanding can be done with the lathe on and while wearing a dust mask. I typically apply a total of three to four coats of paint, but this will depend on what effect I am trying to achieve.

Special effects

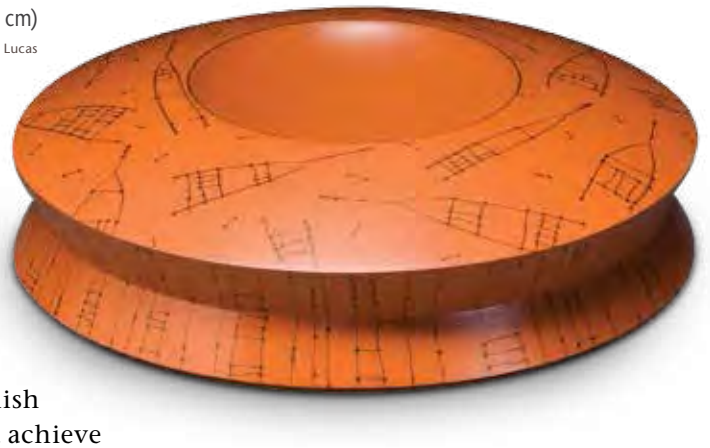
The visual versatility of milk paint is remarkable. It can take on a wide range of appearances, limited only by your imagination

The burnished spindle sampler has a soft sheen that shows off the various special effects.

Apply black paste shoe polish (with paper towel) to create depth and to achieve an aged look.



The completed spindle sampler displays a variety of effects and two types of wax finish.



Monty's Pumpkin Bowl, 2009, Poplar, milk paint, graphite, 4" × 9" (10 cm × 23 cm)
Photo: John Lucas

and experimentation. The sampler spindle in *Photo 8* is receiving two base coats of Salem Red and two topcoats of Federal Blue.

To achieve an aged appearance, with the lathe running in reverse, I gently applied 150-grit abrasive to the surface to cut through the blue layers to reveal the red layers beneath *(Photo 9)*. I used the same procedure to highlight the changes in contours of the row of beads and to add highlights to the carved segment. The longer I applied the abrasive to the surface of the spinning object, the more red was revealed.

The sampler spindle now displays a variety of effects that can be achieved easily with milk paint: a solid-color segment, an antiqued segment, a segment of changing contours, and a segment of texture.

Finishing

Milk paint dries to a flat chalky surface, but when burnished becomes smooth with a subtle sheen *(Photo 10)*. To burnish the paint on the lathe, move the toolrest out of the way and turn the lathe on in reverse at approximately 400 to 450 rpm. Using your hands and an abrasive pad or 0000 non-oiled steel wool, apply moderate pressure to the surface of the spinning painted object. The pressure and gentle abrasion create a smooth glowing surface. It is not, however, waterproof.

Without a sealer, the paint will last indefinitely, but it will water spot and absorb dirt and oils. Most sealers will work over milk paint, but the appropriate sealer will depend on how the object will be used. Wax creates a soft sheen but will provide minimal protection.

I often use paste-style black shoe polish to create depth and achieve an aged quality *(Photo 11)*. Clear wax can also be used *(Photo 12)*. Other finishes such as penetrating oils and sprays can be used for more protection—they will deepen the color somewhat. With all sealers, it is important to test them over a painted scrap to be sure you like the finished result before applying it to your painted project.

When applying wipe-on finishes on the lathe, it is important to use soft paper towels versus fabric rags, which can easily wrap themselves around and pull your fingers into the spinning object.

Design considerations

When trying to decide what color combinations to use, I suggest looking at textile and wallpaper designs as a starting point. They often display wonderful color combinations and use of pattern. Typically, contrasting colors, such as cool colors (blue, green, violet) combined with warm colors (red, orange, yellow), will accentuate textures because they complement each other. If you plan to combine painted elements with natural wood elements, consider the tone and color of the wood before ▸

Red Oculus Mirror, 2011, Poplar, fiberboard, milk paint, colored pencil, graphite, glass, 4" × 18" (10 cm × 46 cm)
Photo: John Lucas

selecting the paint color so that you do not select a paint color that is too similar. When colors are too similar, each will be camouflaged by the other. A contrasting color will highlight the warmth of the natural wood rather than blending in with it.

Whatever design you settle on, it is important to test and record every step of your painting project on a scrap or test area before applying the first coat on your project *(Photos 13, 14, 15, 16)*.

There are no right or wrong ways to approach design; we all have our own preferences and aesthetic sensibilities. Take your time to explore the possibilities of embellishing the surface of turned objects using milk paint. Experiment, be patient, and have fun. The possibilities and magic are endless. ■

To find the look you want, experiment by creating a variety of sample boards using different textures, a variety of layers, and varying color combinations of milk paint.

A close-up of a variety of ways milk paint can be added to highlight textures, both pronounced and shallow.

Milk paint can be used with antique crackle finish.

Milk paint can be layered in multiple colors and sanded through to create an aged appearance.

Kimberly Winkle is a turner, furniture maker, and educator. She is an Assistant Professor of Art at Tennessee Technological University in Cookeville, TN. Her work has been published in American Woodturner, Fine Woodworking *and* Woodwork *magazines and has been exhibited nationally and internationally. She regularly teaches workshops at craft schools and demonstrates woodturning. She can be contacted at wimkinkle@yahoo.com.*

Salmon Candlesticks, 2010, Poplar, milk paint, graphite, brass, 12" × 4" (30 cm × 10 cm)
Photo: John Lucas

Finding Inspiration *Flood Bowl*

Terry Martin

In 2011, floods devastated much of my home state of Queensland. The personal cost to the population was incalculable and in my city of Brisbane the damage was hard to comprehend. On the day the waters began to subside, we witnessed an astonishing outpouring of community spirit as tens of thousands of people whose homes had not been affected arrived in convoys armed with shovels, wheelbarrows, trucks, and machinery. In self-organized groups they went from street to street, providing food and drink to stunned victims, cleaning homes of debris, and offering seemingly unlimited goodwill.

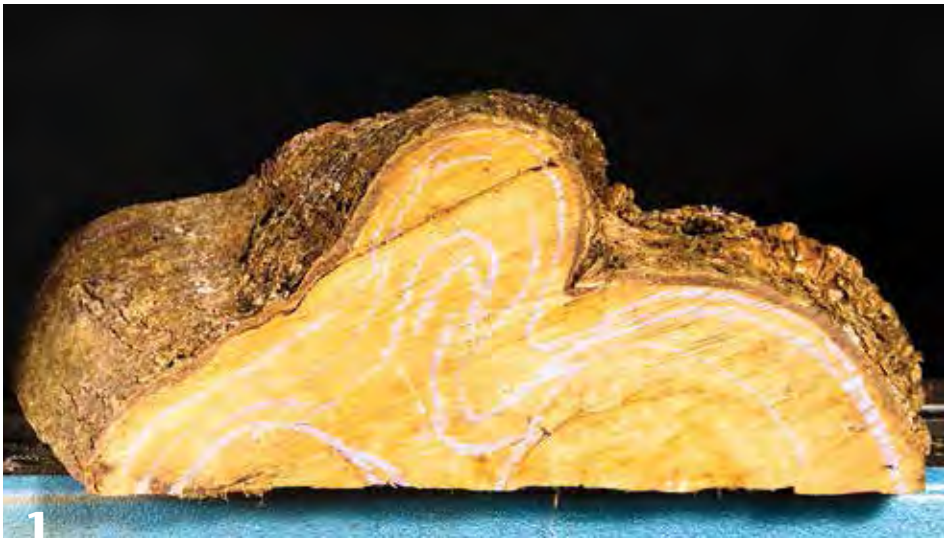
As I drove through the streets, I came across a huge Jacaranda tree that had collapsed under the weight of water. It had crushed a fence and lay half across the sidewalk. There were tons of wood to remove and when I offered help, the owner told me I was welcome to have as much of the wood as I wanted. *Flood Bowl* is the result of that encounter and is my way of remembering all of the people who helped their fellow citizens.

In writing about *Flood Bowl*, I want to emphasize how I developed the idea. There are many ways to learn about turning technique, but finding original ways to use hard-won technical skills remains a challenge for many. In a turning world where so much has already been done, the search for original ideas and a personal voice has become increasingly difficult. So, unlike many how-to stories, my intention is not to show how to reproduce this particular piece, but to encourage lateral thinking and ways of using personal experiences to enrich our work.

Inspiration from the wood

As I unloaded the tons of wood at my home, I was particularly taken by the convoluted shape of some of the pieces of the trunk and how the folded growth rings formed a wavelike effect in profile. I had already started thinking about how I could make something to reflect the flood and this idea immediately crystallized. I had in mind something being borne along on the crest of the wall of water that engulfed Brisbane. ▸

Flood Bowl, 2012, Jacaranda, 5" × 16½" × 9" (13 cm × 42 cm × 23 cm)



The profile of the wood triggered images of a wave. The growth rings are indicated with chalk.

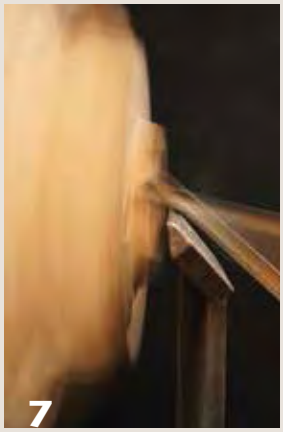
The blank is mounted between centers.

Weight is reduced by cutting away wedges of wood.

Once the weight is reduced, the piece can be turned at speed without excessive vibration.

This is the most dangerous part of the process. Hands out of the way!

The center is turned before the outside.



Rolling the tool into the spinning piece.

I know that Jacaranda is easy to work when wet, but immensely hard and strong when dry, so I took the piece straight to the lathe and marked out the growth ring lines (*Photo 1*). Wood that is cut across the grain is always weaker, but it was apparent that if I followed these lines it would be strong enough to make the piece very thin.

I mounted the wood between centers, moving the contact points with the oversized drive dog and live center till it was as balanced as it could be with the apex of the "wave" in the center (*Photo 2*). After locking the spindle to stop the wood moving, I marked out wedges of unwanted wood with chalk then removed them with the chainsaw to reduce weight *(Photos 3, 4)*.

Making sure to keep my hands well out of the way of the spinning "wings" of wood, I turned a spigot on the bottom of the piece so I could remount it in a chuck *(Photo 5)*. After reversing the piece, I turned out the center of the bowl *(Photo 6)*, retaining the bark because I wanted a visible reminder of the outer parts of the tree in the finished piece. When I turned the wood away from the outside of the bowl, it was an intermittent cut with the tool only in contact with wood for about 50 percent of each revolution. I find the best way to maintain control for this kind of cut is to start with the handle down low, maintain steady pressure downwards on the toolrest, then to lift the tool handle so the edge rolls into the wood *(Photo 7)*.

Once the partially embedded bowl was revealed, the turning was complete *(Photo 8)*, but I kept the piece on the lathe as it is a perfect mounting for carving. The wood can be rotated freely and then the spindle can be locked, giving stable access to most areas. I used a combination of a battery-powered pruning

Once the bowl is turned, the carving proceeds.

As much carving as possible is completed with the piece still on the lathe.

The final carving is done off the lathe.

The fine work is done with a high-speed air tool.

Safety precautions

There are inherent risks in making out-of-round pieces and carving wood while it is still on the lathe, so here is a checklist of basic precautions:

1. Wear a full faceshield or helmet.
2. Wear gloves. When an out-of-round piece is intermittently passing the toolrest, if a finger inadvertently crosses into the no-go zone, the flicking of the wood against the glove may be the early warning sign that will save you. I know this because I have a permanently bent finger from my preglove days.
3. With out-of-round work, always turn down the speed of your lathe or select your slowest pulley before you turn on the lathe. Only increase the speed gradually.
4. Keep your fingers behind the toolrest at all times. The side the work is spinning on is a no-go zone.
5. If you are chainsawing a piece on the lathe, lock the spindle to prevent the wood rotating. Avoid cutting toward metal parts as much as possible.
6. Only use an electric chainsaw–the fumes from a gas-driven saw will fill your workshop in seconds.

chainsaw and an Arbortech carver to further reduce the bulk *(Photo 9)* before removing it for finish carving. I used a Foredom flexi-shaft tool to finalize the thickness *(Photo 10)* then textured the surface to resemble flowing water using a round burr in long sweeping cuts along the grain. It was important to give an impression of the speed and power of the water, so I carved the leading edge to look like frothing water *(Photo 11)*, then extended the froth pattern around the base of the bowl to blend the turned and carved sections.

