Hybrid Bottle Stoppers • Small Bowls • Rolly Munro Profile

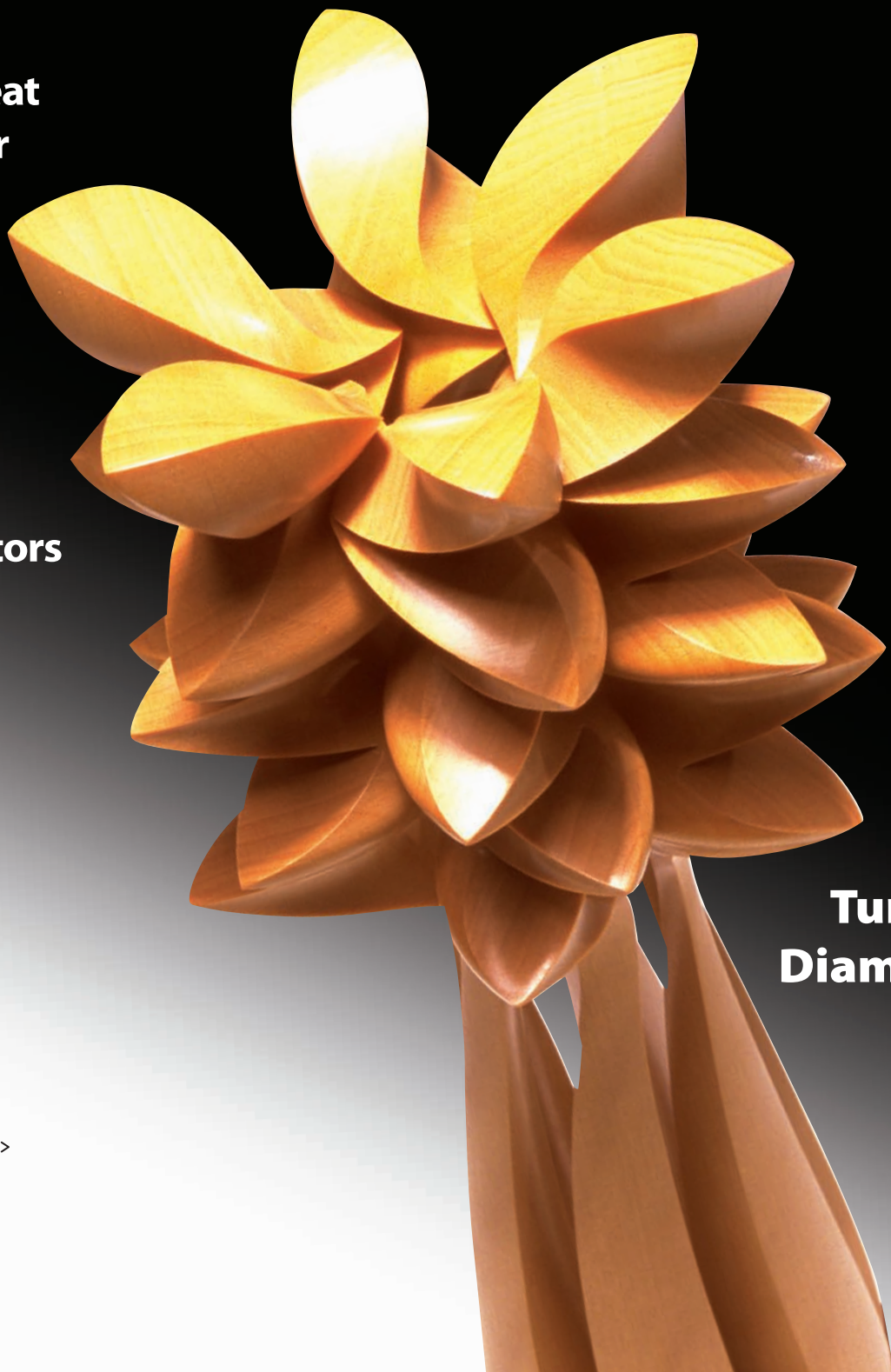
AMERICAN WOODTURNER

Journal of the American Association of Woodturners

The Compleat Woodturner

Four-Jaw Chuck Primer

Featured Symposium Demonstrators



Turning Diamonds

February 2010 vol 25, no 1
woodturner.org
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Candle Holders, 2009, Ash, bleach, dye,
12" x 2" (30cm x 50mm)

Goblet, 2009, Cherry,
14" x 3" (36cm x 76mm)

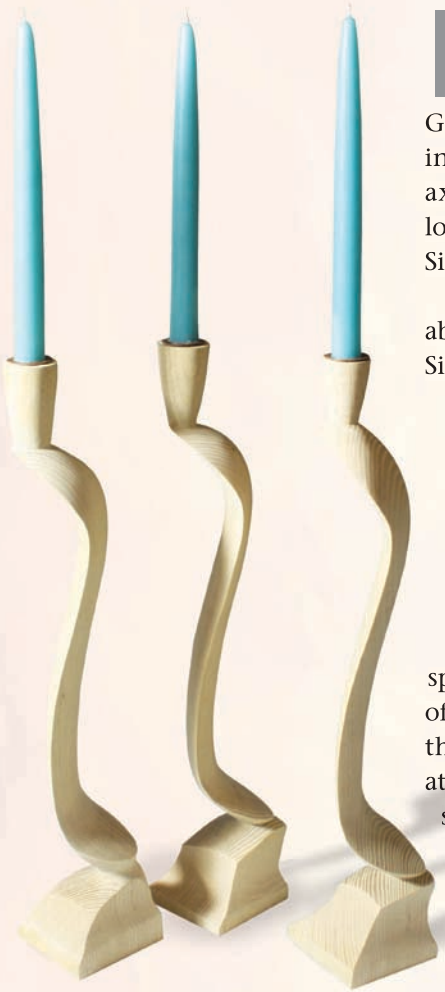
Goblet and Candle Holders, 2009,
Cherry, 12", 14", 16" x 3"
(30cm, 36cm, 41cm x 76mm)

Candle Holder, 2009,
Ash, bleach,
19½" x 3½"
(48cm x 89mm)

Trio Facing, 2009, Ash, bleach,
19½" x 3½" (48cm x 89mm)

Split Turnings Series

Barbara Dill



Trio Walking, 2009, Ash, bleach, 19½" × 3½" (48cm × 89mm)

I was inspired by a beautifully sculpted goblet I saw in *AW* (vol 23, no 4), made by Nikos Siragas from Greece. I tried to emulate it by turning a stem for a goblet using multiple axes. After a frustrating day (or two), I looked again and saw that the stem of Siragas's goblet was *carved*.

Nevertheless, the idea of being able to turn a goblet stem similar to Siragas's stuck with me. I also remembered the form as leaning, and kept thinking about that concept. I recently looked at the article again, however, and saw that the goblet was not leaning after all; it simply had a beautiful curve. Funny how the mind works.

This series is an exploration of split turnings, made with four pieces of wood, each one square, and all the same length. The four pieces are attached together to create a larger square, which is then turned using the center of the four squares as the turning axis. That turning is split apart, reassembled, and turned again. Two, three, or four sides can be turned to achieve varied results. The end product is four turnings that are alike. I use these turnings for the stems of goblets and also for entire candleholders. The cups for the goblets are turned separately and are connected to the stems with round tenons.

The first stems and candleholders in the series were a bit clunky, but as I progressed through various stages of experimenting with this process, the forms became more elegant and I achieved the leaning look I sought.

I think of the trios as relating to one another, seen as family dynamics that can be either playful or serious. When I view the arrangement with the pieces facing away from each other and far apart, I know there's trouble brewing in that family. ■

Barbara Dill lives and teaches in the Richmond, VA area. Visit her website at barbaradill.com.

Trio Facing, 2009, Ash, lacewood, 11" × 4" (28cm × 102mm)

Trio Leaning Away, 2009, Ash, lacewood, 11" × 4" (28cm × 102mm)

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

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Inside This Issue

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FEATURES

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Journal of the American Association of Woodturners

ASSOCIATION NEWS AND NOTES

WOODTURNERS CHATTER

GALLERY

ON THE COVERS

Cover – Peter Exton, *Zaret Spray,* 1998, Brazilian boxwood, 14" × 5" (35cm × 13mm) Collection of Norman Zaret, photo by Bob Barrett (story, page 27)
Zaret Spray is one of Peter Exton's first diamond sculptures and is entirely turned. It is made from six diamond-section lengths of wood, none touching, and has thirteen axes. Patterns appear on the outside as well as down through the center.

Back Cover – Stephen Hogbin, *Radiance,* 2008, Ash, paint, 16" × 17" (40cm × 43cm)

woodturner.org

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

MEMBER SERVICES

For address changes or damaged issues received through the mail, please contact the AAW office at inquiries@woodturner.org or 651-484-9094.

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

To order back issues:
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For rates and specifications,
please contact Associations Inc. at 515-280-7313 or email Tonya Vitzthum at tvitzthum@associationsinc.us.

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 in the AAW *Resource Directory.* Following them will help you continue to enjoy woodturning.

From the Editor

Six issues. *Six!* Two additional journals a year provide an opportunity to publish in-depth articles on complex techniques and processes—articles that will now be in members' hands sooner than ever before.

I am pleased and excited to present Peter Exton's article, "Turning Diamonds." It is studded with valuable techniques he has developed for taking inside-out (reverse) turning to a new level. He freely shares the processes you need to learn in order to explore his innovative approach to woodturning. The piece on the cover is completely turned! With Peter's article, you can find out how he made it and begin your own adventure.

Speaking of the cover, I am also delighted that this issue of the journal features a makeover in the form of a new typeface for the cover, as well as for the inside text. I hope you agree that the text is easier to read; that was our intention. We selected a display typeface that is more subdued and modern looking than the previous one. With the use of this typeface, cover photos will receive the focus and attention they deserve.

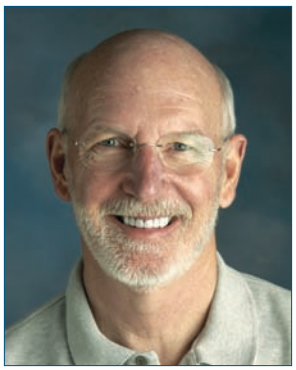
The article, "Mastering the Four-Jaw Scroll Chuck," was a team effort that resulted in what I think is the best primer on chucks ever written. The two authors, Dick Gerard and Stan Wellborn, and photographer Ed Kelle worked together in a way that illustrates a dedication to sharing knowledge that so clearly defines our organization.

Clifton Chisum and the Tidewater Turners have a thank-you to pass along to Heather Caillet. Heather and her husband, Bill, own a Woodcraft store in Virginia. Heather

was instrumental in helping organize a club collaboration. Thank you, Heather!

—Betty Scarpino

President's Letter



I'd like to tell you a little about myself and share with you the reasons why I am so enthusiastic about serving you as President of the American Association of Woodturners.

I grew up in the Shenandoah Valley of Virginia, an area with a rich tradition of woodturning. Historically, turnings were spindles, primarily turned legs for furniture. My Dad was an expert on American period furniture, built reproductions, and had a lathe in his shop. I began to use that lathe as a young boy.

Upon graduation from college, I traveled extensively, lived in Asia, Europe, and in ten states. The lathe in my Dad's shop became a distant memory. About fifteen years ago, I happened upon a demonstration by Richard Raffan. I had heard of him, but I had no idea what he would be turning in his demonstration. I was amazed to see him take a piece of green timber and turn it into a beautiful bowl. It had never occurred to me that someone could use a lathe to turn lovely objects from timber, such as the kind that grew on my own land. I was hooked. I bought a lathe and began teaching myself to turn.

I read a few books, but I knew nothing of the AAW, and progress was slow.