It's easy to explain how such a piece was made, but a lot more difficult to explain the thought processes that went into it. A lot of creativity is instinctive, but I think the most important thing is to develop the habit of thinking outside of the usual parameters. For turners, these days that often means that the turning is only a starting point for developing further ideas. In this case, I was already thinking about the flood while I was cutting the wood. My thoughts were along the lines of "What story does this wood have to tell?" I thought "flood," and I saw "wave." In this case, the bowl is more than a bowl, it is a container for ideas. My hope is that those readers who are ready to break into truly creative work will use what I have done to stimulate their own creative processes. Good luck and enjoy! ■

Terry Martin is a wood artist, writer, and curator who lives and works in Brisbane, Australia. He can be contacted at eltel@optusnet.com.au.

Turning Six Diamonds

Leaf cluster project demonstrates a complex technique

Peter Exton

Tackling this diamond assembly will introduce you to six-diamond turning.

The six-piece diamond technique emerged after many turning experiments, leaving this array of artifacts in Exton's workshop.

In the spring of 1997, I shipped off the last of my winter orders, swept out my shop, and turned my attention to some research. As described in my article, "Turning Diamonds" (*AW* vol 25, no 1), I had been working for a number of years with reversals of two and three pieces and wanted to see what might be possible with more.

I remember telling a gallery owner I expected to have something for him in about six weeks. Fourteen months later, I finally had something to send.

During that time, I tried to expand the reversal concept, filling my shop with dozens of experiments *(Opposite page)*. I tried four and eight pieces, but there were drawbacks to both. Eventually I realized that two groups of three-piece diamond turnings could be brought together neatly to make a cluster of six.

An important technical discovery—going back to the bandsaw to remove excess material from the diamonds—opened the door to a new world of form. Sawing closes the space between elements, unifying the composition. It also creates overlapping, three-dimensional patterns throughout, with interesting kaleidoscopic effects when looking down through the open center. The technique also generates many edge lines, making them a prominent element.

Turning six diamonds

To introduce you to turning six diamonds, I describe making a leaf cluster. This small project uses the familiar cove shape to produce a profile resembling the leaf of a white oak. The six diamonds fit beautifully together without quite touching, an intriguing composition that mystifies everyone who sees it *(Opposite page)*. The method breaks down into three stages:

1. Turning two identical three-piece diamond assemblies;
2. Reversing the pieces in both assemblies and turning them again;
3. Trimming all six pieces, then gluing them together to turn the final shape.

The first two steps set up a base pattern that enables all six pieces to be assembled in overlapping fashion. The third step creates the teardrop contour, revealing the leafy look only at the very end.

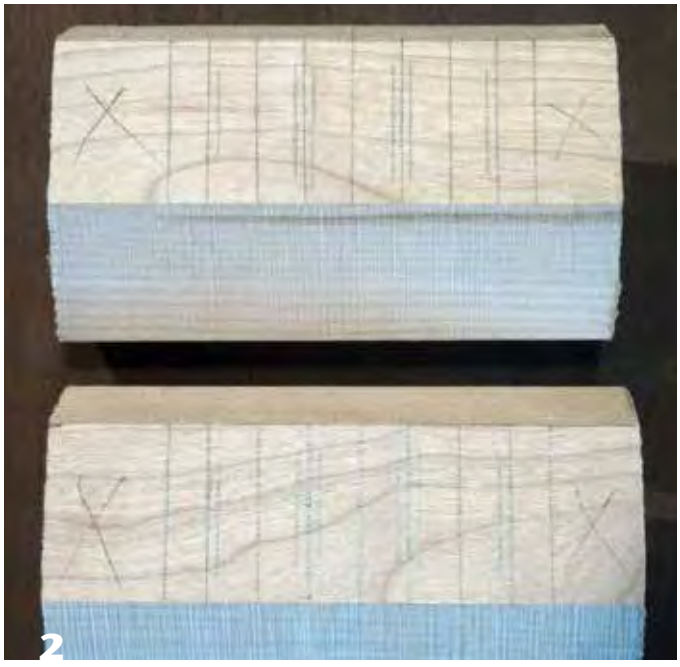
This is not a one-evening project, but working through it will help you understand the six-diamond technique, which may open a door to an entirely new universe of turned wood objects. Take your time because haste increases the risk of tearout, and accuracy is important to get a satisfying result.

Setup

For cutting the diamond-shaped blanks and turning a basic three-piece assembly, please refer back to my previous article, "Turning Diamonds." Follow that method to cut a dressed 5/4 cherry board—it

Marking out

Alignment key. Cut six 5" (13 cm) lengths of diamond material and glue up two three-piece assemblies using medium CA glue. True the ends, then pick and mark the tops of each assembly with letters A1, A2, A3 and B1, B2, B3, making sure to orient the letters in the same way on each diamond. This will help align the pieces later.



***(2)* Marking out.** Mark both glue-ups to match. With the bottom end to your left, mark a face 1½" (38 mm) from the end. Make another mark ¼" to the left, and then make six more to the right ⅜" (9.5 mm) apart. After the last mark, make one more ¼" to the right. The mark at 1½" will be a high point, as will every other mark to the right, with cove bottoms in between. At each high point, mark guide lines 1/16" (1.6 mm) to each side. ▶

will be about 1" (25 mm) thick—into uniform diamonds with facing 60° and 120° angles. Cherry offers a good combination of strength and workability and is a decent sketchbook wood for learning techniques and working out ideas.

For this project, in addition to your turning tools (½" skew chisel, ¼" bowl gouge, parting tool) you will need medium CA glue and thin rubber bands, strapping tape, a combination square, and a caliper. A reversing switch on the lathe is helpful. You will also need a bandsaw with a sharp ¼" (6 mm) blade. . . very important.

On the lathe

Once you are on the lathe, this project is an exercise in cutting clean, precise, and symmetrical coves. You may find this difficult, so adjust your technique to get a balanced profile. Try to get your shapes with tools, sanding just to clean up. Abrasives can blend and smooth, but they are not effective shaping tools.

After the first turning, use a hammer and small flat screwdriver to split the assemblies. Next you will reverse the three pieces to turn their opposite faces, but instead of gluing

Base pattern, side 1

Pattern sample.
The offset coves and peaks divide the thickness of each diamond into thirds: the shaping depth from two sides and a solid core for strength. With thickness at 1", cut 5/16" (8 mm) into each side, leaving 3/8" as a fat third in the center.

Chuck and tape.
Mount the bottom end of one assembly in a four-jaw chuck and center the top end with a tailstock center. Secure the top end with strapping tape.

Rough cylinder.
Use the skew chisel to cut cleanly into the corners at the outside marks. Turn the working area almost to a cylinder, leaving your marks. Extend the marks by steadying a sharp pencil on the toolrest and rotating the piece by hand.

Cove depth.
Center the parting tool on your cove marks and cut to rough depth of ¼", leaving 1½" as the caliper setting. This leaves another 1/16" for finishing cuts. Shape the coves with the gouge, alternating small side cuts down to the parting tool depth.

Finishing cuts.
The final cuts shape the coves to a uniform depth, a diameter of 1⅜" (33 mm), leaving the peaks at full diameter of 2" (51 mm). Round over the peaks to form uniform beads, leaving only a trace of the marks, and make sure the end cuts are straight and clean across the corners.

Sanding.
With the lathe off, back 100-grit cloth abrasive with a dowel and cradle it in a cove. Find a dowel that fits neatly, small enough to touch the bottom but not so small it wanders. Turn on the lathe in reverse and sand each cove to 220 grit. Finish off the peaks with cloth abrasive, erasing the last marks. Now turn the second set to the same specs.

the reversal permanently as described in "Turning Diamonds," use medium CA glue so the pieces can be split apart and reassembled again for their third and final turning.

When you have reversed the pieces, take small cuts to avoid tearing big chunks out of the unsupported trailing edges of the coves, especially at their narrow peaks. Increased speed can help make clean cuts, but keep things under control. If you do lose a chunk, don't despair. The trailing edge is going to face out in the final assembly, so you will likely cut it off anyway.

The third and final turning happens after you have assembled and glued all six pieces into a six-pointed star. This turning creates the teardrop form, and it also reveals the leaf shapes loaded into the piece by the two base turnings.

Think about finishing, if any, before you assemble the turned pieces. After assembly, you will not be able to get at the interior areas. I prefer a two-step method: Finish the turned surfaces before final assembly, and then finish the outside of the piece after assembly and final turning. Mask any surfaces intended for gluing, and test the finish on the same wood to be sure it's right for your project.

Base pattern, side 2

Assembling side 2.
Separate and reverse the pieces, aligning them with the clean cut at the bottom. On top, the orientation of the letter marks will be reversed, and all of the peaks should meet, almost touching. Glue with medium CA glue as before, holding the assemblies with #84 rubber bands to dry.

Marking side 2.
Mark both assemblies (as in Step 2), but this time switch the order, marking peaks opposite the coves and coves opposite the peaks.

Back to the lathe.
Mount one assembly onto the lathe and strap its top end with tape, as before. Use the skew chisel to rough down to a cylinder, with clean cuts across the corners at both ends.

Side 2 coves.
Use a sharp parting tool to cut the rough depth for the coves to 1½" diameter. Make the cut ¼" wide at both ends. Nibble away at the coves to avoid tearing big chunks out of the unsupported trailing edges, especially at the narrow peaks.

Trailing fibers.
As you shape the coves, you may notice trailing fibers. Don't pull them off. Trim them by manually sanding backward, or reverse the rotation and sand them normally.

Half coves.
Complete the coves and peaks as before, to the same dimensions. On the ends, use the parting tool to cut a full ¼" across the 1⅜" diameter and blend the half-cove slope to it. Sand, then mark a bold **X** across the end faces of the leading edges—you are going to cut away these faces on the bandsaw.

Second assembly.
When you have repeated all of this (Steps 1 through 14) with the second set, your base pattern will be complete. Use the small flat screwdriver to split both assemblies into six individual pieces. Do this carefully, because your turning has weakened the blanks and too much force might break them. ▶

Sawing the diamonds

Where to saw.
With the bottom end of each piece to your left, find *Side 2*, which has the deep, broad cuts at either end plus the **X** marks you drew on the lathe. Reducing these marked faces makes the assembled pattern overlap. The 60° angle does not change.

Remove glue.
Chisel any remnant glue off the back sides of the marked faces so the pieces will lay flat on the saw table. Use the chisel like a cabinet scraper to smooth the surface.

Bandsaw setup.
Set the bandsaw table for a 60° cut with a wood fence about ¼" higher than the workpieces. With the bandsaw off, slip one piece between the blade and the loose fence, nestling the blade in the recess so it is close to the turned wood but not touching. Fix the fence here—the piece should slide freely.

First cut.
Set out your pieces in sequence: A1, B1, A2, B2, A3, B3. Make sure you have marked the correct faces for removal and that no glue residue will interfere. Lower the blade guard and tape the table insert in place. Carefully slice away the face at the top of the first piece, taking care not to damage the turned area, and back the piece out.

Second cut.
Turn off the bandsaw. Slip the piece between the blade and the fence and position it for cutting the bottom waste, leaving the blade teeth free to move. Hold the piece in place, fingers clear of the blade, and turn the saw on. Carefully advance the piece to slice away the marked bottom face.

Check it.
Match up two pieces and see how it looks. The peaks should center themselves in the coves and should not touch. Cut the rest of the pieces and assemble all six with a rubber band; look for the tightest space between a peak and cove. If you want to shave off more, this is the space you have to work with. Visually, tighter is usually better, but no touching.

Remedies.
The photo shows the gap before sawing. After sawing, if a peak does touch an opposite cove, all is not ruined. You can hand-sand the peak to create separation, or build out the over-cut diamond faces with masking tape or veneer. Do what is necessary to save the project.

Diamonds and Islamic circle designs

Turners' diamonds do not seem to have much in common with the circle. After all, they have flat sides and sharp angles. Yet they are surprisingly adaptable to working on the lathe, a machine that makes circular forms. What is the connection between the diamonds and circles?

Diamond turnings and Islamic seven-circle designs share some basic geometry. As the illustrations demonstrate, diamonds can be drawn from the seven-circle configuration, and the circle pattern can come out of the six-diamond arrangement. The diamonds provide a structure that enables turners to explore multicircle designs, with one important difference. For a thousand years, Islamic artists have explored them in two dimensions. The modern woodturner can explore them in three, and there is plenty we do not know.

Seven circles.
This common Islamic seven-circle pattern is easily formed with a compass. Connecting the intersections reveals the six-diamonds pattern.