A few years later my wife, Melinda, read something about the Utah Woodturning Symposium and out of curiosity we decided to go. At the opening ceremony we had the good fortune to sit close to Jerry Smith, an AAW advocate with a passion for teaching and for woodturning. In chatting with Jerry, we discovered we lived only a few miles from one another. He encouraged us to join the AAW chapter in Denver. We did, and it opened our eyes to a whole new world. We were embraced by a community of woodturners who taught us techniques, critiqued our work, and encouraged us to advance our skills. My turnings improved dramatically and so did my enjoyment of the craft.

I'm a member of two AAW chapters and a past two-term president of the Front Range Woodturners, the AAW chapter in Denver. Two years ago, you elected me to serve on the AAW Board of Directors. This year I was elected to serve as your President.

I now regard myself as a reasonably good woodturner, but it took many years to get here, and I can sincerely say that if it hadn't been for the AAW, I'd still be toiling away in the dark. I owe my turning success to the AAW, which is why I am so enthusiastic about the opportunity to serve you. I believe it is important for all of us to reach out to others who may not yet be AAW members, especially when I think of what the organization has provided for me. I would like to see all turners benefit from a similar experience so that they will have the support they need to advance their woodturning skills and to enjoy this craft that we all find so compelling.

With warm regards,
Tom

24th Annual AAW Symposium

Hartford • June 18-20, 2010

The AAW's 24th annual symposium, June 18–20, will be held at the Connecticut Convention Center (CCC) in historic downtown Hartford where floor-to-ceiling vista windows overlook the revitalized riverfront of the Connecticut River.

We've chosen Hartford, not only because it is a vital, thriving city, but because it is easily accessible by car, train, and plane. Bradley International Airport is only twelve miles from the CCC (ctconventions.com) and there is ample parking nearby in an eight-story parking garage.

While in Hartford, visit historic Asylum Hill where you will find the Mark Twain House, Harriet Beecher Stowe Center, and the Hartford Children's Theatre. Take in the impressive collections at the nation's oldest public art museum, the Wadsworth Atheneum Museum of Art. Hartford ranks in the top 6% in North America for its arts and culture!

Of course you won't want to miss the fantastic woodturning demonstrations we have planned. The featured demonstrators are listed below. A complete lineup of demonstrators will appear in the April issue of the journal. ■

Skyline of Hartford showing the Connecticut Convention Center.

Featured Demonstrators

Peter Bloch, New Hampshire

I will be sharing my passion for the amazing qualities of wood that can be revealed by creating thin-walled endgrain turnings. I will discuss techniques, present problems and solutions, share my inspirations for turning large-diameter heavy chunks of green wood, and talk about the many directions my work has taken over the past seventeen years.

- Translucent Lampshades

Peter Bloch,
Lampshade and Table

Trent Bosch, Colorado

Participants will learn not only all the techniques that I go through during the creation of my body of work, but also how I developed them and why. For vessels of illusion, I will demonstrate turning the outer form, carving the vessel, turning the insert, and using wood bending to get the insert into the outer vessel. I will provide good, solid technical information on turning, carving, and wood bending, as well as how to come up with your own ideas and where to look for inspiration.

- Vessels and Surfaces
- Sunburst Platter
- Vessels of Illusion
- Decorative Utility Bowls

Trent Bosch,
Surface Series, 2009,
Pine, 6" × 6"
(152mm × 152mm)

Accommodations

Host hotel

Marriott Hartford Downtown, 200 Columbus Blvd., 860-249-8000 or 800-228-9290. Mention group code American Association of Woodturners. Rate is $139 for a single or double.

Alternate hotels

Hilton Hartford, 860-728-5151. Mention group code American Association of Woodturners. Rate is $119 for a single or double.

Crowne Plaza Downtown Hartford, 860-549-2400. Mention group code GHCVB, American Association of Woodturners. Rate is $118 for a single or double.

continued

24th Annual AAW Symposium in Hartford

Jimmy Clewes, England (and Nevada)

My demonstrations concentrate on design, shape, form, and aesthetics. I will share various tooling techniques and discuss fundamental errors that beginners make because of lack of experience and knowledge. Let's have fun turning!

- Turning a Platter
- Bowl Turning
- Box Turning

Jimmy Clewes, Ziricote with brass inlay

Christian Delhon, France

All of my work is based upon the sphere. I will demonstrate simple techniques on how to make balls and spheres. I have traveled all around the world to show my techniques and share my design philosophy with fellow woodturners. It still surprises me how many people are interested in this craft.

- Chinese Balls
- Spike Star in a Sphere
- Spherical Box

Christian Delhon, *Trembleur,* 2009, Ivory, 26" × 2" (65cm × 50mm)

Sharon Doughtie, Hawaii

I will show how to alter vessels and boxes with burning, carving, and color. You will learn how to make and use burning tips, which commercial pens I use and why, ways to carve and texture, and about simple tools to help with design layout. I will also discuss compatibility between finish and color.

- Embellished Boxes
- Burned and Carved Vessels

Sharon Doughtie, *Unconscious Influences,* 2009, Norfolk island pine, 3½" × 10½" (89mm × 267mm)

Cindy Drozda, Colorado

Come and share with me the magic of woodturning! There is more to learn than how to turn and what to make. I explain the "why" of my turned artwork while sharing my ideas and tips. You will see the tools, techniques, design, and workflow that give my work its fine detail and elegant form. I hope to inspire your turning to a new level of excellence!

- Finial Box
- Fabulous Finials
- Image Editing for Artists

Cindy Drozda, *Renaissance,* 2009, African blackwood, two 4-point diamonds, chrome diopside, 14k gold, 27" × 6½" (70cm × 165mm)

Photo: Tim Benko

Peter Exton, New York

Add more variety to your turning! Turning diamonds, developed from the reversal technique, opens the door to a wide range of form, from little ornaments to complex assemblies. I will guide you through the essential first step, cutting the diamond-shaped pieces, and introduce you to the basic method. You can then explore and discover!

- Turning Diamonds 1: Cutting the Diamonds
- Turning Diamonds 2: The Basic Method
- Turning Diamonds 3: Designing with Diamonds

Peter Exton, *Rubies and Pearls,* 1999, Boxwood, dye, 19" × 3" (48cm × 76mm)

Michael Fortune, Canada

Imagine making a solid piece of wood so pliable that it can be bent, twisted, and divided into wonderful shapes that can then be mounted on your lathe. Or perhaps turn a cylindrical shape and form it afterward. My "Bent Way Outta Shape" interactive presentations will explore the marriage of steam bending and woodturning.

Forming wood over a hot pipe is one of the most overlooked methods for creating vessel forms or small implements. This simple technique begs to be explored by woodturners using parts of turned vessels, so bring with you a turned object for bending!

- Steam Bending for Turners
- Hot Pipe Bending

June 18-20, 2010

Stephen Gleasner, Maine

What happens when you combine a tangential mind, caffeine, plywood, and a wood lathe? Come to Hartford and you will learn how to make a gift worth giving, make stack-laminated bowls for efficiency of material, and hear an overview of how I make my tall plywood vessels.

- A Caffeinated "Tangenta" Mug
- Fast-stack Laminated Bowls
- Tall Plywood Vessels

Stephen Gleasner, Vessel

John Jordan, Tennessee

I will demonstrate the uncomplicated way to make a hollow vessel using green wood and simple tools. The result will be a refined and elegant piece. Wood selection, efficient gouge use, and shear scraping will be covered.

Through pictures and stories, I will discuss how my work has developed. Learn about influences and how to make your work your own. If you want to go beyond the "how" and look into the "why," the Inspiration and Ideas session is for you.

- Hollow Turning
- Carved/Textured Surfaces
- Inspirations and Ideas—Personal Work
- The Aesthetics and Properties of Wood (or "My Wood Don't Crack)

John Jordan, Rosewood Vessel, 2009, Florida rosewood, 10" × 11" (254mm × 279mm)

Michael Kehs, Pennsylvania

Join me in exploring the unique and somewhat magical technique of inside-out turning. I will show you how to take basic spindle turnings and transform them into little windows of curiosity, to reveal trees, hearts, and flowers. Transform simple drawings into three-dimensional forms.

- Inside-Out Turning
- Pierced and Carved Hollow Vessels

Michael Kehs, *Entrants to the Underground,* 2009, Norway maple, 5½" × 12½" (140mm × 318mm)

Glenn Lucas, Ireland

Twenty years of making work has fine-tuned every aspect of my approach to turning. You will leave my session with practical tips gained from running a successful streamlined production business where I make 2,500 bowls a year.

- A Production Turner's Approach to Making a Salad Bowl
- Plates and Platters
- Thin-Wall Bowls

Glenn Lucas, *Irish Yew Bowls,* 2009, Irish yew; largest is 3" × 3" (76mm × 76mm)

Graeme Priddle, New Zealand

I will cover a myriad of surface treatments and embellishment possibilities, as well as design and influences, wood selection, carving and texturing techniques, pyrography, coloring, finishing techniques, and safety. Join me to learn about my unique approach to multicenter bowl and hollow turning.

- Surface! Surface!
- Sculptural Multicenter Turning
- Vessels of the South Pacific

Graeme Priddle, *Paua,* 2009, Kauri, acrylic paint, 3" × 11½" × 10" (76mm × 292mm × 254mm)

Joey Richardson, England

My demonstrations will include designs and techniques for piercing turned forms, as well as many different types of texturing. I will show how I use an ultra-high-speed dental drill and a power-carving tool. Learn about using an airbrush and coloring techniques, including masking, image transfer, interference, and transparent and opaque paints. I will go through the process of coming up with design ideas for making a floral form.

- Piercing and Airbrushing
- Texturing Techniques, Design, and Floral Forms

Joey Richardson, *Purple Mist,* 2009, Sycamore, acrylic paint, 9½" × 5½" × 5¼" (241mm × 140mm × 133mm)

continued

24th Annual AAW Symposium in Hartford

Mark St Leger, Virginia

In my rotations, I will share tips and jigs I use to create unique lidded boxes. I will transform a small hollow vessel into a seedpod, provide information about turning on the bias, discuss how to make a simple eccentric chuck, and impart details about creative chucking, carving, and wood burning, as well as much more. Join me for a tip-filled, lighthearted, and relaxing demonstration.

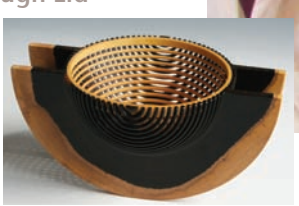
- *Rock-a-Bye Box* (Turning on the bias)
- Rectangular Box with a Natural Burl Edge
- Hibiscus Seedpod

Mark St Leger, *Rock-A-Bye Box*, 2009, Eucalyptus burl, blackwood, boxwood, 2¼" × 3½" (57mm × 89mm)

Hans Weissflog, Germany

I will demonstrate that pieces that seem to be difficult are, in reality, easy to make. Learn little tricks such as how to cut rings loose, do pierced work, and how to make a chuck to hold the drunken box using a very small ring.

- *Saturn Box*
- *Drunken Box*
- Box with Pierced-Through Lid



Hans Weissflog, *Rocking Bowl III*, 2008, African blackwood, boxwood, 1⁹⁄₁₆" × 3⅛" × 2" (38mm × 80mm × 50mm)

Glenn Lucas with a very big order of bowls! Roughed out salad bowls, 2008, Irish ash, beech, 13" and 15" diameter (33cm and 38cm).
Photo: Cornelia McCarthy-Lucas

Shop Teachers

Lyndal Anthony

Woodturning was a huge hit at last November's annual conference of the Technology Education Association (TEA), held in Peoria, Illinois. The first rotation, slated to begin at 9:00 AM, started early when several eager shop teachers showed up ahead of time. East Dubuque High School teacher Lyndal Anthony opened the presentation and Jerry Sievers and Bill Paulo from the Central Illinois Woodturners took over by demonstrating turning techniques for the Illinois shop teachers. The fifty-minute session was so packed that organizers moved the next presentation to a different room in order to continue with the woodturning demonstrations, which lasted for two-and-a half hours!