Photo: British Museum

Complex designs.
By playing with the seven-circle geometry, complex designs can be developed, like this brass plate engraving from 11th century Iran.

Six diamonds.
Compare the seven-circle pattern with the assembled six diamonds. The black lines on the diamonds indicate turning diameters, and if you continue them all around to make circles you have something very similar to the Islamic pattern.

Photo: Bob Barrett

Boxwood Spray.
The six-diamond assembly can be developed into something like the top view of Boxwood Spray. *Both the Islamic plate engraving and my boxwood piece have a center point enclosed by a hex pattern and many intersecting arcs. The spray has six points; the plate design has three sets of six points. The woodturner "draws" arcs with the lathe.*

Final assembly

23

Center the angles.
When you are satisfied with your cuts, check that the faces are flat and clean them up with a chisel if necessary. Assemble the pieces in sequence and hold them with a #84 rubber band at each end. Set the assembly upright on a flat surface, press the pieces down, and bring the angles to a center point.

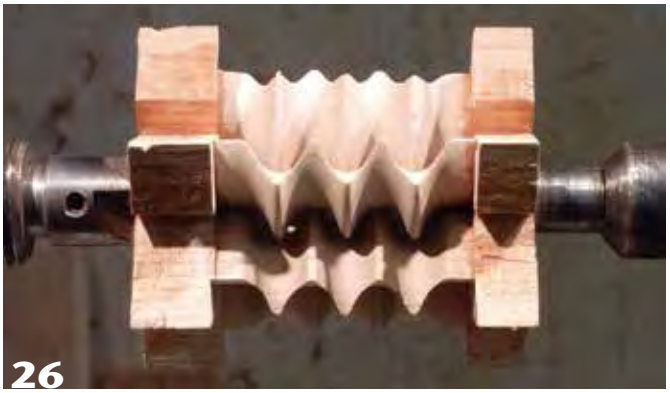
24

Align the coves and tack.
Turn the assembly over and center those angles too. If your angles are accurate and you measured both the A and the B pieces identically from the bottom, all the peaks will center neatly in the opposing coves. Gently rotate the assembly to check and adjust alignment, focusing on getting the coves and peaks in place. When all is set, apply a few drops of medium CA glue on the top center to tack those angles in place. Spray with accelerator and allow the CA glue to cure. Turn the piece over and repeat.

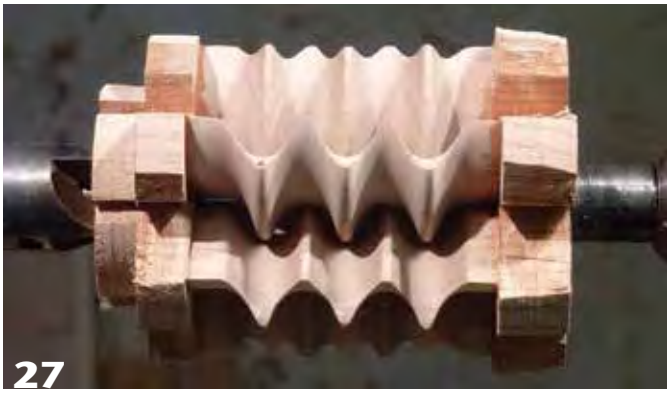
25

Glue drip.
With the assembly tacked together, drip thin CA glue into each seam below the turned area. The bandsaw has left tiny channels to help carry the glue to the center. Avoid glue splashes, and hold the piece so excess glue runs down and off. Leave it to cure without accelerator, then turn the piece over and repeat with the other end. ▶

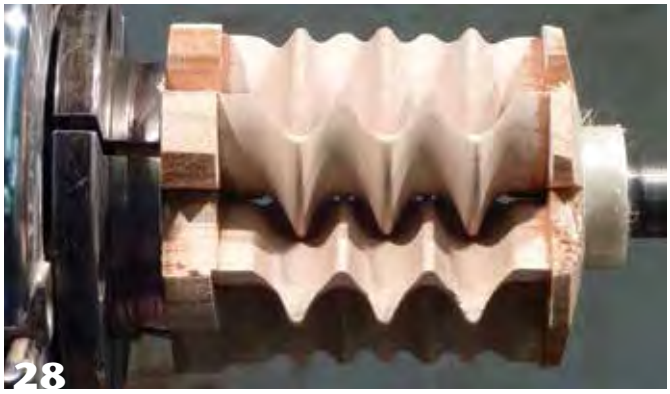
Revealing the form



Between centers.
When the assembly is completely cured, mount it between centers onto the lathe, drilling pilot holes as your equipment dictates. Tighten the tailstock center firmly enough to hold the piece without crushing it. For safety, put on your faceshield.



Turn a tenon.
Run the lathe at moderate speed and trim off the diamond points, then cut a tenon at the bottom for gripping with the scroll chuck. Be sure the tenon is not longer than the chuck jaws, so the assembly can seat flush and square.



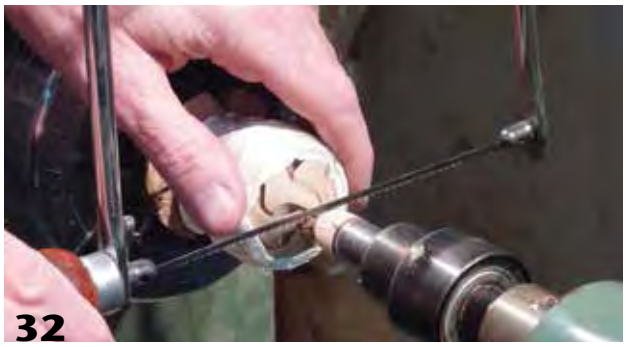
Scroll chuck.
Remount the assembly into the scroll chuck and bring in the tailstock center just tight enough to center it. Cut a small tenon at the top end and wrap that securely with strapping tape.

Teardrop shape.
Using light cuts, start shaping the cluster's exterior profile while also bringing down the ends. Initially, you can use the small gouge, but the skew chisel will give cleaner cuts. Adjust the speed if it helps. As you near the final shape, the leafy profile will begin to emerge.

Leafy profile.
Aim the teardrop toward the inside ends of the ¼" flats, but remember that the assembly has a hollow core so do not cut too far. At the bottom, make a tenon about ¾" (19 mm) in diameter and ¾" long, including the ¼" flat. At the top, cut the taper toward the same ¾" diameter. When you are satisfied with the teardrop shape, reverse the rotation and sand.

Wrap top surface.
Wrap the teardrop with a cloth or paper towel and secure it with strapping tape to keep it from flying apart. Back the tailstock center out to relieve any pressure and then bring it in just enough to keep things centered. Using a sharp skew chisel, reduce the waste, and begin a notch a little above your intended top point.

Cutting it free



Coping saw.
Hand-sawing is the safest way to remove the top waste from a project that has a lot of time already invested. Use a sharp saw blade and rotate the assembly to saw each element a little at a time until it comes free.

Skew chisel.
It is only a little riskier to cut the waste off with a skew chisel. Cut the notch until it is almost through, then make the final cuts from the tailstock inward so the tool doesn't catch on a leaf.

Remove top waste.
With one or two pieces cut through, stop the lathe, back out the tailstock center, and gently separate the others to remove the top waste. If necessary, cut individual pieces carefully with a bench chisel.

Final sanding.
Reverse rotation, leave the body wrapped, and start sanding with 80- or 100-grit coarse cloth to remove the waste at the top, but avoid touching the area you sanded earlier. Switch to fine grits to blend the body and tips together. Part off at the tenon for mounting, leaving enough of the glue-up to hold the piece together. ▶

Look inside

When a six-diamond assembly comes together, patterns of overlapping shapes are created in the center of the piece. To see them, you have to open the top. On small projects, this can be done after the top waste is removed, while the assembly is still held together with strapping tape. Wrap some cloth abrasive around a dowel and gradually sand away at the top center. In the top view of *Boxwood Spray* (*Islamic sidebar*), long curving lines feed down to the repeating hex pattern within, which has been left untouched. In *Jiggy Ray Torchere* (*Photos b,c*), dyeing the wood emphasizes opposite faces of the diamond shapes.

(a) Opening the top.
Sand into the top of the assembled diamonds to expose the interior.

(b, c) Jiggy Ray Torchere.
Peter Exton and Jason Busch,
Jiggy Ray Torchere, *2008, Brazilian boxwood, dye, cherry, 14" × 4" × 4" (36 cm × 10 cm)*

Collection of the Center for Art in Wood.

Photos: Vince Romaniello

Sanding the S curve of the base pattern produces active interior lines set off by dyeing, suggesting a pre-Columbian sun drawing.

Exploring a base pattern

The leaf cluster project relies on a profile found in the base pattern, the tapering contour of the teardrop revealing the look of a leaf. By cutting the exterior differently, we can see some of the variety possible in the same base pattern, exposing hidden shapes, lines, and patterns.

In the first example *(Photo d)*, I inverted the leaf cluster to serve as the body of a taller vessel form. A stylized vapor plume now appears to rise in the space between pieces. The relief neckband uses edge lines curving to a peak, pulling inward to create a cinching effect. The flared mouth also works with a peak, pushing outward to form an open blossom and reveal a patterned interior.

In the second experiment *(Photo e)*, I made only V cuts into the assembly, the location and depth creating different effects. In the body, deep Vs create patterns of facets around the piece, with curving edge lines ending in points. The pattern repeats but reverses its orientation on the next level. There is a hint of drapery or stretched fabric in the resulting form. On top, a tight series of shallow Vs across the slope of a cove creates a moving step pattern that reverses direction as the top opens at the peak. The shaping from multiple sides on these top elements makes them appear slightly twisted.

Note that all of these different effects were found in the same base pattern. The pieces work together visually, yet they touch only where they are glued together, out of view in the base. ■

Study, *leaf cluster base pattern, vessel, 2011, cherry. Laying a vase shape on the base pattern creates yet another visual effect.*

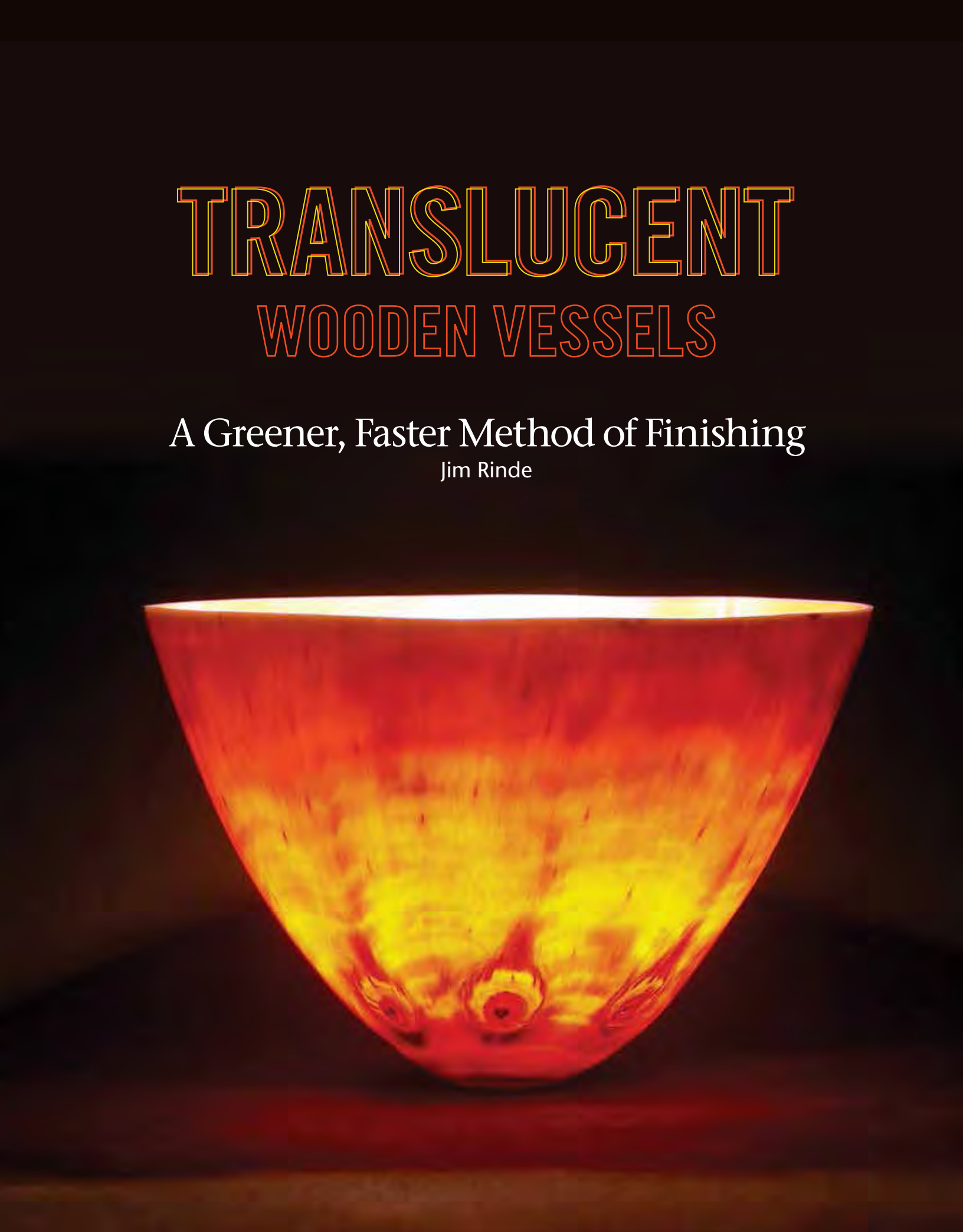
Study, *leaf cluster base pattern, V cuts, 2011, cherry. Deep V cuts into the same base pattern as the demonstration project create a totally different effect.*

Peter Exton has been exploring reverse turning methods since 1991. He has received awards for innovation from the Whitney Museum of American Art and the Philadelphia Furniture Show and grants from the AAW and the New York Foundation for the Arts. As a resident of the 2008 International Turning Exchange, he continued to probe the limits of what can be done on the lathe.