By presenting woodturning at this conference, our group intended to illustrate visually that woodturning is an exciting activity for today's students; instant results and the ability to be creative are appealing to students!

Teachers gained inspiration and offers of help from the demonstrators and went home with a CD containing hyperlinks to the AAW website, links to all the woodturning clubs in Illinois, and other helpful websites. Many of the teachers intend to brush up on their own woodturning skills in order to help teach their students safe and proper turning techniques.

A door has been opened! If you can be of help in your own state with the inclusion of woodturning in technology education programs, please do so. ■

Jerry Sievers told the assembled crowd that a faceshield is required, but in order for people to be able to hear him, he had to make do with just his safety glasses.

Contests

Best Chapter Newsletter/Best Chapter Website

Each year, the AAW holds two contests: Best Chapter Newsletter and Best Chapter Website. The closing date for applications is April 1, 2010. Winners will be announced in mid-May on the AAW's website and at the symposium banquet in Hartford; there will be a follow-up announcement in the journal.

Rules and guidelines may be found on the AAW website at http://woodturner.org/community/chapters/chapter_contests_2010.htm.

How to apply

Best Chapter Newsletter

Email a *link only* to your four best newsletters from the past year, to inquiries@woodturner.org. Do *not* send any of the four newsletters themselves; the file sizes will overwhelm the judges' inboxes!

The judges for the newsletter contest will be two AAW Board members, as well as winning editors from past newsletter contests. The 2009 newsletter winners were Montgomery County Woodturners (montgomerycountywoodturners.org), Chicago Woodturners (chicagowoodturners.com), and Greater Vancouver Woodturners (gvwg.ca). Read their newsletters to get a general idea of what it takes to put together an excellent newsletter.

Best Chapter Website

Email a link to your chapter's website, as well as the name and contact information for your webmaster, to webmaster@woodturner.org.

Ed Davidson, the AAW's webmaster, will coordinate the website contest. Winners of the 2009 contest were Montgomery County Woodturners, West Bay Area Woodturners (westbaywoodturner.com), and Woodturners of the Virginias (woodturnersofthevirginias.org).

For both contests, the judges will be looking for:

- Visually appealing layout
- Current content
- Content that pertains to woodturning
- Content that contributes to the AAW's mission statement
- Useful woodturning and news-related information
- Sound writing skills

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

Dale Larson

New Law Will Monitor Safety of Handmade Items

Stan Wellborn

It's a rare day when a woodturner appears on the front page of the *New York Times* business section, but there he was on October 31, a Maine craftsman standing at his lathe, under the headline, "Burden of Safety Law Imperils Small Toymakers."

The story was prompted by the mandates imposed by a federal law—the Consumer Product Safety Improvement Act—passed in 2008 and intended to ensure that lead paint and other potentially harmful substances are not used in the manufacture of a wide variety of consumer products. Targets of the law include imports from Asia and Latin America, most by large toy and other consumer merchandisers.

The unintended consequence may be that small craft businesses and hobbyists, as makers of handmade items, will need to prove—through elaborate and expensive tests at authorized laboratories—that their products are nontoxic and safe for children under the age of 12. The new regulations are scheduled to be implemented in February 2010.

For woodturners, that could cover a host of craft and gift items: pens, tops, baby rattles, buttons, ornaments, jewelry, beads, key rings, bottle stoppers, tableware—from scoops to honey dippers to salad bowls and serving trays—and an array of objects that the law mentions only as "small parts."

The good news is that turnings made entirely of untreated wood (without paint, surface coatings, or hardware) may be sold or given away without needing certification that they have passed testing for lead or other dangerous substances. However, the law states that any product that has an applied finish or uses certain glues or additives is subject to testing. (Imported or exotic woods are not specified, although many individuals are allergic to some species.)

Who is covered? According to the Consumer Product Safety Commission (CPSC), the law includes "all manufacturers and importers—large and small, domestic and foreign. All businesses, including handmade toy and apparel makers, crafters, those making charitable donations, and other small business must take appropriate steps to be sure that their products conform to all aspects of the law and safety standards, including the new lead content and phthalates limits and mandatory toy standards."

In response, a number of small shops and individual craftspersons are organizing to change the law, which clearly was intended to protect consumers from manufacturing practices that produce imported and mass-produced items for resale by large retailers such as Target and Walmart. Some of these imports have been tainted with lead paint and other harmful substances.

William John Woods, the toymaker from Maine who was featured in the *Times* article, estimates it would cost him around $30,000 to perform tests on the eighty different items he makes, which include wooden cars, boats, helicopters, and rattles. His toys are made of maple, walnut, and cherry and finished with walnut oil and beeswax from a local apiary.

Woods and fellow members of the Handmade Toy Alliance are pressing Congress and the CPSC to exempt small craft shops and handicrafters from the law's provisions.

For further information, consult the following resources:

- The U.S. Consumer Product Safety Commission (cpsc.gov) has published a twenty-four-page booklet about the new law entitled Handbook for Resale Stores and Product Resellers to help sellers understand the new law and existing regulations. The document can be downloaded from the Commission website at cpsc.gov/cpscpub/pubs//thrift/thrguid.pdf.
- The Handmade Toy Alliance website, handmadetoyalliance.org, describes efforts the organization is making to change the new law. ■

Resources for Beginning Woodturners

Significant and helpful resources for beginning woodturners are available through the AAW at reasonable prices. Consider acquiring project books, DVDs, or a few back issues of *American Woodturner* to help you learn more about woodturning and the woodturning community. Simply visit the AAW's website, woodturner.org, and click on Shopping, then AAW Products; or send an email to inquiries@woodturner.org; or call 615-484-9094. Our staff is eager to help you succeed, enjoy, and be safe with all of your woodturning endeavors.

AAW Board of Directors

Call for Nominees

The AAW offers much to its members and we are looking for a few good people who can contribute something in return. Do you have the time, energy, and ideas to be a part of the AAW operations as well as a willingness to help make it a better organization? Be a part of moving the AAW forward—run for a position on the AAW Board!

The AAW elects a volunteer nine-member board to represent the membership and move the organization forward. If you have been a member in good standing for the past three years, you are eligible. The nominating committee will select the six best candidates. From these six, members will elect three candidates to serve a three-year term, beginning in January 2011.

Information on duties is available in the AAW *Resource Directory,* or call any current board member for details.

If you are interested in serving on the board, please email the following to the executive director (mary@woodturner.org), no later than May 15:

1. A statement of intent, including qualifications and reasons for applying.
2. Letters of recommendation from two individuals who can attest to your organizational and leadership abilities.
3. A high-resolution photograph of yourself.

The nominating committee will review application materials and schedule phone interviews in late May and early June. Candidates will be presented in the journal, ballots will be sent out in the fall, and election results will be announced in late 2010.

Logo Contest

Help us with the AAW's 25th anniversary celebration by entering a design for a special logo! This logo will be used for our anniversary events and for the 2011 symposium in St. Paul. A special committee will select the most appealing, appropriate, and eye-catching design. All AAW members are encouraged to submit ideas; anything from a sketch to a well-crafted design will be considered. The AAW reserves the right to modify designs when preparing the final artwork.

Entries must be submitted or mailed by February 28, 2010. Submit electronically to inquiries@woodturner.org or mail to AAW, 222 Landmark Center, 75 5th St W, St. Paul, MN 55102-7704.

Studio (and Shop) Protector

A pop-up style information toolkit, useful for preparing ahead of time for when disasters, such as fires or hurricanes, strike, is available through the Craft Emergency Relief Fund (CERF+). This indispensable guide (designed by "paper engineer," Carol Barton) has information wheels and pockets, and is ideal for craft artists who want to ensure the safety of their art, assets, and archives in the event of an emergency.

It is designed to be wall-mounted like a calendar. It features two spinning wheel charts that explain how to plan ahead for emergencies and reduce the impact of disaster. Five pocket protectors or pullout guides provide detailed information about what to do in the minutes before a disaster strikes, how to clean up after a calamitous event, and how to salvage fire- and water-damaged items.

The all-in-one guide to disaster preparedness is available through CERF+, a national nonprofit organization, which provides direct grants and loans to craft artists who need help in the event of an emergency. For more information, visit studioprotector.org. Proceeds from the sale of the studio protector go toward CERF+ emergency programs.

Call for Entries

Lubeznik Center for the Arts in Michigan City, Indiana, is sponsoring the exhibit, "Through the Woods, Around the Block: A Juried Exhibit of Turned Objects," February 19–April 10, 2011. Cash awards for Best of Show and Notable Awards will be given, totaling $1,500. Entry deadline is September 30, 2010.

The exhibit will highlight nonendangered, indigenous wood species, within specific size guidelines. Submissions must consist of two elements: (1) a 6" × 6" × 3" (150mm × 150mm × 75mm) block of wood, and (2) a turned object created from a similar 6" × 6" × 3" (150mm × 150mm × 75mm) block of the same wood. The second element can be turned from the block of wood or that block can first be disassembled, refashioned, and then turned, as long as the wood's features are not obscured by paint, dye, or bleach. The two elements will be displayed together during the exhibit.

Jurors will be Cindy Drozda and David Nittmann. More information and a prospectus can be found at lubeznikcenter.org. ■

Were You There?

Photo: John Kelsey

What images do you have that are as good as or better than this one? Do you recognize any of the people in the photograph (other than Albert LeCoff)? *Were you there?*

Did you participate in early American Association of Woodturner events? Do you have a secret stash of photos from any of those events? Perhaps you attended the 1985 conference at Arrowmont School of Arts and Crafts in Gatlinburg, Tennessee, where the plan to form the AAW was hatched? The first AAW symposium in 1986? Early AAW Board meetings? Early AAW local chapter meetings and chapter-sponsored events? The editor of the AAW's 25th anniversary book project wants to hear from you.

We can work with slides, prints, and digital files. When you send your slides or prints, please include a label with your contact information attached to the back of photos or to slide mounts. We will return your original materials to you. If you email digital files, include the information about the images in the email message.

Please make sure you tell us where the photo was taken, who is pictured, and other relevant facts you may know.

The photograph shown here is from the first (or perhaps the second?) woodturning symposium at the George School in 1976, organized by Albert LeCoff (now the director of the Wood Turning Center). Albert is in the blue plaid shirt, watching his mentor, Manny Erez, demonstrate spindle turning to a crowd of eager amateurs. The AAW traces its roots to the 1985 conference at Arrowmont; however, the template for the AAW and its symposiums was actually created at the George School, the seed from which the organization germinated and grew.

Send your images and information to:
John Kelsey, Editor
2148 Landis Valley Road
Lancaster, PA 17601
Email editorkelsey@gmail.com ■

A Young Man's Dream

Charles Brooks

Maple bowl, 2009.

When Nathanael and his dad met AAW member Pleas McKee and saw his woodturnings, Nathanael's dream that someday he, too, would produce beautiful turned objects was put into motion. Pleas invited the young man and his dad to his AAW chapter meeting, and told him about the Educational Opportunity Grants (EOG) that were available. At age 12, Nathanael applied for the EOG, and was awarded $600. He bought a mini lathe and a few tools.

Pleas suggested that Nathanael's dad contact Paul Coppinger (whose shop was only a few miles from their home and who belonged to a closer AAW chapter, East Texas Woodturners) to explore the possibility of mentoring and to find out more about this local club. Paul started mentoring Nathanael and both he and his dad joined the East Texas Woodturners. Nathanael has been an active, participating member for almost three years.

Since Nathanael is homeschooled, he and Paul meet weekly at Paul's shop. Paul is impressed with Nathanael's ability to stay focused while learning techniques and practicing on the lathe. He says, "Nathanael's tool control and the quality, as well as the sophistication of his work, have increased tremendously from simple spindle turnings on his mini lathe to bowls and large complex hollow vessels using my large lathe." It has been exciting for Paul to watch Nathanael bring in an idea, explain the details to accomplish it, and then execute it with the skill of turners with far more experience. Paul says, "The student may soon surpass the teacher."

Nathanael Landry turning two toy cars per John Horn's pattern.

At his first club meeting, Nathanael was fascinated by an array of pens displayed by Danny King. Eager to learn, he walked right up to Danny and asked, "Mr. King, will you teach me to turn pens like these?" Danny was more than happy to do so. The two spent a day cutting blanks, boring, and gluing and at the end of the day, Nathanael had turned five pens. He showed them at the next club meeting with the poise of a veteran professional. Danny stated that it was an enjoyable experience working with Nathanael, that he absorbed and understood all the techniques that were explained to him, and that it has been a pleasure to see the progress he has made with his turnings. Danny added that Nathanael is the most courteous and respectful young man he has ever had the opportunity to work with.

Our club paid for Nathanael to attend the South West Area Turners (SWAT) seminar in 2008. He accompanied Paul and Mike DeLong. Nathanael commented on the quality of the Instant Gallery and learned many new techniques from the demonstrations. Mike remembers, "During a break between demonstrations, Nathanael asked me to accompany him to a vendor's booth so he could show me the Wagner texturing tool. The vendor demonstrated several ways to use the tool and then asked Nathanael if he would like to give it a try. Within a few minutes, Nathanael had created a couple of beautiful designs that the vendor had not realized the tool could accomplish. This was just one of many times I was impressed with Nathanael's eagerness to learn and lack of fear at trying new ideas."

Nathanael is extraordinary for his age. He continues to learn and he regularly brings his turnings to our monthly meetings. Some of our members jokingly give him a hard time about having to follow him, but in reality they are extending a compliment. This young man represents the future of woodturning and could possibly make a career using his skills. It is a pleasure and honor to watch him develop as a woodturner. ■

Charles Brooks is the President of the East Texas Woodturners. You can learn more about him at his website at brookswoodstudio.net. Paul Coppinger, Mike DeLong, and Danny King contributed to this article.

Correction

The correct contact information for the Omega Stubby lathe discussed in the December 2009 article, "Upgrade Your Lathe," is stubbylatheusa.com or bill@stubbylatheusa.com. Stubby Lathe USA, Inc. is the exclusive U.S. and Canadian importer of the Omega Stubby machine, manufactured in Australia.

Tips

German-style ring turning

The traditional technique of ring turning involves turning a blank piece of wood with a certain profile on both sides so that when cut in pie sections through the center, a shape is revealed on the cut edge. In order to obtain correct shape and detail, negative templates must be made and used for this purpose. Any errors in following the template (or cutting too deep) will affect the overall image if corrections are attempted to the shape. Using templates requires marking the blank at key points before and during the shaping process.

An alternate method is to use a positive template embedded in the ring itself. This entails cutting out the desired shape out of ⅜" (3mm)-thick contrasting wood and inserting (gluing) this into the prepared blank, ensuring that the pattern lines up with the center point of the blank. Then, all you have to do is turn the blank away up to the inserted template, with no marking required, only stopping frequently to check your progress. Also, by using some version of jumbo jaws, the ring can be finish-turned right on the lathe.

– Bernie Hrytzak, Chatham, Ontario, Canada

Lathe tool caddy

Ever set down your tool on the lathe bed only to have it roll off? I did, that is, until I put together a tool caddy to keep tools temporarily close at hand. The caddy fits over the bed and can be moved so as not to interfere with the work or tailstock. It's designed using ¾" (20mm) plywood but any wood can be used.

Originally, my caddy would hold four tools, but I soon realized that I could add other features. Several holes in the middle hold drive centers. I added a magnet from a computer hard drive to hold small metal parts like Allen wrenches. A hole drilled in the edge holds a pencil. All those little parts that seem to end up in the shavings now have a place while I work. The size and shape can be adjusted to fit almost any lathe and the features are limited only by the turner's imagination.

– Ray Kallman, Virginia Beach, VA

Got a Great Idea?

Share your turning ideas! If we publish your tip, we'll pay you $35. Send your tips along with relevant photos or illustrations and your name and mailing address to:

Betty Scarpino
American Woodturner
5246 Evanston Ave.
Indianapolis, IN 46220
editorscarpino@gmail.com

Easy tenon measuring

After truing the ends of your turning blank between centers, you can mark to cut a tenon for chucks with #2 jaws on JET 10" × 14" (25cm × 36cm) and 12" × 20" (30cm × 51cm) mini lathes by placing a pencil atop the tailstock, then touching the spinning wood.

Photo: Jim Ciesla

A pencil mark from top center of tailstock will produce a mark slightly larger than 1⅞" (48mm), which is the largest tenon that will fit into the Tekna-Tool Nova midi chuck. Marking from the top flat corner of tailstock will produce a line just over 2 1/16" (52mm) for a larger tenon to go into most other chucks.

If you cut the tenon a bit smaller, it will still fit into your chuck. This pencil trick works on my 3520 Powermatic also. Check to see if this will work on your lathe.

– Lee Sky, Oakland Park, FL

Clamping segmented rings

This is a tip devised by my friend Lino, who has used this device for many years. It solves the problem of putting bar clamps close together for glue-ups.

Step 1: Remove the handles from bar clamps by grinding off the peened area with an angle grinder.

Step 2: Fabricate an adapter for a ratchet wrench. Lino's adapter was made by drilling two holes in a piece of steel, filing out the material between the holes, and then welding this on to a socket. It is a bit of work, but you only have to do it once.

– Mark Knize,
Tracy, CA

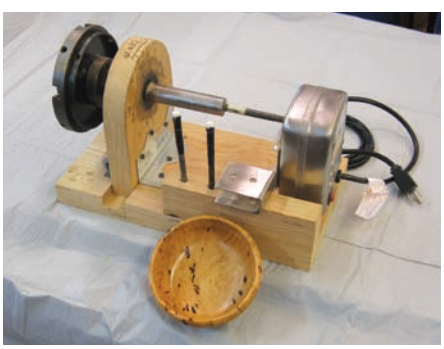
High-build-up, finish-drying tool

This is a drying device that I made, copying one that Jan Panek had made. The device allows thick finishes to dry evenly. With the piece attached to a chuck, apply one thick coat of finish and turn the machine on. It rotates at 10rpm and will keep the finish from running. The pieces I've finished on this device have a thick, deep finish and look as if I have applied twenty-five coats.

Parts needed:

- slow-speed motor (I use a barbeque rotisserie motor)
- chuck
- one large bolt with a 1" (25mm) × 8tpi and nut to fit your chuck
- two 1" (25mm) bearings
- two brackets
- a ⅜" (10mm) bolt, with the end squared to fit the motor

Drill into the end of the 1" (25mm) bolt so that the ⅜" (10mm) bolt sets ¾" (19mm) into it. Drill and tap the inside of the 1" (25mm) bolt to hold the ⅜" (10mm) bolt with a setscrew. Loosen the setscrew when applying finish. The 1" (25mm) nut, which is also drilled and tapped, serves as a stop for the chuck. *– Lou DeMola, Clifton Park, NY*



Over-the-bed table

I have found that using an over-the-bed hospital tray table makes a convenient platform for tools and accessories while woodturning. It's easy to move out of the way when the tools are not being used. The height of these tables is adjustable.

– Vic Goetz
Punta Gorda, FL ■

Calendar of Events

Vol 25, no 2 2010 Deadline: January 31

Send information to editorscarpino@gmail.com

Australia

March 23–25, 2012, "TurnFest Australia," 10th anniversary conference to be held at the Sea World Resort, Gold Coast, Queensland. Over fifty past presenters, both international and Australian, will be featured. Contact ddrescher@bigpond.net.au for information.

British Columbia, Canada

September 10–12, "West Coast Roundup," Sheraton Guilford, Surrey, sponsored by the Greater Vancouver Woodturners Guild. Visit gvwg.ca for more information.

Georgia

April 23–25, Southern States X Woodturning Symposium, Georgia Mountains Center, Gainesville. Featured demonstrators are Dixie Biggs, George Hatfield, Mike Mahoney, and Michael Mocho. For information contact Marsha Barnes at 828-837-6532 or pineshingle@brmemc.net or visit southernstatessymposium.org.

Hawaii

March 5–26, 12th Annual Big Island Woodturners Exhibit, Wailoa Center, Hilo. Opening reception, March 5. Hands-on woodturning demonstrations on Saturdays. For more information, call Dennis Hakes at 808-961-5631, the Wailoa Center at 808-933-0416, or visit bigislandwoodturners.org.

Idaho

February 27–28, "Artistry in Wood," Holiday Inn Convention Center, Boise. Woodworkers from all levels are invited to submit work. Registration is February 26. For information contact treasurevalleyscrollers.org, swiwt.org, or Douglas Rose, roseboise@yahoo.com.

Illinois

August 20–22, "Turn-On! Chicago 2010," symposium, Mundelein, just north of Chicago. Demonstrators include Jimmy Clewes, Don Derry, Cindy Drozda, David Nittmann, Binh Pho, Dick Sing, and Malcolm Tibbetts. Events include hands-on pen turning, trade show, and banquet. For more information, visit chicagowoodturners.com.

Minnesota

January 12–February 14, "Among Friends: Selections from the Frank Sudol Collection" and "Regional Spotlight: Works from Ohio and Texas Turners," AAW Gallery, 222 Landmark Center, Saint Paul. For more information, visit gallery@woodturner.org.

New York

March 27–28, "Totally Turning," Hilton Hotel, Saratoga Springs, in conjunction with Showcase 2010, the largest woodworking show of its kind. Presenters include David Ellsworth, Graeme Priddle, Marilyn Campbell, Jean-François Escoulen, Giles Gilson, Kurt Hertzog, Steve Sherman, and John Franklin. For more information, visit totallyturning.com.

North Carolina

January 2–May 15, "With Lathe and Chisel: NC Wood Turners," Gregg Museum, North Carolina State University, Raleigh. Exhibit will feature work selected by Dale Nish from members of the North Carolina AAW chapter. For more information, go to ncsu.edu/gregg.

January 30–April 4, "Women in Wood," Grovewood Gallery, Asheville. For more information, visit grovewood.com or call 828-253-2489.

Ohio

January 31–March 28, "Be Our Guest: A Progressive Invitational," Ohio Craft Museum, Columbus. In conjunction with the AAW's WOOD program, this exhibit focuses on wood-turned forms created by established and emerging artists. For more information, visit ohiocraft.org.

Texas

August 27–29, 19th annual Southwest Association of Turners (SWAT) symposium, Waco, Texas. Demonstrators include Eli Avisera, Clay Foster, Mike Jackofsky, Alan Leland, Jennifer Shirley, Molly Winton, and fourteen regional turners. Symposium includes instant gallery, vendor area, and hands-on woodturning. For more information, visit SWATurners.org.

Utah

May 6–8, Utah Woodturning Symposium, McKay Center, Utah Valley University, Orem. Featuring over twenty premier woodturners, demonstrations, instant gallery, manufacturers' showcase, pen turners' rendezvous, educators' lecture series, swap meet, and more. Visit utahwoodturning.com for information.

Washington

July 24–27, 3rd Annual Creativity in Woodturning, Komachin Middle School, Lacey, WA. Alan Lacer will be the featured woodturner for Saturday's symposium. Workshops are available July 25, 26, and 27. For more information, visit woodturnersofolympia.org or contact Al Price at aprice44@aol.com. ■

Small Lidded Bowl

Bowl with lid,
2009, Pear, walnut,
3¼" × 3"
(80mm × 75mm)

Bruce Thompson

A fun project to make is a small bowl with a handled lid. In this example, the lid continues the curve of the bowl and ties the piece together. The handle is in harmony with the gentle curve of the lid. There are three stages to this project: the lid, the bowl, and the handle. Turn the lid first so that you can shape the bowl and lid together.