TRANSLUCENT WOODEN VESSELS

A Greener, Faster Method of Finishing

Jim Rinde



I developed a new method of creating translucent vessels using drying oils that requires less finish and shorter working times than the conventional soak-and-drain method. The amount of time from log to finished vessel drops from weeks or months to days. Even faster results can be achieved using epoxy resins.

In a previous article entitled "Finishing with Epoxy Resin" (*Woodturning*, No. 210, 2010), I discussed two methods of filling the pores of wooden drinking vessels to make them watertight. Since then, I have developed an easier method that uses more universally available equipment: a vacuum cleaner, a hair dryer, and a shopmade adaptor. In addition, I have expanded the size range by making a large platform adaptor, 15" (38 cm) in diameter, for use with larger vessels. I have also used this apparatus with drying oil finishes. Remarkably, I can fully impregnate the walls of an endgrain pine vessel and do it in about one hour versus several weeks for the normal soaking and draining process originally developed by Ron Kent.

The key to the process is a simple adaptor: a *vacuum impregnation platform* or VIP. It attaches to the end of a vacuum cleaner hose so that air can be pulled through the walls of wooden vessels for finishing. By applying the finish to the outside of the vessel while pulling air through the walls, the finish is sucked into the wood pores with some of it flowing all the way through the walls. As the finish is drawn into the wood, the surface dries and you simply recoat that area, as many times as required, until the outside surface remains wet with the coating material, indicating that the wood is saturated.

When the wood has absorbed all that it can, turn off the vacuum cleaner and check inside the vessel. There should be hundreds of small wet spots where the coating penetrated the walls. The coating will not be uniform because the wood is not uniformly porous. Coat the interior, wipe, and then cure the oil or epoxy.

Start with a small adaptor

To make the small adaptor, I turned a cylinder from a piece of scrap wood that was about 3" (8 cm) long and more than 5" (13 cm) in diameter with a 2¼"- (57 mm-) diameter hole to fit the hose on my shop vacuum cleaner that has an outside diameter of 2¼". To the surface of the adaptor, I glued a piece of ¼"- (6 mm-) thick polyethylene foam, packaging foam that is available in shipping stores (*Photo 1*).

To test the adaptor and system, I used an epoxy resin to fill the pores of a wooden beer vessel made from tipuana tipu wood. I mixed the epoxy according the manufacturer's directions, started the vacuum, and put the beer vessel in contact with the foam. The vacuum held the vessel in place, and I started coating the outside (*Photo 2*). As epoxy was sucked into the wood, the surface took on a dry look, so I recoated that area. I repeated the process many times. After about fifteen minutes, I turned off the vacuum cleaner and checked the inside surface of the vessel. *Photo 3* shows the epoxy penetrated the wall of the vessel where the wood was most porous.

Large vacuum impregnation platform

For large vessels, I needed a VIP that would be stable so that I had both hands free and could concentrate on coating the outside of the vessel. I made a platform 15" in diameter with three legs and a 2"- (5 cm-) diameter conduit to attach the vacuum hose to the platform (*Photo 4*).

I cut and glued together a 2"-thick board to form a flat panel. I attached a faceplate to one side, turned the edge round, and flattened the face. Next came a 2"-diameter hole, drilled into the center. I removed the panel from the faceplate, reversed it, and turned a flat surface on the other side (*Photo 5*). Both surfaces should be flat to prevent unwanted airflow. (Using a planer and wide-capacity drill press could achieve the same results.)

To make the hose connection port, take a rectangular block of wood about 4" by 4" by 6" (10 cm by 15 cm), mount it onto the lathe

Safety guidelines

This relatively new process may have safety issues that I am not aware of yet. Be observant of what is happening while using this method. Here are some guidelines you should follow.

Solvents: I did not use any solvents or finishes that contain solvents. Most, if not all, vacuum cleaners send some or all the air that it intakes through the electric motor. Most motors are not explosion proof and sparks can cause an explosion/fire of the solvent vapor/air mixture.

Vapors: A large volume of air will be pulled through the vessel, releasing volatile vapors from the finish into the space where the vacuum exhaust is expelled. In a closed space, high levels of dangerous or irritating vapors can occur. Vent the exhaust outdoors. If you use epoxy resin, be aware of volatile materials in the curing agent as some contain amines that are corrosive and can cause injury to eyes and skin. Read and understand the Materials Safety Data Sheet (MSDS).

Drying oils: If you use tung oil or boiled linseed oil, be aware of spontaneous combustion of oily rags, paper towels, or the filter in the vacuum cleaner. Store and dispose of properly.

(*L*) Two Norfolk Island pine vessels are illuminated with regular light. The one on the left is finished with epoxy resin and the one on the right is finished with tung oil.

(*R*) The same vessels illuminated under transmitted light.

between centers, and turn a tenon on one end. Insert the tenon into a four-jaw chuck and drill a 2"-diameter hole about 4" deep into the other end. Enlarge the hole to 2¼" diameter to accept the vacuum cleaner's hose. The hose should fit tight (*Photo 6*).

Remove the block from the lathe and drill a second 2"-diameter hole into one side, using a drill press. This hole should intersect the first hole to form a continuous pathway for airflow. Glue the block to the bottom of the platform so that the hole in the side lines up with the hole in the center of the platform (*Photo 7*).

Turn three legs for the platform so that it rests on the legs, and not on the central rectangular block (for stability). I turned these from 4" × 4" scrap wood, and glued them to the bottom of the platform.

The platform is now complete, except for adding a sealing material to the top. I used ⅛"- (3 mm-) thick polyethylene foam and glued it to the top surface using 3M brand, type 77 spray adhesive (*Photo 8*). For looks, I spray painted the platform.

Turn a vessel

The starting point for making translucent vessels is to turn a thin-walled endgrain vessel from a light-colored wood that is low density and porous. The usual wood is some kind of pine such as Norfolk Island. I recently obtained some freshly cut Norfolk Island pine from which I could make two endgrain vessels. *Photo 9* shows the log turned to a cylinder and ready to be cut in half. I chose this log because I wanted to make two similarly turned translucent vessels using the same process, one vessel finished with tung oil and the other with an epoxy resin.

Tung oil vessel impregnation

Turning the vessel and drying to a constant weight required three days. The dimensions were: 7¼" (18.4 cm) high, 6¼" (15.9 cm) diameter at the top and 1½" (4 cm) diameter at the bottom. The wall thickness was just under ⅛" (2.8 mm) thick. I sanded to 400 grit. I reinforced the knots and the area around them with thin cyanoacrylate (CA) glue. Cracks and the pith were filled with sanding dust and CA. The weight of the vessel before impregnation was 138 grams.

I used 100 percent tung oil from Woodcraft. It has no added drying agents.

The setup for the impregnation is shown in *Photo 10*. I placed the vessel upside down on the VIP (*Photo 11*) before starting to coat the outside surface. I started the vacuum cleaner and applied tung oil to the outside of the vessel. The vacuum inside the vessel held it firmly in ▸

1 The small adaptor for a vacuum cleaner hose.

2 A wooden drinking vessel being impregnated with epoxy resin using the small vacuum adaptor.

3 The inside of the drinking vessel after vacuum impregnation. There are wet and dry regions.

A large vacuum impregnation platform, turned upside down, has three feet and a conduit that attaches to a vacuum cleaner hose.

Turn and flatten both faces of the VIP base.

Test the vacuum connection port with the hose to ensure a tight fit.

The vacuum connection port is glued in place.

The finished VIP has polyethylene foam glued onto the top of the platform.

place. The air passing through the walls pulled the tung oil into the wood and the first application began to be absorbed.

The wood in this pine vessel was not very porous and the tung oil was being absorbed slowly in spite of a shop temperature of 80 °F on an unusually warm January day. To speed up the process, I used a 1200-watt hair dryer and started heating the outside of the vessel while the vacuum cleaner was running (*Photo 12*). This reduced the viscosity of the tung oil, which noticeably sped up the absorption.

As the oil was absorbed, I applied more on the outside surface and continued heating for thirty minutes. I turned off the vacuum cleaner and turned the bowl over to see how well the oil had penetrated (*Photo 13*). About three-quarters of the inside surface was wet with tung oil, so I could assume that the walls were fully impregnated. I proceeded to coat the interior with tung oil.

Coat the interior

To achieve better penetration of the tung oil into the pores of the wood on the inside, I put the vessel in a vacuum chamber and reduced the pressure to –25" Hg with a vacuum pump. In my system, this required about ten minutes. I released the pressure and the vessel returned to atmospheric pressure. I noted dry areas and areas wet with oil. I then recoated both the inside and outside with more tung oil and repeated the vacuum chamber cycle a second time until the inside and outside surfaces of the vessel were coated with a layer of oil with no dry spots.

Wiping off all the excess oil required many paper towels. The final wipe should be with a fresh towel and there should be no signs of oil on the towel when finished (*Photo 14*). Total time required for the impregnation step was one hour and fifteen minutes.

Curing

To cure the oil, I placed the vessel on waxed paper and put it into an oven with the temperature set at 100 °F (38 °C). After two hours, I checked to see if any oil had extruded to the surface. None had, and I continued the curing. After heating for twenty-four hours, the tung oil was cured hard enough that the surface was dry to touch. To make sure the tung oil was fully cured, I increased the oven temperature to 130 °F (55 °C) for an additional twenty-four hours.

I removed the vessel from the oven and cooled it to room temperature, sanded it with 400-grit abrasive, and polished it. After sitting for several days, the vessel reached a constant weight of 163 grams. The vessel gained 25 grams in weight or 18 percent. The total amount of tung oil used was 48 grams. I know that because I weighed the bottle of tung oil before and after starting the process. Discounting the small amount left on the paper towels, far less oil is required than for the soak-and-drain process.

In general, thick layers of tung oil do not cure on the inside since a film of cured oil forms on the surface and prevents oxygen penetration to the tung oil under it. Therefore, some may think that the coating is too thick and will never cure all the way through; however, it did cure. I think what happened is that during the impregnation step, a huge volume of air was drawn through the wood and coating and this effectively exposed the tung oil to oxygen so that it became fully saturated. Using an elevated temperature sped up the curing.

A Norfolk Island pine log is rough turned. The two halves will each become a vessel, one impregnated with tung oil, the other impregnated with epoxy resin.

Vacuum chamber for a vacuum pump

Do you really need to pull a vacuum on the vessel after the inside is coated with finish to get the translucent effect? In most porous woods it is probably not necessary if, when you coat the inside, you allow plenty of time for the finish to penetrate, especially if you use a hair dryer to warm the coating. With that said, it is fairly easy to make a vacuum chamber from a piece of pipe, an old pot, or turn one from wood. Here are two I made. One is 6" (15 cm) in diameter, made from a thick-walled paint can, and the other from 15"- (38 cm-) diameter PVC pipe. These are connected to my vacuum pump and a vacuum of about -26" Hg is achieved.

Epoxy resin impregnation

The dimensions of the second Norfolk Island pine vessel were similar, and the wall thickness was just at ⅛" (3.2 mm). As with the other vessel, I sanded this one to 400 grit and reinforced the knots and the area around them with thin CA glue. I filled the cracks and pith with sanding dust and CA. The weight of the vessel before impregnation was 147 grams.