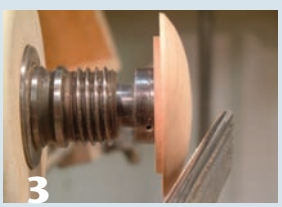
I used pear wood for the bowl and lid, and walnut for the base and handle. Pear is a beautiful wood for turning; it is clear and tight grained, and finishes well. It is important to use dry wood when turning lidded bowls or the finished piece will warp and the lid will no longer fit properly.

Making the lid

Cut a piece of wood for the lid that is 3" (75mm) diameter by ¾" (20mm) thick. To prepare it for mounting on an arbor screw chuck, locate the center and drill a ⅜" (5mm) hole (or whatever size is suitable for your chuck) all the way through. Mount the wood on the arbor screw chuck so that the inside surface of the lid is available for cutting.

1 Turn the inside of the lid, forming a tenon to hold the lid on the bowl.

2 Turn a domed-shaped spacer mounted on an arbor screw chuck to use in mounting and turning the outside of the lid.



3 Mount the lid on the spacer and arbor screw and turn the outside surface.

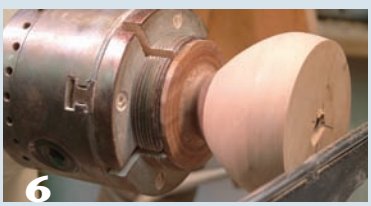
Smooth the face of the blank and then use dividers to mark a circle 2¼" (55mm) in diameter for the tenon of the lid. Use a parting tool to cut on the outside of the line, into the lid about ⅛" (3mm) deep. There should be about ⅜" (10mm) from the tenon edge to the outside diameter of the lid. Later, as you shape the lid and bowl together, this distance will be reduced to about 3/16" (5mm). The tenon should have a finished profile about ⅛" (3mm) high by ⅛" (3mm) thick.

Start cutting the inside dome of the lid. Cut in small arcs, increasing the diameter as the depth increases. Take care when you get to the depth where the screw begins to be visible *(Photo 1)*. Take light cuts so that your gouge doesn't nick the screw. The last cut should start at a diameter of 2" (50mm) and should be about ½" (13mm) deep. Make the inside profile a smooth arc. When finished turning the inside of the lid, sand that area.

Make a spacer to fit on the arbor screw chuck out of a scrap of wood. Turn a dome-shaped profile to match ▸

With the bowl blank mounted on a screw chuck, turn the bowl and base sections round, cut a tenon for remounting the blank, and mark the center of the tenon.

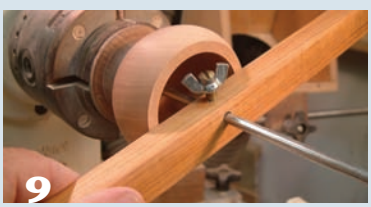
Begin to shape the bowl and base, leaving the tenon intact for remounting.



Reverse the bowl into a four-jaw chuck using the tenon formed on the base.

The lid should be held tightly enough on the bowl so that it can be shaped and blended with the bowl.

Blend the lid and bowl shapes together.



Hollow the interior of the bowl and check the depth.

the inside of the lid, making the thickness of the spacer equal to the length of the arbor screw minus the desired ⅛" (3mm) thickness of the lid *(Photo 2)*. The protruding end of the screw will thus correspond to the correct thickness for the finished lid. Remount the lid on the arbor screw chuck over the spacer and turn the outside surface of the lid *(Photo 3)*. Stop when the tip of the screw is exposed. Sand.

Making the bowl

Cut a piece of wood 3¼" (85mm) diameter by 2" (50mm) thick for the bowl and a contrasting piece of wood 2½" (65mm) diameter by ¾" (20mm) thick for the base. Glue them together, taking care to align the grain running in the same direction.

In the wood that will become the inside of the bowl, drill a 17/64" (7mm) hole in the center about 1" (25mm) deep. (Or drill whatever size hole is suitable for your 3" [75mm] screw chuck.)

Mount the bowl blank on the screw chuck and turn the two sections to cylinders. Make the bowl's diameter close to 3⅛" (80mm) and that of the base about 2½" (65mm). Use dividers to mark a tenon for holding in a four-jaw chuck (approximately 2" [50mm] in diameter) and cut in with a parting tool about ¼" (6mm) deep. Leave a shoulder for the tenon for squaring against the top of the jaws of the chuck—this shoulder is the most important part of making a tenon fit securely into a chuck. Before going to the next step, mark a dimple in the center of the bottom of the tenon for a later operation to finish the base *(Photo 4)*.

Try to envisage the final shape of the bowl. In this case, think of the most pleasing apple shape you have ever seen. Locate the largest diameter of the bowl about ⅔ up from the bottom of the finished piece. Reduce the diameter of the base above the shoulder of the tenon to about 1½" (40mm). Start shaping the bowl, cutting from the small diameter to the largest diameter, aiming for a smooth curve *(Photo 5)*.

Remove the bowl blank from the screw chuck and mount the tenon in a four-jaw chuck, keeping the shoulder tight against the top surface of the jaws *(Photo 6)*.

Shaping the bowl to fit the lid

Smooth the flat top of the bowl and use dividers to mark a circle 2¼" (55mm) in diameter where the tenon of the lid will fit. Cut on the inside edge of the circle with a parting tool. It is important to get an interference fit (press fit). The lid should need some force to be pushed into place but not too much; otherwise it might split *(Photo 7)*. The lid should not fly off when the lathe is turned on. A helpful hint is to taper the opening as you cut it; then, as the lid starts to fit, straighten the sides of the walls. If you happen to get the opening too large, simply make the bowl a little shallower and start again.

With the lid in place, start shaping the outside of the bowl, blending the curve of the lid with the sides of the bowl *(Photo 8)*. To make the cleanest cut possible, cut from the smallest diameter toward the largest. Sand the outside of the lid and bowl.

Remove the tight-fitting lid by inserting the screw of the arbor screw chuck into the hole in the lid. Very carefully pry the arbor and sharply rap with your knuckle on the lid. It should start to separate from the bowl. Rotate and repeat on the opposite side until the lid has separated. Once the lid is off, enlarge the opening very slightly to get a loose fit for the lid. Make the fit looser than you might think you need to, because the wood will seasonally warp and the finish will shrink the fit.

Hollow the interior of the bowl *(Photo 9)* and sand it. Apply sanding sealer to the inside surfaces of the lid and bowl. Lightly sand the inside again and, with the lathe off, wipe polyurethane on these surfaces. Use a clean paper towel to remove any excess polyurethane. (You will apply finish to the exterior of the bowl, lid, and handle when all three parts are finished.)

Turning the bottom of the bowl

Remove the bowl and the chuck from the lathe. Mount a scrap piece of wood 3" (75mm) in diameter between centers and turn a 2¼" (55mm) tenon on one face *(Photo 10)*. You will use this tenon to mount the scrap piece of wood into your four-jaw chuck. This scrap piece of wood will then be used to hold your bowl for turning the bottom.

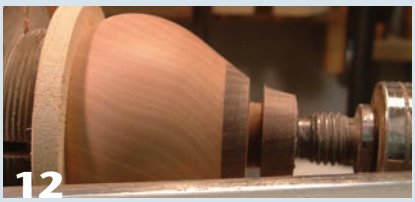
Remove the wood and the drive center from the lathe, remount your four-jaw chuck, and mount the scrap wood in the chuck. Form a tenon on the outer face of the scrap block and size it to fit into the opening of the bowl *(Photo 11)*. This will allow you to reverse and center the bowl on the lathe.

Mount the bowl on the scrap-wood tenon and bring the tailstock up to fit into the dimple in the bottom of the tenon on the bowl's base. Establish the bottom of the bowl and blend the base into the curve of the side of the bowl *(Photo 12)*.

Reduce the diameter of the excess wood until only a small nub is attached to the bowl at the tailstock *(Photo 13)*. Sand. Remove the bowl from the lathe and cut the nub away with a knife. Sand that area if needed.

Form a tenon on a piece of scrap wood held between centers of the lathe and mount this scrap wood in your four-jaw chuck.

Turn a second tenon that fits the bowl's opening. This tenon will center the bowl on the lathe and help hold it as you turn the bottom.



Shape the base of the bowl and establish its bottom.

Remove the excess wood from the base, leaving a small nub.

Making the handle

Many styles of handles might be appropriate for this project, but a carved one adds a special character to the finished piece.

Cut a blank from 5/16" (8mm) stock such that neither the arc nor the stem of the handle aligns with the grain *(Photo 14)*.

Drill down into the stem of the handle with a ¼" (6mm) tenon-forming bit *(Photo 15)*. The stem formed will fit perfectly after the hole drilled in the lid is enlarged slightly. To do so, drill the hole in the lid from the inside out with a ¼" (6mm) drill bit.

I used a Dremel rotary tool with a cylindrical double-cut bit to shape the handle *(Photo 16)*. Sand the handle after shaping it. Hint: make the handle longer than needed and then cut it to suit the piece after it's shaped. Glue the handle in place.

Finishing the bowl

The pear and walnut combination looks good with one or two coats of Danish natural oil. This darkens the walnut and warms or brings out a pink color in the pear. Let the oil dry thoroughly for a few days, lightly smooth the surface with 0000 steel wool, and, as a final finish, apply two coats of high-gloss polyurethane finish. ■

Bruce Thompson is a member of the Minnesota Woodturners Association.

Lay out the shape of the handle, making sure the grain runs through the handle and tenon at an angle.

Use a tenon-cutting bit to form a tenon on the handle.

Shape the handle using a cutter like this one in a rotary tool.

Pen Turning as a Cottage Industry

Jay Hockenberry

Have you ever had an idea that you knew would work? There was a true need and you had the solution? Sure, there were some problems that had to be worked out, but you're a woodturner and you're used to working around obstacles.

In September 2006, I was part of a United Methodist Church's mission team in Awombrew, Ghana. Awombrew is a small agricultural village of about 800 people who are desperate to improve the lives of their children. The village is made up of mud huts with grass roofs without sanitation, plumbing, water, or electricity, yet the villagers are working hard to construct cement block schools. If we build the schools, the government will provide teachers. We were working on the second school, which would allow an additional 120 children to attend school for the first time. Although the villagers provide the labor, they are dependent on our financial support to purchase building supplies and school materials.

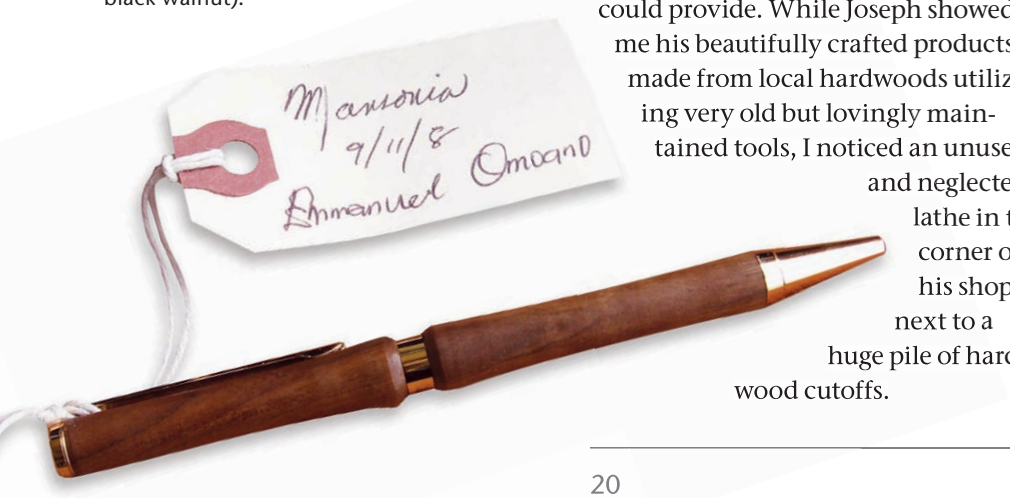
Jay is teaching the skill of woodturning to villagers of Awombrew who have never used a power tool. Electricity was just installed in the recently completed storage facility, which is part of the education complex being constructed by the villagers with financial support of the United Methodist Church.