The process for impregnating with epoxy resin is basically the same as with tung oil. Epoxy is different from tung oil, however, so precautions must be taken: The epoxy resin must be slow curing, even when heated with a heat gun, so as not to give off toxic or objectionable fumes, and be of relatively low viscosity. I used Rhino Linings's epoxy resin 1403, paired with their curing agent 403. I mixed to a ratio of 100/43 by weight. This system when mixed has a pot life of about eight hours at room temperature and is based ▸

An overall view of the vacuum impregnation setup shows the shop vacuum connected to the VIP. The vessel is in place ready to start the process.

Here is the setup before the start of the impregnation of the Norfolk Island pine vessel with tung oil.

I used a hair dryer during impregnation process to speed up oil absorption.

The inside of the Norfolk Island pine tung oil vessel after impregnation of the walls shows wet and dry areas.

The Norfolk Island pine tung oil–impregnated vessel is ready for curing.

on Huntsman's Jeffamine T-403 curing agent and a low-viscosity epoxy resin.

Process

I placed the vessel on the VIP, started the vacuum cleaner (*Photo 15*), and began applying epoxy to the outside surface. Absorption was slow, so I used the hair dryer. I applied multiple coats for about thirty minutes, taking care not to overheat the vessel and prematurely cure the epoxy.

I turned off the vacuum cleaner and checked the inside for epoxy penetration. About 50 percent of the inside surface was wet with epoxy resin (*Photo 16*). At this point I decided to coat the inside surface with epoxy. I coated the vessel and put it into a vacuum chamber and reduced the pressure to –25" Hg. As with the tung oil, I repeated this process a second time before wiping the excess resin off with paper towels.

For curing I placed the vessel in a 100 °F oven and after one hour checked for wet spots. There were none. Five hours later, the epoxy was cured, dry to the touch. For final curing, I increased the oven temperature to 130 °F. Nine hours later, the epoxy was fully cured.

I sanded with 400-grit abrasive and polished the surface. After a few days, the weight stabilized at 165 grams. The vessel gained 18 grams in weight from the epoxy resin or 12 percent, which is less than the 18 percent gained when using tung oil. Even so, the vessel is translucent.

Conclusions

The two translucent vessels were turned, impregnated with either tung oil or epoxy resin, finish cured, and polished in seven days from log to finished vessel. Individually, each vessel took five days, three days of which was the drying process. Clearly, this is a fast method for creating translucent vessels.

If you want to try this process, I recommend starting with tung oil or boiled linseed oil (BLO). Both are readily available and easy to use without the worry of premature curing of epoxy during the impregnation process. The downside of these finishes is some residual odor, and with the BLO, a darker color for the wood.

Both cure by reaction with oxygen in the air and form water-resistant finishes. These coatings are softer than epoxy; however, they are not as durable or strong as epoxy. The higher strength of epoxies can be an advantage with thin-walled vessels and epoxy resins have better solvent resistance. It is possible to color both tung oil and clear epoxy resin with clear dyes to create translucent vessels with color. ■

15 Norfolk Island pine epoxy vessel before starting impregnation process.

16 A detail view of inside surface of Norfolk Island pine epoxy vessel shows wet and dry areas after applying epoxy to only the outside surface of the vessel while under vacuum.

Sealing cracks

I roughed out an avocado-wood bowl that had 1"- (25 mm-) thick walls and was 15" in diameter. The wood had been drying for about two years and had developed several small cracks around the rim. I wanted to see if I could fill these cracks with epoxy and save the bowl in its larger size. I put the bowl on the VIP and evacuated the inside and added epoxy to just the cracks. The epoxy penetrated the full wall thickness and sealed the cracks. The crack lines will still be slightly evident after applying finish. However, I was able to salvage the larger diameter.

Jim Rinde is a retired research chemist who lives in California. He is a member of the Channel Island Woodturners, the AAW, and the American Bamboo Society. He has been woodturning for about twenty years and has published several articles on woodturnings that include epoxy resins. In his professional career, he spent twenty-five years working with epoxy resins and has twenty-one patents, many in the field of epoxy resin technology.

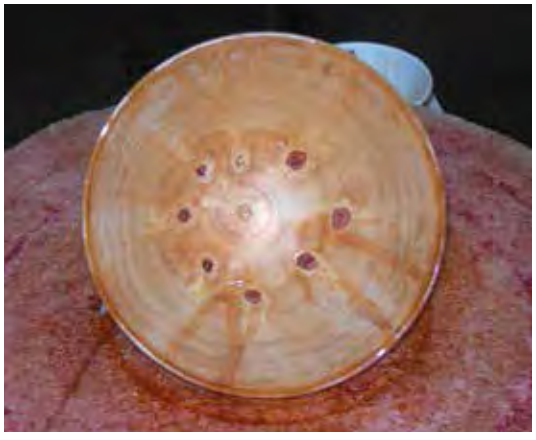
TRANSLUCENT FINISH

OTHER VESSELS, OTHER WOODS

I have experimented with other types of vessels and wood species. It is instructive to review some of them to see how they behave when subjected to this process.

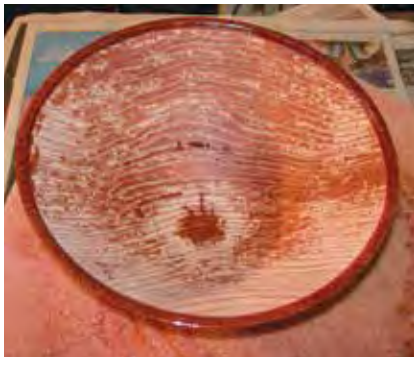
A Monterey pine endgrain vessel impregnated with tung oil after the VIP treatment shows good penetration of the tung oil through the walls of the wood, except for the bottom. The wood thickness in this area was about ½", which was too thick for the oil to penetrate completely. Monterey pine is more porous than the Norfolk Island pine and the heat gun was not needed. The vessel gained 32 percent in weight from the added tung oil.

Spalted beech endgrain vessel impregnated with epoxy resin. When compared to other woods, the spalted beech wood was much softer and more punky—it absorbed more of the epoxy resin, and did so faster. I used a hair dryer. The vessel's weight went from 91 to 182 grams for a total gain of 100 percent. I colored the epoxy resin with yellow dye.



A thinner-walled Norfolk Island pine vessel impregnated with epoxy, knots at bottom. This was turned to 2 mm thickness and absorbed more epoxy than the two other Norfolk Island pine vessels, which were thicker. Weight went from 55 to 81 grams for a 47 percent increase in weight.

The inside of a redwood endgrain vessel is partially wet with epoxy. Before I got the Norfolk Island pine, I did some experiments with redwood, as it is very porous. In this case the vessel was turned endgrain and impregnated with epoxy. The wood has about the same porosity as the pine. It gained 18 percent weight. The heat gun was not used.



A second redwood endgrain bowl, impregnated with tung oil. As the photo shows, about 50 percent of the interior surface is wet with the oil after forty-five minutes on the VIP. One side was more porous than the other. Here the wall thickness is 4.5 mm. Total weight gain was 63 percent.

In a candlelit ale house off a muddy, narrow London street of medieval timber-framed houses, in the year of Our Lord 1500, a liveryman of the Guild of Turners of London is looking suspiciously at the turned wooden goblet full of beer in his hand. He suspects that it does not contain the full measure for which he has paid; and he cannot find on it the maker's mark of a fellow member of the Guild. The landlord is defensive; but the liveryman is adamant that he has been short-changed and that the maker was unlicensed. The next day he takes the goblet to Guildhall, where it is found to be faulty and is destroyed.

The crest of the Worshipful Company of Turners depicts the Company's patron saint, Catherine, with the wheel on which she was tortured. She was saved by divine intervention, which split the wheel (but she was later beheaded). The Company's motto is "By faith I obteigne." *Obteigne* means "achieve" or "attain" rather than "get."

The Worshipful Company of Turners of London

Penrose Halson

Turners' marks of 1347.

Original drawing of the Angels' Lathe, in the Theological Library of the University of Leuven, Belgium

Photo courtesy of Theological Library, University of Leuven

Medieval members of what is now the Worshipful Company of Turners of London had the power to regulate their trade within the City of London. Only members could sell their wares in the Square Mile. Their products—platters, goblets, furniture legs, and bowls—had to bear the maker's mark, be well made, and contain any measure accurately.

Livery companies today

Today "The City" is the commercial and financial district centered on the Stock Exchange and the Bank of England, governed from Guildhall by the Corporation. The Lord Mayor and two Sheriffs, elected annually by the Livery, head the Corporation. The Livery are the members of the City's 108 Livery Companies, most of which have their roots in the medieval trade and craft guilds: dyers, bowyers, vintners, glovers, wax chandlers, pewterers, cutlers, brewers, and barbers, whose members united to protect their craft or trade, their livelihood, and their fellows.

All but a few of the Livery Companies have lost their regulatory powers, though the Fishmongers still control the buying and selling of fish in the Port of London. The Goldsmiths assay gold and silver objects before hallmarking those of the required standard, that is, applying their mark at their magnificent Goldsmiths' Hall. The Apothecaries set exams, held in their enchanting Hall, which survived the carnage of the World War II blitz bombing.

Instead of regulating, the principal activity of the Livery Companies today is supporting charitable causes. They raise around £41 million ($66 million) every year, much of it to help their traditional crafts and trades. The Worshipful Company of Clothworkers funds research into the development of technical textiles and color science; the Glass Sellers give grants to students on courses or training related to glass; even the young Company of Arts Scholars, founded in 2000, uses its charitable fund to give bursaries in support of museums and historical projects.

The Turners' Company is rooted in the City and supports the Lord Mayor's chosen charity, this year one that treats patients with multiple injuries resulting from road incidents, gun and knife crime, falls and assault. The Turners also contribute to City charities that help many causes: young scholars studying in London, ex-prisoners in desperate need of money for basics such as clothes, and the glorious church of St Bride's, Fleet Street, whose renowned "wedding cake" spire is in danger of collapsing. But chiefly, the Company supports turners and the craft of turning, which it does with great enthusiasm.

Showing the craft to the public

Since the nineteenth century, the Company has encouraged the ▸

Luc Knapen, Librarian of the Theological Library of the University of Leuven, Belgium, demonstrates the *Angels' Lathe* to Kate Abbott RPT at the "Wizardry in Wood" exhibition in 2008. The lathe is based on a drawing from 1627.

Photo: Stuart King RPT

Brighton Bun, circa late 19th century, Olive, 2½" × 5" (6 cm × 13 cm), closed, height with candlestick: 3½" (9.2 cm)

Pair of traveling candlesticks, often called *Brighton Buns*, in the collection of Nicholas Somers, Court Assistant of the Worshipful Company of Turners. *Brighton Buns* are made in silver, brass, and wood and generally date from the late eighteenth to late nineteenth century.

Photos: Nicholas Somers

public to appreciate turned work: The first Company Turning Competitions were held in the Mansion House, home of the Lord Mayor, in 1857. The display of entries became a must-see event, with more than 4,000 members of the public in 1883 gazing at pieces turned in wood, ivory, steel, brass, vulcanite, porcelain, and other materials. In the twentieth century, the competitions lapsed but were later revived, and today the prizes and prestige given to the winners attract entries from top professional and amateur turners, young and old, in classes for plain, ornamental and pole lathe turning, and for design. The material is almost invariably wood, with some soapstone, bone, plastic "ivory," and inventive novelties: recycled vending machine cups or refrigerator doors, cunningly melted into a solid piece and then turned. One member of the Register of Professional Turners (RPT) uses a small clockmaker's lathe to turn amber and jet into striking and delicate jewelry.

The British are not nearly as informed or appreciative of the craft as the Americans, so to raise awareness, the Company organizes demonstrations and displays at city events such as the City Red Cross market, held in Guildhall, and the Cheapside Fayre, held outside St Mary le Bow (the church whose bells must be in earshot of any baby who grows up claiming to be a London Cockney). An important exhibition in 2012, "Butcher, Baker, Candlestick Maker," showed 850 years of London Livery Company treasures, including a beautiful turned piece by Joey Richardson RPT, Freeman of the Turners' Company. The Company also puts on small exhibitions for individual turners, such as "Wizards in Wood: Stuart Mortimer and Joey Richardson," held at Linley, Mayfair. Every four years, it puts on a major exhibition, "Wizardry in Wood."

Geoff Brandon, RPT, *Lidded Standing Cup*, circa 1987, Antique ivory, size unknown

Geoffrey Brandon is a superb turner, Liveryman of the Worshipful Company of Turners and winner of the Company Gold Medal for outstanding service to the Company and the craft.