The leader of the trip knew of my interest in woodworking and introduced me to Joseph Mensah, a cabinetmaker who owns a woodworking shop in a neighboring town. Joseph was very supportive of our efforts to assist the village and offered us any assistance he could provide. While Joseph showed me his beautifully crafted products made from local hardwoods utilizing very old but lovingly maintained tools, I noticed an unused and neglected lathe in the corner of his shop next to a huge pile of hardwood cutoffs.

An idea was born. Why not utilize the unused lathe and local hardwoods to start a cottage industry to provide a source of income for the village of Awombrew? The plan was simple. I would teach Joseph to turn pens and he would teach the villagers. Since the villagers had never seen a lathe or ever used a power tool, pens seemed like the logical choice for the first product. They are relatively easy to turn, and since the market for the product will be in the United States, pens are easy to transport.

A storage facility was planned as part of the education facility, and efforts were underway to install electricity. Once we had electricity, a lathe could be installed and the production

This is the first pen turned by a villager in Awombrew, Ghana (September 11, 2008). The wood is Mansonia altissima (African black walnut).



would commence at the village. Until then, the villagers could travel to Joseph's shop.

The idea of producing a product that would be desired by others is a radical idea to those not used to the concept. Despite the doubts voiced by "the experts," I believed that the villagers would embrace the chance to learn a new skill, and I felt that woodturners would support the effort.

In April 2007, I called Craft Supplies, USA, and spoke to Ben Williams. I explained that I was involved with building an education complex for a very poor village in Ghana, Africa. I also told Ben that my dream was to establish a cottage industry in Awombrew of turning pens utilizing their local hardwoods. I asked if Craft Supplies could assist me in my efforts. A few days later, I received an extremely generous package of kits, mandrels, glue, sandpaper, barrel trimmers, and polish. In June, the board of directors of the Yankee Woodturning Symposium presented me with three sets of pen-turning tools in support of the effort. In August, John Matchak, owner of the Norwalk, CT, Woodcraft Store, generously donated all of the remaining supplies I thought I would need to start the project.

In September 2007, I found myself in Joseph Mensah's shop trying for five days to unsuccessfully resurrect a mistreated Elektra-Beckum D-4470 lathe. Nothing can be purchased in the area. An adapter to accept a pen mandrel had to be made at a neighboring machinist's school; an ill-fitting replacement tailstock was fitted with locally manufactured shims to approach alignment; nuts and bolts to secure the toolrest and tailstock were retapped because they couldn't be replaced. The final blow was a burned out motor.

Thanks to the grace of God and Joseph's perseverance, an industrial school that had a working lathe was located a mere twenty miles away. On very poor dirt roads, that equates to about an hour's ride in a van. Unfortunately, since the school was not in session, they did not have the money to buy diesel fuel to run the generators necessary to provide power for the lathe. Arrangements were made for the fuel to be provided for the next morning, my last day in Ghana. After an early arrival at the school the next morning, it was simply a matter of removing the battery from the van to use it to start the diesel generator to provide the power to start the lathe. Using blanks that I brought with me, I was able to teach Joseph how to turn and assemble a pen. He is a skilled craftsman and I felt confident that the teacher would be able to teach the villagers. The lack of a nearby operational lathe was addressed by getting permission to move the several hundred–pound English lathe to Joseph's shop for a few months' duration.

Since our initial trip in 2006, tremendous progress had been made on the construction front. The school building we worked on was completed and dedicated, allowing 120 children to attend. The storage facility we dug the footing for was erected, prewired for electricity, and was only lacking the roof and floors. During my trip in 2007, the villagers started and completed the digging of the footings for the nursery (Kindergarten, grades 1 and 2). One obvious disappointment was the lack of progress on installing electricity at the complex. I met with the Chief Executive Officer (Governor) of the area and presented my plan for the cottage industry and presented her a pen as an example of the product. We were given two telephone poles and assurance of quick action on the electricity.

Upon my return from Ghana in 2007, I was surprised by my friend John Matchak with the gift of a new JET mini lathe, which had been returned to his Norwalk Woodcraft facility. After building an electrical converter to allow it to run on 230V 50 cycles, I was able to send it to Ghana in the extra suitcase of a friend going home to visit family. What could go wrong? ▸

Living conditions of the village of Awombrew, Ghana, Africa.

Unfortunately, Joseph Mensah suffered severe bouts of malaria, which resulted in extensive stays in hospitals. His heart was weakened to the point that he has been unable to work for over a year, which effectively delayed the pen-turning effort.

In September 2008, I led a team back to Awombrew to continue working on the education complex. We were excited to see the completed storage facility and were able to get electricity installed. What a thrill it was to turn on the new JET mini lathe in the storage facility and watch it turn. The team that I taught to turn was the local carpenter and his two assistants. I was amazed to watch the carpenter construct shelving and desks in the storage facility utilizing his entire inventory of tools: a hammer, a handsaw, a tape measure, and a wooden-bodied plane.

The villagers were eager to learn and quickly grasped the basics of spindle turning and using a pen mandrel. To be able to use a power tool and learn a skill was a great honor and they paid keen attention to every detail. The potential language difficulty was overcome by focus and at least three translations of everything I said. Our daily turning lessons were a huge attraction for the people of the village and whenever the lathe was on there was a crowd of onlookers. I had brought back Mansonia (African black walnut) from Joseph's shop in 2006 and had prepared twenty-three sets of pen blanks. These blanks were used to turn the first-ever pens in Awombrew, Ghana.

Emmanuel Omoano demonstrates turning a pen with many interested onlookers. A crowd gathered every time the lathe was turned on. For most of the villagers, this was their first glimpse of a power tool in operation.

Emmanuel tests the protrusion of the ink cartridge in a pen he is assembling.

It was an emotional experience to see young men who had never used a power tool create a pen from local African hardwood in a facility that the village built with our support. In total, the villagers crafted twenty-three pens from the Mansonia blanks. They may not be the fanciest pens ever turned, and if you look closely you can probably find a flaw, but to me, they are beautiful.

I brought all of the pens back with me. I am keeping the first pen turned in Awombrew to show when I make presentations at local civic organizations. I will continue to keep it until I have the opportunity to present it to a representative of Craft Supplies, USA. The second pen turned in Awombrew was presented to John Matchak at his Norwalk, CT, store. The remaining pens were sold at $35 each with all of the money returned to the building effort at Awombrew.

The current impasse to progress is the lack of tools and skills to do the prep work on the blanks. Unfortunately, Joseph's health is still very poor which prevents him from performing the prep work. My solution is to supply the storage facility with the necessary equipment and during my next scheduled trip to Ghana, I will teach the villagers to drill, glue, and trim the blanks. I am currently trying to ship an English (230V) bench-top drillpress and a grinder to Awombrew.

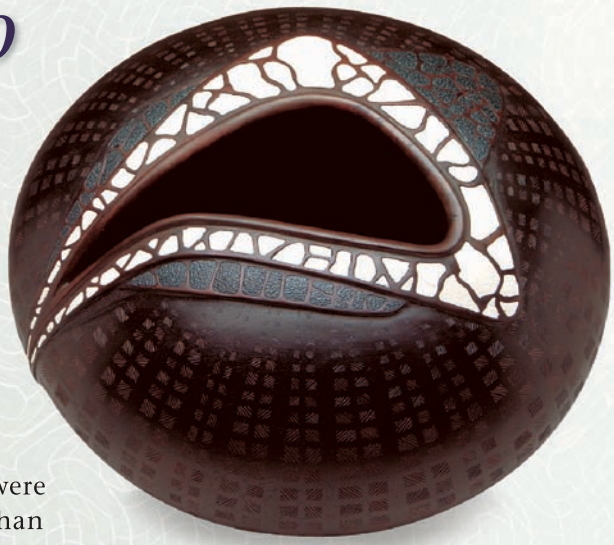
This simple idea has mushroomed into a multiyear project. The village has honored me by installing me as a Chief of their village. Subsequently, I was officially named Nana (Chief) Atta III. I never would have dreamed that I would be this involved in the life of a village in Ghana, but I have to admit that the look on the faces of the people of Awombrew makes it all worthwhile. ■

Jay Hockenberry retired from the corporate world in 1998. Following a lifelong interest in trees and woodworking, he took a class in bowl turning at the Brookfield Craft Center, taught by Andy Barnum. He quickly developed a love for turning and joined the Nutmeg Woodturners League. This gave him the opportunity to learn from excellent turners such as Angelo Iafrate, Andy Barnum, and Carl Ford. Jay and his wife Rae Ann's involvement with the village of Awombrew, Ghana, has consumed much of the last few years. Jay and Rae Ann live in the western hills of Connecticut.

Implementing Art

The Work of Rolly Munro

D Wood



Crustacae Form, 1998, Walnut, pigments, emu and ostrich eggshell, 4" × 11" (100mm × 280mm)

Collection of Musées des pays de l'Ain, France

It would be understandable that, after perusing *New Masters of Woodturning* (Terry Martin and Kevin Wallace, 2008), anyone would be interested in seeing more of Rolly Munro's work. Unfortunately, an internet surfer or gallery browser would be disappointed. Although Munro is a household name amongst turners throughout the world, this is not because of a proliferation of his sculpture. Nor is it because of *The World's Fastest Indian,* a much-loved movie based on the biography of fellow New Zealander Burt Munro, who set speed records on an Indian Scout motorcycle in Bonneville, Utah, in the 1960s.

Instead, Rolly is known because he and Burt share a characteristic Kiwi ingenuity. New Zealanders, whose forefathers were thousands of miles from the historical equivalent of Home Depot, had to be resourceful and became adept at fashioning No. 8 fencing wire into whatever was needed. Burt built an unsurpassed racing machine from a 1920s cycle; Rolly adapted woodworking files into turning tools that were cheaper and more effective than commercial brands. Today, Rolly Munro assembles and fine-tunes his namesake hollowing tools, which are distributed globally and time-consuming to make. But when I visited Munro's home and workshop north of Wellington, I agreed with Terry Martin and Kevin Wallace that Rolly's artistry should be more widely witnessed.

New Zealand is a sovereign nation in the South Pacific and, like Canada and Australia, is part of the British Commonwealth. The country consists of two islands, appropriately named North Island and South Island, and the current population stands at 4.3 million with approximately 75% occupying the North Island. The National Association of Woodturners (NAW) estimates that 1,100 of those residents are woodturners affiliated with forty-five guilds and clubs distributed from the far north to the chilly south. To give you an idea of how far south, Christchurch, the largest city in the South Island, is the departure point for flights to Antarctica.

Rolly is a committee member of the NAW and has been a professional turner for twenty years. He is a frequent demonstrator at national clubs and overseas conferences/workshops where he is known to impress onlookers with his one-handed "blind" turning. These displays of bravado are intended to ▸

Puhapuha Form, 1998, Pohutukawa, pigments, 9½" × 11¾" (240mm × 300mm)

Hapuku I, 1997, Pohutukawa, copper, pigments, 15" × 12" (380mm × 310mm)

Lipton Collection, USA

Echinoderm Form, 2007, Pohutukawa, pigments, 4⅓" × 10¼" (110mm × 260mm)

prove the utility and safety of his tools, which he initially designed in 1990. Observing one of the demos can be unnerving, yet Rolly epitomizes the dictum that turning is dependent on full engagement of the body and senses. He gauges the sound and feels the cut through the tool and is aware of physical resonances that tell him rightness or wrongness. Watching such a master is obvious incentive to want to emulate—it's a good marketing device!—but it is also provides an indication of the dedication invested in the hardware and its results.

Rolly was born near Rotorua, New Zealand. The city is a must-see for sulphur springs and Maori culture. He recalls being given a hammer, nail, and wood at the age of two, and deriving sufficient amusement from them that his minders had ready pacifiers for years to come. He credits an uncle, who was a pioneering diver in the 1950s, and an aunt who taught art, as his mentors and heroes. Guided by this "big brother" uncle, he took up snorkeling and developed a passion for the sea, an influence that appears in much of Rolly's work. In addition to being fascinated by the tide, sea animals, and detritus of the beach, he made boats and finds it difficult to live away from the ocean.

Organ Form series

A series from the late 1980s called Organ Forms is indicative of the artist's marine influence. Made of kauri (*agathis australis,* a conifer whose height and diameter led to forest decimation by empire and boat builders in the nineteenth century; a rare form of kauri, trapped in anoxic swamps thousands of years ago, can be turned and is highly prized), the cut sections of turnings were reassembled. At the time he described his intention, "I often find the turned form rigid and uninteresting. This is an attempt to deal with this." The "organ" of the title is the human heart, yet the allusion to helical shell forms is apparent. The grain of kauri hints at sand drifts, tendrils of kelp, and rolling waves, much more than anatomy. There is no repulsion in these objects. They are as compulsively tactile as wind-worn driftwood.

Rolly came to turning via the fine arts. An unaccomplished student, he quit high school and trained as an industrial chemist, finding work for a brief period in New Zealand's ubiquitous dairy industry. That quickly proved to be dull, provoking a decision to move on, and on. "By the time I was nineteen," Munro recounts, "I'd had thirty-six different jobs." In 1973, he enrolled for foundation art courses in Auckland but, in a characteristic move to distance himself from big cities, migrated to the South Island and studied at the Otago Art School in Dunedin. Here he embraced the curriculum wholeheartedly, taking drawing, painting, art history, ceramics, two- and three-dimensional design, printmaking, general studies, sculpture, woodworking, and metalworking in the first year. In his second year, he encountered Derek Ball and Peter Nicholls, both distinguished sculptors with American graduate school experience. As teachers, they impressed him as "guys who knew what they were talking about." Rolly emulated them, adopting sculpture as his medium and later taking up teaching.

Although tertiary education in New Zealand was free at the time, Rolly got a part-time job at a lathe in a spinning wheel company. His metallurgy training gave him skills to build his own lathe and make tools. Having formed the opinion that

commercially available choices were "expensive rubbish," he adapted old steel files into woodturning gouges and created bowls and then sold them to generate income. After graduation, when a trip to western Australia to build financial resources threatened to turn sour because of a miners' strike, Rolly persuaded a manager of a furniture factory to hire him as a production turner. He survived the first week, bought his own toolkit, and went on to earn up to $1500 per week, a huge pay packet in the 1970s. "It was the best money I ever earned—more than the bosses," Munro remembers. For a year, he churned out components for Spanish-style furniture.

The Munro family returned to Dunedin in 1980 where Rolly taught art at the high school, followed by wood and metal sculpture at his alma mater. Then he went to Rotorua in 1985 so that he and his partner could both have jobs. Although Rotorua is nestled amongst sixteen lakes, a lake just isn't the ocean, and when a part-time position teaching art and workshop in Whangamata beckoned, the choice was a no-brainer. Whangamata is a holiday, fishing, and surfing locale on the east coast of the Coromandel Peninsula, but Rolly didn't relax. Within two years, he presented two solo exhibitions, was a demonstrator at the National Woodturners' Exhibition, and was named the winner of the 1988 Elders Resources New Zealand Forest Products Limited award. The judge was Vic Wood of Australia, who commented on the improvement in New Zealand turning since a visit four years previously, "I have not seen a better exhibition with such fine work anywhere in Australia. The only turning which would be better . . . would be at the International Turned Objects Show in U.S.A. earlier this year and this stuff would rank well there too."

Hapuku III, 2000, Black walnut, pigments, 8¼" × 11½" (210mm × 290mm)

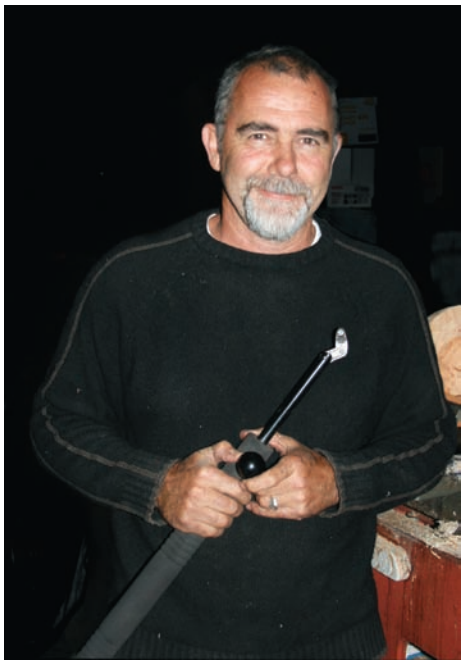
Bender Collection, USA

Wood's remark reflects the buoyancy and excellence in both woodturning and furniture making in the late 1980s in New Zealand. Rolly was able to quit teaching and concentrate on turning full time. The South Waikato District Council commissioned a major work with Munro that was designed in recognition of the area's volcanic landforms and forest industry. The piece, consisting of five sections, is described by its owners as "among the largest turned sculptures in the world." He chose pine for its lightness, color, strength, and stability when dry. He also used that same wood for a commission piece for the Ministry of Forestry headquarters in Wellington, this time, exploring the cone and seed configurations of *pinus radiata* as representative of the potential of forestry and forest products. Rolly elaborated, "working on ideas for a commission is different from my normal creative process. I usually begin working with the wood from an initial idea or sketch, but during the course of production, either the wood or the form begins to ▸

Palm Vessel, 1999, Totara, pigments, fiber, 13" × 9½" × 5½" (330mm × 240mm ×140mm)

Bohlen Collection, USA

Sea Biscuit, 1999, Walnut, pigments, copper leaf patinated, 3" × 11¾" (75mm × 300mm)



dominate, and I modify as I go along. With a commissioned piece, the design must be completely resolved at the planning stage, so it can be approved. All exploration and modification happens on paper or via maquettes."

For smaller projects, he opts for native timbers (totara, pohutukawa, rata, black maire, kauri) or exotics (walnut, holly, ivory wood). He has seen "so much shiny brown wood" that he is not averse to adding metal, natural materials, pigments, and dyes if the subject matter dictates. In the past, Rolly has taken aging hints from nature—the effects of wood's erosion by sand over time can be replicated in a sandblasting chamber—and has exploited the character of wood species to emulate other natural phenomena like the carapace of a sea creature. "My passion is to expand the boundaries of where turned wood art can go" and the best mechanism for this kind of exploration is imagination.

Rolly credits the Munro Hollowers with assisting his creative explorations and vice versa. Though he would like to devote much more time to the physical act of turning, he describes his business as being a creative process. He distributes between 600 and 1,000 units per year to England, France, Germany, Canada, the United States, Japan, Australia, and New Zealand. He designs the tools' components, then machines and assembles the resulting bits; he tests for consistency and safety; he designs the graphics and packaging, and prepares each tool for shipping; he makes models and prototypes; he does demonstrations, workshops, and promotional tours. And he absolutely detests flying! But in a country of New Zealand's size and geographic isolation, there are activities that are requisite to sustaining your passion. Rolly Munro will continue to pursue those activities, while his admirers dream of the day when his art overshadows his industry. ■

Kaipuke Kaiwai, 1998, Pohutakawa wood, copper, epoxy, pigments, 12½" × 8" × 8½" (320mm × 210mm × 220mm)

Bohlen Collection, USA

Hapuku II, 1998, Pohutukawa wood, copper, pigments, 14½" × 12" (370mm × 300mm)

Bohlen Collection, USA

D Wood received an MFA in furniture design from the Rhode Island School of Design. She writes about craft media for a variety of international publications and is currently a PhD candidate in design studies at the University of Otago, New Zealand.

Turning Diamonds

Peter Exton

Sluice in progress.

Looking for a rich new turning idea? Try turning diamonds. Okay, not those glittering rocks. Diamond *shapes*, like on playing cards.

Derived from the reverse-turning technique, also known as inside-out turning, turning diamonds uses lengths of wood with diamond-shaped profiles instead of square or rectangular ones. Worked three at a time, the pieces can be used individually or grouped in multiples to produce all sorts of constructed shapes and patterns. All shaping can be done on the lathe.

Shortly after I began turning in 1990, I was drawn to the reversal method. Mostly, I adapted it to furniture. In response to an order for a small, three-legged pedestal table, I opened up the column with a two-piece reversal. As a variation, I developed a three-piece version that encouraged use of a contrasting ornament in the hollow. This was how I discovered diamonds for turning, and over the years, I have found they have geometric properties uniquely adaptable to working on the lathe.

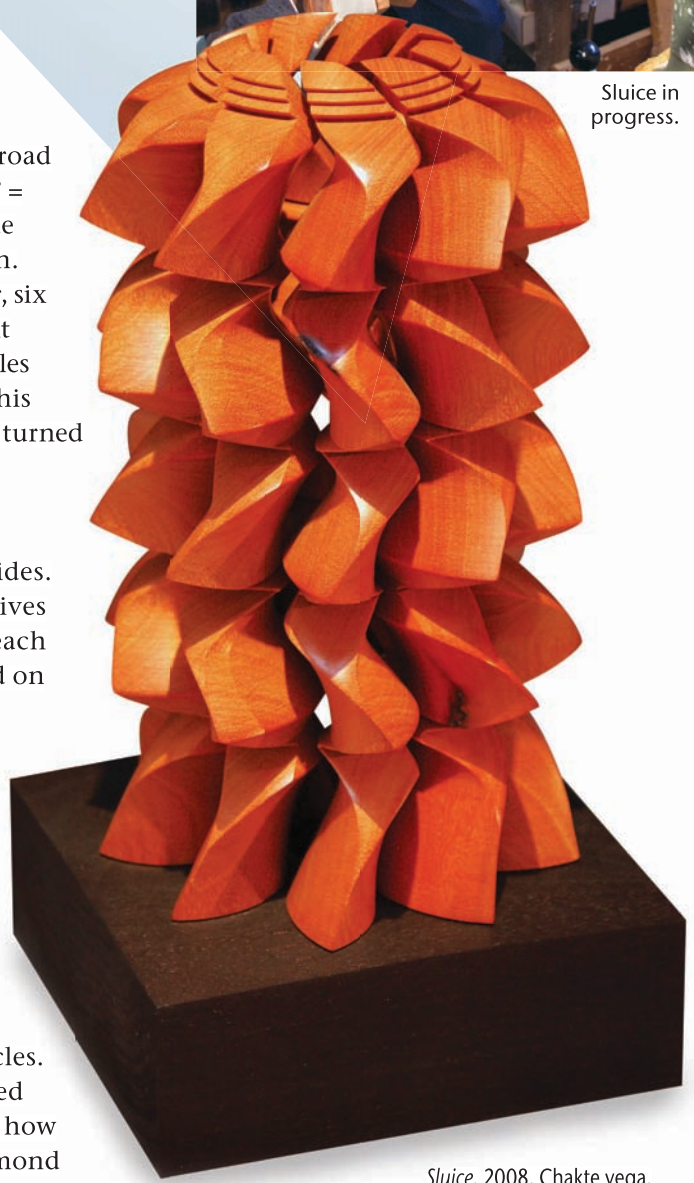
So, what are these special turner's diamonds? Like the ones on playing cards, they have four sides of equal length. The interior angles are specific: the broad (obtuse) angles facing each other measure 120°, and the closed (acute) angles are 60°. A circle has 360°, so three of these diamonds will fit together snugly at the broad angles, because 3 × 120° = 360°. Flip them all inside out and it happens again.

Going one step further, six diamonds can be brought together at the acute angles because 6 × 60° = 360°. This arrangement can also be turned inside out.

Starting with three pieces, each diamond can be shaped on two sides. Combining six pieces gives access to two more, so each of the six can be shaped on four sides.