The first "Wizardry in Wood" in 2004, celebrated the 400th anniversary of the grant of a royal charter by King James I to the Company. Held in the Hall of the Worshipful Company of Pewterers, it was a comprehensive exhibition of turning such as had never been seen in Great Britain. To the British, turning is more a utilitarian craft than an art. If they understand what turning means at all, people think of battered old salad bowls. "Wizardry in Wood" was a revelation, a real eye-opener.

Many visitors to "Wizardry in Wood" 2004 were so enthused that they turned up at the 2008 event. Even bigger and better, the exhibition was held in the Hall of the Worshipful Company of Carpenters, first built in 1429, destroyed by an air raid in 1941, rebuilt and reopened in 1960. Its size, splendor and wood-panelled interior made it a magnificent setting for the vast array of exhibits, ranging from antique treen to futuristic wood art. A pole-lathe turner demonstrated to fascinated onlookers; others examined the Angels' Lathe, a collaboration between the Flemish Guild of Woodturners and the theology faculty of the University of Leuven, Belgium. Antique treen included an English wig-stand in walnut, 1650–1700, a nineteenth-century Scottish water flask, and a very rare turned pewter tankard, contrasting with superb examples of modern wood art: two fabulously delicate pieces by Binh Pho.

Pieces from collections were on display: from the Daniel Collection,

a highly personal selection of over 260 largely British pieces, by partners Shirley Sinclair and Jonathon Cuff; from the collection of Brian and Hana Smouha, who fell in love with turning in the United States; from Nicholas Somers' eclectic collection of treen. Also catching the eye were turned copies of eighteenth-century oboes, flutes and bassoons, from the Worshipful Company of Musicians, plus two superb pieces loaned by the Crafts Council, and pieces designed by the late Theo Faberge, Honorary Liveryman of the Worshipful Company of Turners, and his daughter Sarah, Court Assistant and Press Officer of the Company.

Sixteen of Great Britain's top turners displayed a huge variety of work, together with woodturning organizations: the Register of Professional Turners, the Association of Woodturners of Great Britain, the Society of Ornamental Turners, and the Association of Pole-Lathe Turners. As this article goes to press, twenty top turners are exhibiting at "Wizardry in Wood" 2012—a wonderfully comprehensive exhibition, including turned artifacts rescued from Henry VIII's flagship, the Mary Rose, sunk in 1545, historic lathes, pieces made on Holtzapffel lathes not shown to the public for eighty-two years, alongside some modern work.

Joey Richardson, RPT, *Freeone*, Sycamore, English walnut, 6" × 6" (15 cm × 15 cm)

Freeone is symbolic of the day Joey was made a Freeman of the Worshipful Company of Turners. The English walnut represents the sleepy woodland village where she lives; the white sycamore is the bright lights of London. The piece contains references to places and to friends and sponsors in the Company, Sarah Fabergé, Nic Somers, and Penrose Halson: a pair of walking sticks, a pen, a rose, a cat, a map of India. One panel shows the Catherine Wheel of the Company's patron saint, Catherine of Alexandria, who was tortured on a wheel. Two butterflies represent Joey's family life and freedom. Joey says, "*Freeone* is full of love. It not only symbolizes my special day with family and friends but also my journey as a turner to the City of London and the Arts. "

Photo: Joey Richardson

The spire of St Bride's church, Fleet Street, in the City of London. The Turners' Company holds its annual Patronal Service in the church, which was built by Sir Christopher Wren after the Great Fire of London in 1666.

Photo: Morley von Sternberg

Setting standards

In 1978, the Company helped create the Register of Professional Turners (RPT). To qualify for the Register, a turner's work is assessed, and his or her workshop checked for standards of safety—for the turner, and for pupils. Jointly with the RPT, the Company exhibits and gives demonstrations at national woodworking shows.

The latest initiative is the creation of a Master in Turning. The Livery Companies Skills Council is restoring the ancient craft certificates for Apprentice, Journeyman, and Master status. However, because the craft of turning in the United Kingdom has no accredited educational program, the Worshipful Company of Turners cannot award Apprentice or Journeyman certificates. It is therefore creating a Master in Turning certificate, to be awarded to turners who have given many years of outstanding service to the craft, attained high levels of skill and excellence, achieved wide and possibly international recognition and contributed generally to the support of the craft.

With the Association of Woodturners of Great Britain, the Company is also creating a Certificate in Turning and a Diploma in Turning, aimed at one day receiving accreditation from a mainstream educational authority.

Education and training

A new initiative by the Company is at the Cockpit Arts Studios, a busy, bustling, innovative organization that gives young designers and craftspeople not only space to work in but also training in business skills. This is of great benefit to those creative people who are not business-minded, so may make beautiful objects but be unable to sell them. The Company has installed a lathe at the Studios, and funds a turner for a year's residence. ▸

Lathe for disabled youth given by the Turners' Company to the school where he is a student.

Further encouragement is given to turners by the Company's biennial bursaries, awarded to practicing turners who are extending the technical and design boundaries of the craft, and who need new equipment, or money to travel or study. Some winners have used their bursary to go to the United States to learn from celebrated turners such as Binh Pho and Dale Nish—returning to the United Kingdom full of exciting new knowledge and skills, and determined to convince the British of the beauty of fine turning.

Minors benefit from training provided by the Association of Woodturners of Great Britain, supported by the Company, at Teenage Turning weekends. Young people are taught by top turners, sleep in tents in a garden, eat as if they had never tasted food before, and take home a well-turned object for their family to admire. A lucky group of under-18s were taught the craft on a summer holiday in France, organized by a Liveryman.

In United Kingdom schools, craft skills have been increasingly replaced by computer skills; and the culture of Health & Safety is stifling anything as potentially dangerous (and exciting) as a lathe. So the Turners' Company, which has traditionally given many lathes to mainstream educational institutions, now often helps children and adults with special needs. The Company has donated a lathe to the Services Rehabilitation Center in the hope that badly wounded soldiers will learn a new skill. They will be taught by a trained instructor and receive visits from a wheelchair-bound member of the Register of Professional Turners who will demonstrate what can be achieved on a lathe while sitting.

Severely physically disabled children cannot manipulate the cutting tools used with a conventional lathe, so the Company gives computer-controlled lathes to special-needs schools. To a school whose students are on the autistic or Aspergers' spectrum, with a curriculum centered on land-based and woodland crafts, the Company gave a treadle lathe, a pole lathe, money to build outdoor premises, tools, and expert tuition. It also gives traditional lathes, for example to a school for boys who have been excluded from normal schools, and whose syllabus is geared to vocational training, particularly working with wood.

The Company's Charity Committee receives and investigates all sorts of requests. Recently, the Chairman found himself in a neglected North London cemetery, where nestling among the weeds, old graves and broken memorials was the London Green Woodworking Centre. This small organization of dedicated volunteers teaches pole-lathe turning and woodcarving to a wide variety of people, a labor of love that the Company is now supporting with a comprehensive selection of pole lathes and carving tools. Pole-lathe

Eleanor Lakelin, *Hollow Form*, 2011, Chestnut burr, bleach, 5" × 27½" (13 cm × 70 cm)

Eleanor Lakelin won the Turners' Company/Cockpit Arts award in 2011. See more of her work at eleanorlakelin.co.uk.

Photo: Nicholas Somers

turner Robin Wood was given money to provide photographs for his definitive book, *The Wooden Bowl*. The French classic *L'Art du Tourneur* is now available in English, thanks to the Company's payment for its translation. The Company contributed to the Liveries Wood Group's initiative, Branching Out, which raised £20,000 ($32,000) for the arboretum at Castle Howard. An unusual request was for turned finials for the thrones on the royal barge for the Queen's Jubilee.

Raising money, having fun

To fund all this charitable work, the Company has to raise money. Members of the Company give generously to the Charity Fund, through donations and legacies. And the Company does something else at which it is very good: enjoying itself. An annual Charity Musical Evening, combining singing, playing, socializing, eating, and drinking, brings in funds and delights the Freemen and Liverymen (members enter the Company as Freemen and usually proceed to become Liverymen). Feasting, fun, and hospitality are very much part of all Livery Companies' life, and the Turners have a particular reputation for the friendliness of their welcome.

No longer do members of the Worshipful Company of Turners prowl through the narrow alleys of the City of London on the lookout for inaccurately turned measures to destroy. The Company now protects and supports its ancient craft, the mystery or art of turning, with verve, imagination, and pleasure. ■

Penrose Halson is a Past Master of the Worshipful Company of Turners of London. She can be contacted at penrose@halson.com. For more information, visit turnersco.com and The Register of Professional Turners at RPTurners.co.uk.

Finials in English oak turned by Stuart Mortimer, RPT. He gave the left-facing finials a left twist and the right-hand ones a right twist, and ensured that the fittings were so effective that they could not be easily removed.

Photo: Stuart Mortimer RPT

The finials were painted and gilded by Plowden & Smith. They were repainted three times to reach the exacting standards of the barge's designer, who wanted a perfect color-match with the red velvet of the thrones, a difficult task since the pile of the velvet caused the color to vary in different lights.

Photo: Nicholas Somers

The thrones on the barge Spirit of Chartwell that carried the royal family down the Thames in the Jubilee pageant, 2012. The thrones were made under the auspices of the Worshipful Company of Upholders (upholsterers), a member of the Liveries Wood Group (five of the City Livery Companies that work with wood). They were on display at the Turners' Company's exhibition "Wizardry in Wood" in 2012.

Photo: With permission from the Press Association

Fishing the Outer Reaches

Can Tandem Shows Spawn Crossover Appeal?

David M. Fry

Last May in Philadelphia, the newly renamed and relocated Center for Art in Wood outfitted its exhibition space as a light-filled aquarium for two concurrent shows in wood and other media. As the anchor presentation, "Hooked on Wood" filled soaring transparent cases with lifelike fish decoys hovering at different depths, alongside a few uncovered pedestals. Off to one side, "Life Aquatic"—essentially a challenge show—featured work from six sculpturally inclined woodturners responding to the traditions and spirit of decoy making. It was at once a natural yet surprising gallery pairing, given the common theme but divergent purposes of artistic expression and deadly functionality.

Beautiful deception

Like waterfowl carvings, fish decoys have a long craft heritage and significant contemporary following among both outdoor enthusiasts and collectors. The Center's exhibition committee took an interest because historically, many fishing lures were produced on the lathe (and still are, as evidenced in DIY projects depicted online).

Ironically, none of the pieces in "Hooked on Wood" reflects any obvious turning, probably because hand makers of fully developed fish forms would find

Tim Spreck, *Sunfish*, 2012, Wood, paint, 8¾" (22 cm) long; *Bass*, 2012, Wood, paint, 14½" (37 cm) long

Photo: Alistair Burke

David Sengel, *Spaltwater Spawn*, 2011, Red maple, trifoliate orange thorns, 9" × 6" (23 cm × 15 cm)

Collection of Richard and Rita Goldberg

turning more laborious than bandsawing for rough shaping. They also might want to distinguish their one-off creations from the articles associated with massed-produced lathe output.

Unlike the small lures used with rod-and-reel casting, the robust decoys here were designed for a particular form of ice fishing popular in the upper Midwest and Canada. There, the angler cuts a large hole in the crust and submerges decoys tethered to an impromptu shelter or puppeteer-like jig stick above. When a curious fish appears, the fisher spears the catch with a barbed pitchfork.

On display in the gallery floated more than a hundred perch, minnow, pike, sucker, shad, muskie, walleye, bass, crappie, and trout of varying size, hue, and scale pattern. Lengths ranged from 4 to 30 inches, while palettes shifted from drab olives to bright metallic yellows, reds, and blues. Many resembled textbook examples, while others seemed quite fanciful. Almost all of them, however, had seen service in the water, and some had only recently been plucked out.

Echoes in "Life Aquatic"

The challenge for a half-dozen well-known woodturners to mount a complementary show produced striking, sometimes unexpected results among the forty-odd submissions. As Center director Albert LeCoff observed, the lathe artists, "all came up with something different from what they normally do," along with more characteristic pieces.

David Sengel, for instance, innovated with familiar flair in *Spaltwater Spawn*, an oversized spiked aerialist cresting a turned maple pot. The fish's arc hewed to the contour of the domed lid and reprised the spalted crescent figure on the vessel body.

Nearby, *No Mayo* served up two hapless fish protruding from a sand-dollar–like sesame bun. An adjacent pedestal presented *Post-Op Release*, another unlucky catch chopped, gutted, and stitched back together for return to the deep. Harboring the edginess in much of David's thorny sculpture, the spiny fins, sandwiched bodies, and sutured flesh reminded the viewer that both fish and humans can be dangerous and that predation lies beneath everyday existence on the planet.

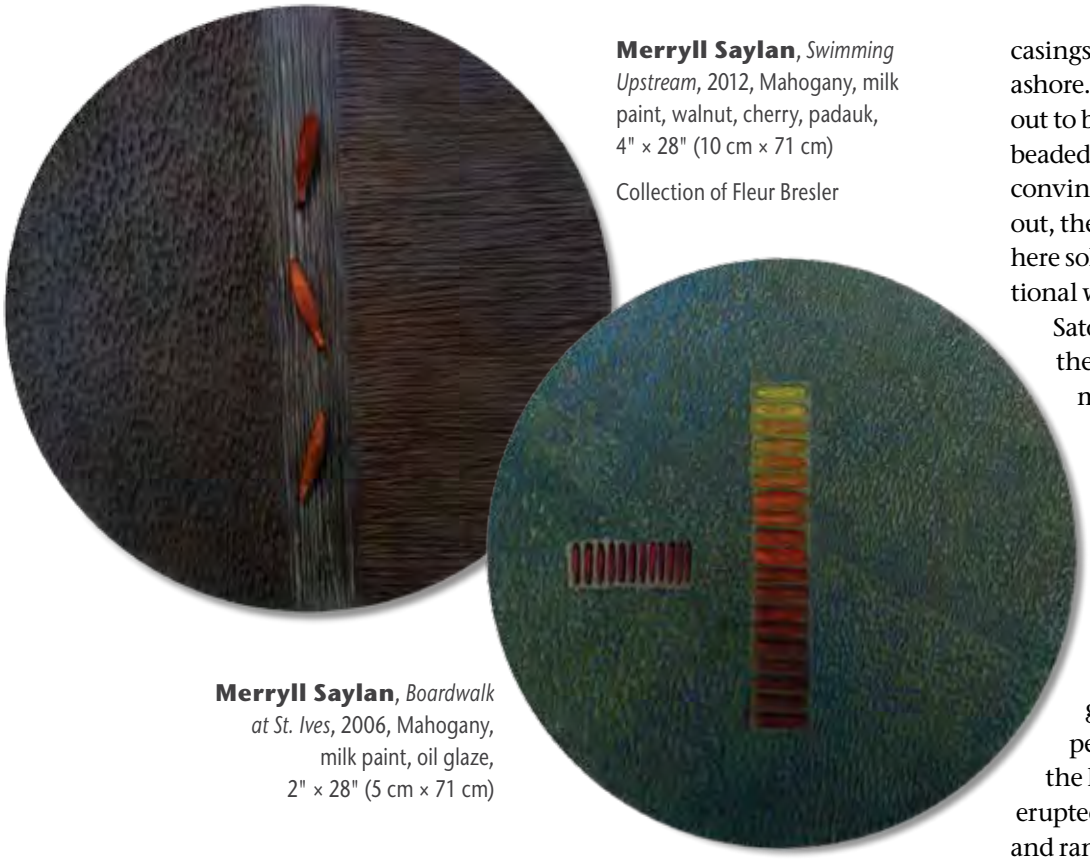
Hard realities also surfaced in Merryll Saylan's *Swimming Upstream*, among the few works that featured habitat as well as creature. Indeed, 98 percent of the gigantic ebonized platter was given over to choppy, wind-creased water channeling a strong current. Against the flow, three tiny fish tacked toward their spawning grounds. In contrast, another imposing platter by Merryll—*Boardwalk at St. Ives*—called to mind life's simple pleasures rather than instinctive struggle. Its dimpled surface of layered greens and blues mingled sea and sky behind a boardwalk spectrum of summer hues. The aquatic life just out of sight here seemed distinctly human, and the breeze benign.

Despite dissimilarities of tone, both of Merryll's pieces offered insight into the use of scale and subject-field interaction. They quietly revealed how hand-tooled expanses of color and texture bound by a distant horizon can give meaning and context to a small feature within the work or even an observer outside the frame. ▸

David Sengel, *No Mayo*, 2012, Curly maple, 2½" × 10" × 5½" (6 cm × 25 cm × 14 cm)

Collection of David B. Small

Photo: Alistair Burke



Merryll Saylan, *Swimming Upstream*, 2012, Mahogany, milk paint, walnut, cherry, padauk, 4" × 28" (10 cm × 71 cm)

Collection of Fleur Bresler

Merryll Saylan, *Boardwalk at St. Ives*, 2006, Mahogany, milk paint, oil glaze, 2" × 28" (5 cm × 71 cm)

Perhaps more than any other turner's pieces, the works of Michael Hosaluk seemed to derive their context and vibe almost entirely from the decoy exhibit. One tall case, for example, displayed grooved, tapering bobbers and lures suspended here and there above an array of curious, often elegant fishing gear of turned wood and other materials. Warped profiles and patinated surfaces suggested extensive use. Less functional but more entertaining were his familiar Saskatchewan fish—turned vessels resectioned and tricked out like spiffy piranha. The bulging eyes and bodies, blister scales, outlandish fins, and toothy grimaces gave these carnival characters surprising three-dimensionality.

Michael's *Fish Husks* offered a more realistic rendering of aquatic life—in this case, an apparent collection of large egg casings like those occasionally washing ashore. The unlikely medium turned out to be rawhide molded around finely beaded spindles, removed, and bent to convincing effect. As Albert pointed out, the patternmaking process reflected here solidly linked Michael's art to traditional woodturning.

Satoshi Fujinuma presented perhaps the show's most exotic forms, more marine than freshwater aquatic. Untitled, these diverse creatures bore casual resemblance to sea cucumbers, horseshoe crabs, and the tube worms around deep thermal vents. Satoshi has described himself as a woodturner absorbed in nature, although it was clear he was a great deal more: Much had happened to his pieces after leaving the lathe. Spines and tubular feet erupted from edges and midsections, and ranks of little pipes and cavities suggested an elaborate apparatus for gathering plankton. A mirror underlayment in the showcase added further detail and solidity to the peculiar geometries.

Although an accomplished turner, Janel Jacobson appeared to rely totally on carving skills to execute her show entries, including *Ebony Fantail*, perhaps one of the most expressive fish on the premises. Below the naturally bulging eyes of the black fantail she fashioned an exquisite pucker. The facial nuances

Janel Jacobson, *Ebony Fantail #470*, 2012, Philippine ebony, horn, unknown dark wood, 1⅞₁₀" × 1⅛₁₀" × 4⅖" (5 cm × 3 cm × 11 cm)

Collection of Fleur Bresler

Michael Hosaluk, *Fish Husks*, 2012, Rawhide, various dimensions

transformed the little swimmer into . . . well, a fish with character!

Sculptor Michael de Forest also worked off-lathe to create his epic *Salmon Coffin Fish*—at 5 feet-plus, the biggest work in either show. Based on local lore and woodworking practices in a Ghanian fishing village, this West Coast adaptation contained a burial compartment large enough for a small child. In one sense, the enormous salmon represented a kind of antidecoy—a fish for swallowing humans rather than ensnaring other fish. Despite the somber twist, the work sold to a collector before the show opened.

Installation "Hooked on Wood: The Allure of the Fish Decoy"

The Center for Art in Wood

Doubling up

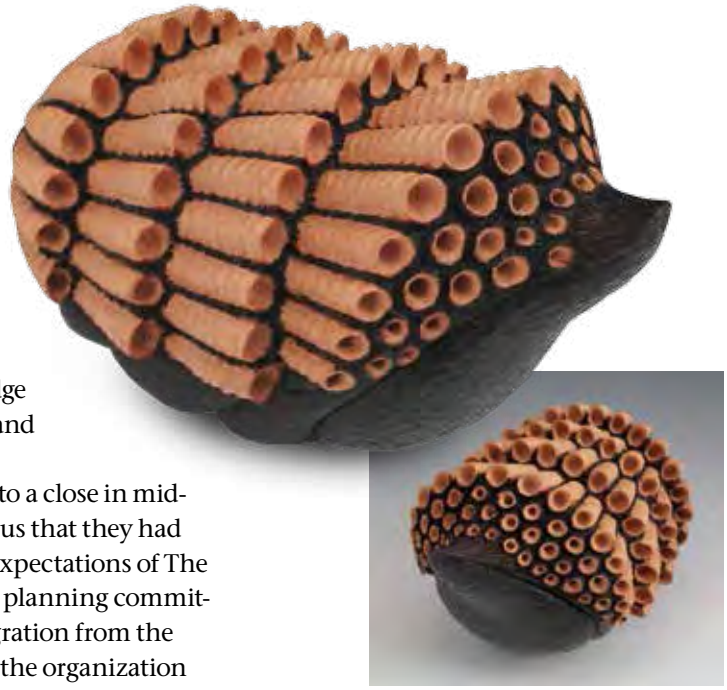
Piggybacked exhibitions have a long history in the art world for good reason: Tandem shows can generate more visitors/income, take advantage of unused space, foster cross-disciplinary dialogue, and expand patron tastes. The first two of these benefits may come easily, but the last ones usually require substantial forethought. Simply hanging one exhibit as décor for another, headlining a broad or catchy theme, or entrusting work selection to chance may do little to foster dynamic interaction between the shows and within the minds of focused enthusiasts. Will visitors "get" the real connection?

In the case at hand, The Center's Exhibition Committee went a long way in laying the groundwork for a symbiotic pairing. Once the decoy show began to take shape, The Center approached selected lathe artists and supplied them with extensive information about ice fishing. Artists were given free rein to reimagine the subject. That so many responded positively was noteworthy in itself. Here were makers working in the fine arts tradition paying tribute to what has been called America's oldest folk art. Some fine artists might have declined the challenge lest their own work be associated with rustic or naïve traditions. The new upscale Center, too, took a calculated risk by hosting exhibits with a rural sport flavor rather than something more urban and "contemporary." For both gallery staff and artists, however, thematic excitement and respect for high craft overcame any reservations.

By opening night, the gamble had already begun to pay off. Crossover was happening along several lines. For example, "Originally the decoy artists ▸

Michael de Forest, *Salmon Coffin*, 2012, Wood, paint, 20" × 5' 3" (51 cm × 160 cm)

Collection of David B. Small



Satoshi Fujinuma, Untitled (No. 2), 2012, Japanese clethra, 6" × 3⅜" × 3⅛" (13 cm × 10 cm × 9 cm)

weren't interested in selling their work," Albert recalled. "But I said to them, 'Look, I'm already interested [in your pieces], and if I'm interested, others walking in will be too. You should consider putting a price on them.' And indeed many did." Entries that would have otherwise gone unmarked now had red dots. Meanwhile the lathe artists wound up selling work to decoy collectors drawn to the precision and aesthetic response evident in the challenge pieces.

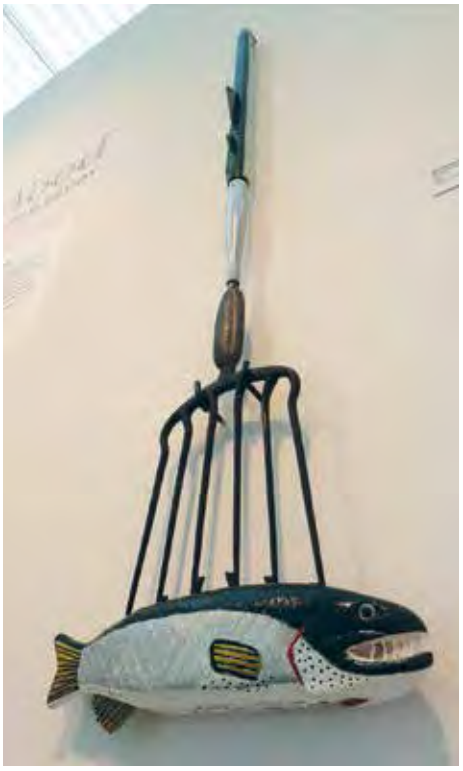
Another reason for successful crossover lay in the boundary overlap between shows and between the interests of their respective constituencies. Decoy makers and lathe artists not only shared a love of fine craft but also many of the same carving and color techniques in their studios. In addition, a number of the lure specialists were already looking beyond simple functionality and labeling their work as *folk art*. Some of their offerings unmistakably crossed the threshold from hyperrealism to elaborate fantasy and symbolism.

Other factors might have been in play as well, including The Center's strategic new location in Philadelphia's old gallery district. It also didn't hurt that "Hooked on Wood" secured funds to produce a catalog, which was supplemented by mounted photographs, onsite appraisal for collectors, continuous video, and marquee signage in the exhibition hall. "Life Aquatic" did not enjoy as much lateral support, however, relying primarily on The Center's website for an introduction of artists and purpose. The challenge show might well have benefitted from two or three wall-mounted paragraphs laying out some of the embedded themes of the artists' response. As it was, casual visitors could all too easily stroll by the colorful shapes without grasping the sometimes playful, sometimes brooding rejoinder of "Life Aquatic." Meditations on predation, food for the table, celebration of nature, and blood sport lurked beneath the surface. Why not nudge people to dive down and take in the depths?

As the shows drew to a close in midsummer, it was obvious that they had fully lived up to the expectations of The Center's director and planning committee. The outward migration from the woodturning core of the organization had advanced once more without a loss of audience or impact. Future events promised to feature art with a focus not only on wood, but also on other materials. As Albert wryly observed, "One day we may simply be called 'The Center.'" Perhaps "The Center for Craft in Art" would be even more apt. Whatever the label, the public will likely be served up something memorable. ■

David Fry turns wood and writes near Washington, D.C.

Michael Hosaluk, *Lures, Bobbers and Unusual Objects for Fishing*, 2012, Wood, metal, found objects, various dimensions



Tom Richards and Jim Nelson, *Spear & Guard*, 2005, Iron, cedar, 60" (152 cm)

Collection of Dick and Diane Walters

Members' Gallery

First place
Roger Meeker, ornament, 2012, Spalted maple, ebony, 6¾" × 2½" (17 cm × 6 cm)

AAW Forum Contest Winners

The challenge for the last AAW Forum contest was holiday ornaments that, "must be newly made and be able to be hung on a tree or on a display stand for a table." Thank you to Alan Carter who juried the entries, and to everyone who entered the contest. Congratulations to the winners!

To enter the next contest, view all the entries, and read the juror's comments, visit the Forum section of the AAW website at woodturner.org. ■

—Kurt Bird, AAW Forums Moderator

Second place
Curtis Fuller, angel ornament, Alder, walnut, 2012, 4¼" (11 cm) tall

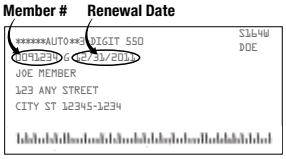
Third place
Bill Donahue, ornament, 2012, Sea urchin shells, maple, dye, pigment, 7⅞" × 2½" (20 cm × 6 cm)

RENEW NOW!

As of March 2011, all memberships in the AAW became renewable on the month you joined rather than on a calendar year. Your renewal date is located on *your* journal's mailing label on the front cover. To ensure that you do not miss any issues of *American Woodturner*, check your renewal date!

IT'S EASY! ONLINE EMAIL PHONE

1. **Find** your membership number and renewal date printed on *your* mailing label.



2. **Save the trees for turning and renew online!** Logon to the members' area at **woodturner.org** to renew.

3. **Questions?** Email inquiries@woodturner.org or call 651-484-9094 or 877-595-9094 (toll free).

American Association of Woodturners

TENNESSEE ASSOCIATION OF WOODTURNERS
25th Annual Woodturning Symposium
FRI., JANUARY 25th & SAT., JANUARY 26th, 2013 • NASHVILLE, TENNESSEE

DIXIE Biggs

JIMMY Clewes

JOHN Jordan

JOHN Lucas

MIKE Mahoney

TENNESSEE ASSOCIATION OF WOODTURNERS 19 87

For the latest information, registration form and schedules go to **www.tnwoodturners.org/symposium**
You may also contact us by email at tawsymposium@aol.com or call Jeff Brockett at 615.973.3336

MARRIOTT COOL SPRINGS HOTEL & CONVENTION CENTER • 700 COOL SPRINGS BLVD. • FRANKLIN, TN 37067 • 615.261.6100

TurnMaster

from *Robert Sorby*

a cut above...

The Robert Sorby TurnMaster is the first tool in the world to combine three cutting edge technologies in one flexible tool.

Cutters are available in tungsten carbide, titanium nitride (TiN) and high speed steel (HSS) providing unsurpassed range to woodturners at every level.

NEW

Benefits:

- All cutters interchangeable with one tool
- Unique* indexable cutting head for three scraping options
- Interchangeable cutter head – no need to buy whole new tool
- Flat underside for stability
- High tensile torx screw / key for quick cutter release

*Patent pending

Scan here to find out more

Or visit: www.youtube.com/user/robertsorbyengland

TurnMaster...
the tool with the vision to educate and inspire

CARBIDE: TITANIUM: HSS

Proudly made in Sheffield, England

Robert Sorby, Athol Road, Sheffield S8 0PA, England.
Tel: +44 114 225 0700 Fax: +44 114 225 0710
E-mail: sales@robert-sorby.co.uk Web site: www.robert-sorby.co.uk

ONEWAY MANUFACTURING

www.oneway.ca
postbox@oneway.ca
1-800-565-7288

Superior Design, Legendary Quality

Wolverine Grinding Jig

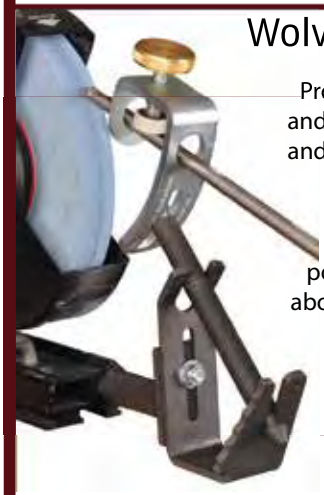
The heavy duty toolrest is the fastest, most versatile in the world. Switches side to side in seconds. Set any angle. No tools required.

Full complement of accessories available:

- Wolverine Vari-Grind
- Wolverine Vari-Grind 2
- Wolverine Skew Attachment
- Wolverine Dressing Jig
- Wolverine Grind ' n Hone Jig
- Wheel Balancing Kit
- Grinding Wheels

Two Fixture Mounting Bases
Heavy Duty Vee-Arm Toolrest

Producing razor sharp tools and accurate bevels is now quick and easy.



Wolverine VARI-GRIND 2

ONEWAY Patent Pending

Produce and maintain fingernail and side grind profiles on spindle and bowl gouges. Side restrained action keeps the tool safely centered on the wheel. The center point of the cutting tool rotates about the center of the adjusting rod, allowing maximum flexibilty of the tool shape.

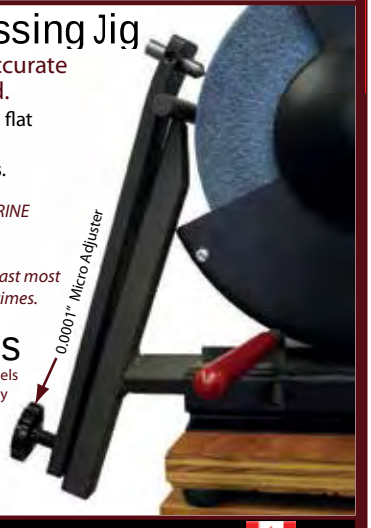
QUICK ·
SIMPLE ·
ACCURATE ·
Instructional DVD included ·

Wolverine Dressing Jig

The Best, Most Accurate in the World.

Grinding Wheels will be round, flat and have a uniform finish.
The Benefit will be **sharp tools**.

The Dressing Jig requires the WOLVERINE Grinding Jig or a mounting base.
Wheel Balancing Kit recommended.
A properly configured wheel will outlast most off the shelf grinding wheels up to 4 times.



Grinding Wheels

ONEWAY Grinding Wheels are designed specifically to be used on a bench grinder to grind high speed steel.

Call the ONEWAY Team today for details.

OUR PROMISE TO YOU: No false claims. Only high quality goods sold. Satisfaction Guaranteed.

Designed and Made in Canada

Corporate Sponsorship Announced!

The AAW has launched a program to partner with long-time vendors and new companies who share our enthusiasm for woodturning. In exchange for promotions, advertising, and opportunities to demonstrate products to our members, companies contribute financially to the AAW. Members will directly benefit from a stronger financial base, which will hold down costs—we intend to keep symposium registration fee increases to a minimum.

Here is how it works: Any company that sells their product to AAW members—food, tools, wood, abrasives, trucks, chainsaws, finishes, lathes, safety equipment—can join us as a partner by donating to the AAW and becoming a sponsor for a specific event. We provide companies with product-promotional opportunities such as advertising venues, banners at symposiums, and brochures in registrations packets. Sponsoring companies gain access to more than 14,000 actively involved woodturners. In turn, the AAW receives financial assistance to help fund our educational endeavors.

*We need **your** help!* Send us referrals of companies that you do business with, along with a contact person's name. We are looking for personal connections. For example, do you know someone at Stihl Chainsaw Company, headquartered in Virginia Beach, Virginia? They are an ideal Corporate Sponsor target company and may not be aware of the potential within the AAW. Manufacturers of pick-up trucks—woodturners own trucks—McDonalds, and Applebee's are possibilities—the list is unlimited! If you know someone who works for a potential Corporate Sponsor, help us make a personal connection.

Current focus on Tampa: We will start the Corporate Sponsor Program in Tampa with the 2013 symposium. If you can connect us with a potential Corporate Sponsor, especially businesses in the Tampa area, send an email to Byron Rosbrugh at rosbrugh@bellsouth.net. With our members' help, the AAW will continue to provide the best woodturning education in the world!

—Byron Rosbrugh, Chair, Fundraising Committee

"Wow! You made a Bolt Action Pen?"

Discover the joy of making this completely original and irresistibly fun Bolt Action pen, a gift that will be hard for any hunting or target-shooting enthusiast to put down.

Completely Authentic

Every detail, from the one of a kind bolt-action mechanism to the precision-engineered components, was carefully designed to ensure uniqueness and reliability. The realistic bolt-action handle smoothly advances and retracts to securely lock the refill in place. Includes a bolt-action rifle clip and replica 30 caliber cartridge and rose gold tip for added authenticity.

Easy to Make

So easy to make with a 3/8" tube, no one will believe you made something of this quality in 15 minutes. Requires mandrel, bushings (Item #PKCP3000BU $5.95) & 3/8" drill bit (Item #PKEXEC-3/8 $3.95)

Our Customers Love Their Bolt Action Pens!

Rod R. of VA wrote, *"This pen kit is Awesome - I LOVE IT! Looks and operates beautifully!"*

Dan P. of OH wrote, *"I have been making and selling pens for a long time but this one has generated the most interest and comments of any I have done. People are buying them in multiples and the ones I give to friends are big hits!!"*

Daryell S. of TN wrote, *"I am extremely delighted with this pen. The look and feel is remarkable and the craftsmanship is perfect. This already has become my best selling ink pen."*

The more you buy, the more you SAVE! Choose from 4 finishes: Chrome (shown above), Gun Metal, 24kt Gold and Black Enamel.

Gun Metal shown with refill advanced

24kt Gold shown with refill retracted

Black Enamel & Gun Metal shown with facing clip

	Item #	1-4	5-24	25-49	50+
Chrome	#PKCP8010	$12.95	$12.05	$11.15	$10.25
Gun Metal	#PKCP8020	$12.95	$12.05	$11.15	$10.25
24kt Gold	#PKCP8000	$14.95	$13.95	$12.95	$11.95
NEW Black Enamel	#PKCP8030	$12.95	$12.05	$11.15	$10.25

3 Bolt Action Pen Kit Starter Pack
You get one pen in Chrome, one in Gun Metal and one in 24kt Gold plus the Bushing Set and 3/8" Drill Bit
#PKCPBAPAK **SAVE $8 Only $42.75** **SAVE 16%**

Penn State Industries

Top Quality, Great Prices and Expert Advice!

1-800-377-7297 • www.pennstateind.com

advertisingindex

MADE IN THE USA

Tools™

woodturning.org

Angle Gauges

- 3 gauges, 40 angles

Univeral Grinding System

- Eight shapes and sizes available
- Pivots at the grinding surface

Taper-Lock Handle System

- Carbon fiber composite handle in ten lengths, bolster, and adaptor sleeves. All sold separately.

Imagine the possibilities when your genius meets ours.

SB Tools are now available at select stores across the country. Visit woodturning.org for a complete list of retailers and tool specifications.

ON SALE NOW

- Angle Gauges (1, 2, & 3) - $34.99
- Univeral Grinding System STARTING AT - $109.99
- Taper-Lock Handle System STARTING AT - $49.99

www.woodturning.org

MARTHA COLLINS

Weaver 9 Bracelet, 2011, Twelve different species of wood, hand-dyed maple veneer, ebony edges, 400 pieces, 2¼" (57 mm) dia

More of Martha Collins' work can be viewed at studiomarthacollins.com.

Photo: Mark Frey