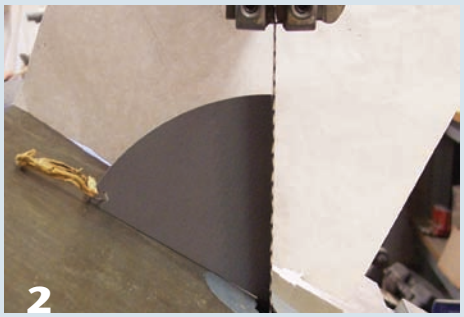
Working with more pieces is also possible–I love nine. The focus of this article is to get you started cutting the diamonds and turning three pieces together. More ambitious work will be discussed in future articles.

In the samples pictured on page 30, you can see how a small three-piece diamond turning can generate a wide variety of forms. Many variables affect the results. Whatever contour is created in the first step will ▸



Sluice, 2008, Chakte vega, 11" × 5" (279mm × 127mm)

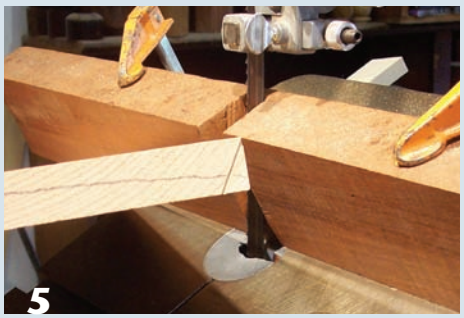
This started out as a nominal 5/4 cherry board, about 8" × 20" (20cm × 50cm). After surfacing both sides, it was uniformly 1" (25mm) thick.



Set the bandsaw table angle with a 60° template. Tighten the table locks and check that there is no visible gap, then rotate the blade halfway around the wheel and check the angle again.

To set the fence, hold the square against the inside edge of the track and extend the ruler's end past the blade. The outside teeth of the blade will determine the cut.

To take a test cut, keep the board flat against the fence and table. The top edge of the board should touch the fence.



The angle on this test cut looks correct; I am ready to proceed to cutting the board.

When cutting, apply steady, even pressure all the way through. Be careful to keep the left end of the board flat on the table at the end of the cut.

determine the nature of the interior hollow after the reversal, as well as the profile of the openings. How much light will get in there? The exterior contour can blend with an idea introduced by the interior, or it can shift emphasis to the outside. Meanwhile, the two contours meet to articulate an edge line, which separates light and dark and can be an important player in a design. Any cut is instantly repeated on all sides, creating echoes of form, often seen through the cavity. If desired, the technique can be used to produce a single solid form in triplicate.

Starting points

The basic technique is not difficult as long as you are reasonably skilled with tools. You don't have to know joinery, but some familiarity with gluing up wood is a plus. It helps to be patient and not in a hurry, and to have some affection for details and good radar for danger. Essentially, this technique is just another way of shaping and arranging material. With a good grasp of the basic process, turners can open the door to an enormous world of form.

Important cautions: Dust off your faceshield and use it. You will be turning bundles of sticks that are temporarily held together and getting thinner with every cut, so the process is inherently dangerous. Be very careful. There is none of the aggressive stock removal used with solid wood, but a catch can be ugly. Be realistic about your skills.

Cutting the diamonds

The first cut

This technique presents material for shaping in a precise way while maintaining relationships between the pieces, so cutting the diamonds accurately is important. This can be done on a table saw, but I prefer a bandsaw for safety reasons. You will need angle blocks or a template measuring 60°, a sharp ¾" (20mm) blade for smooth rip cuts, a hardwood fence at least 1" (25mm) taller than the board thickness and about 6" (15cm) longer than the table, and a combination square for setting the fence. Cut a notch in the fence to accommodate the blade width when the table is tilted. For the angle, I use a template from a Richard Kell Angle Master set.

For this example, I cut a dressed 5/4 cherry board 8" (20cm) wide and about 20" (50cm) long *(Photo 1)*. For easier handling, try to keep the board length under 24" (60cm). To ready the board, joint it flat and then run

it through a planer to even the thickness. Use the jointer to square up one good edge and then square the ends to it (the other edge will be waste). You should have a board of uniform length and thickness. Pick a leading end and draw a pencil line diagonally across it.

Make sure your bandsaw is functioning properly. To set the table angle, light the work area well and clean off your glasses. Unlock and tilt the table, bringing your angle template up against the flat of the blade without pushing against it. A piece of white paper taped up behind the blade can help show the gap between blade and template *(Photo 2)*. Be sure not to push on the blade! Move the table too far and then back again, easing it into place. Try swinging the template back and forth. If the angle is too small, the template will swing freely at the bottom, touching at the top. If it's too large, it will swing freely at the top while touching below. You want in between—no swing, no gap. Gently tighten the table locks. Rotate the blade a bit and check the angle again. Got it? Exhale. You have actually set both angles of your diamond: the flat table is 180°, so a 60° angle on one side of the blade leaves 120° on the other.

To set the fence, refer to the table on page 37 and get the "*x* value" for the thickness of your board. Subtract the thickness of your blade kerf, about 1/16" (1.6mm). Put the combination square against the inside edge of the miter gauge track and slide the ruler past the blade the amount of your *x*-minus-kerf measurement. Tighten the ruler in place on the square. Using this setting, bring the fence into place, fitting the notch around the blade (a third hand helps) *(Photo 3)*. Check at both ends of the table; the fence should be parallel to the track. Secure the fence and bring the saw's blade guide down as close to it as possible.

Your aim is to pass the blade just below the top of the board, leaving an edge to keep contact with the fence. With the saw off, bring the board's jointed edge up to the blade to check the setting *(Photo 4)*. Use the combination square to adjust the fence in or out accordingly, always keeping it parallel with the track. If the fence position is very close to being right, make a slight test cut and then adjust further, if necessary *(Photo 5)*. When the fence is fixed in place, set the combination square aside; you will add to this setting later.

Turn on the saw. With the board flat on the table, bring the edge flush against the fence and apply steady, even forward pressure through the cut. To ensure a smooth saw cut, be sure to keep the top edge against the fence all the way *(Photo 6)*.

If you are doing several boards of the same thickness, make this first cut on all of them now.

The remaining cuts

For the remaining cuts, measure the face of the one you just made—this should be 2*x*—and add to it the kerf width so the blade will now pass outside your diamond. Add this amount to the previous setting on the combination square and move the fence out, again making sure to keep it parallel with the track. Make a slight test cut *(Photo 7)*. All four sides of the resulting diamond should be the same length. Adjust the fence as necessary.

When you are confident that everything is properly set, bring the edge of the board up to the fence and make your cut. Apply steady, even pressure. Keep the board flat on the table, taking care not to push so hard against the fence that the edge rides up it. After starting the cut, I stick a clarinet reed in the ▸

Diamonds for Turning

A turner's diamond: four equal sides, two 120° angles, and two 60° angles.

Three diamonds fit together, forming a hexagon. The broad angles meet at the center point. The black line indicates the turning diameter. It may not seem so, but the radius is the thickness of the board.

Three diamonds reversed, showing new orientation of the turned first side.

Reversed diamonds with second diameter indicated. In two steps all the angles have been replaced by arcs.

Six diamonds. Two sets of three can be brought together and worked as a group. These also can be reversed, so the process enables the shaping of each diamond from four directions. Note how the rubber band forms another hexagon.

Six diamonds at work in *Boxwood Spray* (detail), 2000, Boxwood, holly, 20" × 4" (51cm × 102mm). Like Islamic floral designs, these organic shapes are rooted in geometric pattern.

Photo: Bob Barrett

Turning Diamonds: Three-Piece Samples

Basic

In the technique's most basic form, a simple inner contour can be traced by the outer contour. Here, a tapering curve produces a teardrop or icicle shape. It also hints at the skull of an animal, or maybe a meteor hurtling through space. Further development could strengthen those ideas.

Same shape, different sequence

The contours used to create these two pieces are the same, except the order of the steps is reversed. Starting with a deep V-cut followed by a peaked exterior produces a dark starlike cavity with fine, tapered lines. Starting with a sharp peak, reversed, produces a bisected hollow. This shape makes me think of a cloaked nun, which is like a bishop, and that's a chess piece.

Single shape repeated

A single shape, a *J cove*, is used to create this piece. Note that on the interior, the Js are oriented in one direction but then reversed on the exterior. This produces S-curves on the edges and an almost vertebraic stacking of form.

Arches and architecture

When two columns converge, virtually any type of building arch can be suggested. This little tower combines an ogee arch with a Russian onion dome. A little ball or cross could crown the top. A taller version would replicate a Kremlin cathedral tower.

Free play

It is good to explore forms without anything specific in mind. Two examples: A fairly simple interior, a modified hourglass shape, is matched with a more elaborate exterior. Next to it is a busy interior and a busy exterior. On both, notice how the two opposing contours affect the edge line. Also, note the different effects created by the large coves on the left and the very small ones on the right. When you play, you will discover more form if you resist the urge to have interior and exterior lines always meet.

Animating form

Working on two sides of the material presents opportunities for animating form, depicting movement, flow, weight, tension, and volume. On the right, I have tried to suggest cinching tight a material softer than wood. On the left, the form is an exercise in thick, wavy liquid flow, puddling. Try this and you'll look at poured pancake syrup a little differently.

kerf to prevent binding on the blade *(Photo 8)*.

How'd you do? Measure your faces on both ends of the board. Everything should be the same.

Continue making cuts until you have three pieces. Put them together to form a hexagon. If you have done everything correctly, the three broad angles will form a neat center point, the edges will meet flush, and the hexagon will be uniform. If there are gaps between pieces near the center, your angles are too large. If there is a gap on the outside, your angles are too small. Flip the pieces around; ideally, there will be no difference in the fit no matter how you arrange them.

Finish cutting your board. Be extremely careful on the last cut. You have reduced the board to a narrow piece, bringing your fingers dangerously close to the blade, yet you still must keep the board flat and maintain some pressure against the fence. If this is uncomfortable, don't do it. Hang on to your fingers. Your last cut will leave a waste piece like that left after the first cut *(Photo 9)*.

Turning three diamonds

Glue-up

Now that you've mastered the picky prep work, it's time to have some fun. Turning diamonds begins with a basic three-piece assembly.

Go down to your office supply store and pick up a bag of #84 rubber bands. These are handy for grouping diamonds and for some gluing when doubled over. If you want to splurge, buy some of the smaller #64 size too, for general utility.

It's good to start out small—it's safer and you will learn using very little material.

Take three adjacent diamond blanks, preferably from a 6/4 board or smaller, and trim them to about 7" (18cm) long. (For this example, I used three diamonds from the 5/4 board I cut earlier.) Set them out on a table as if they were still part of the board, using the diagonal pencil line you drew on the end to put them in order *(Photo 10)*. Make a little pencil mark on the end of each as shown. Leaving the middle diamond in place, fold the other two onto it to form a hexagon and then wrap both ends with rubber bands. The pencil marks will be within the hexagon *(Photos 11, 12)*.

Note that you have put one side of the board facing in and the other side facing out. Generally speaking, all three pieces will look and behave the same when oriented and worked in this way. If one piece is reversed, it could look like it came from a different tree ▸

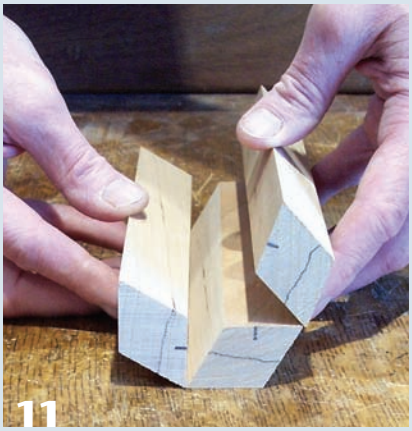
Flow Rabble, 2006, Maple, bleach, 18" × 7" (46cm × 178mm)

7 After resetting the fence for the second cut, test your location. The *inside* teeth now determine the cut. All four sides of the diamond should be the same length.

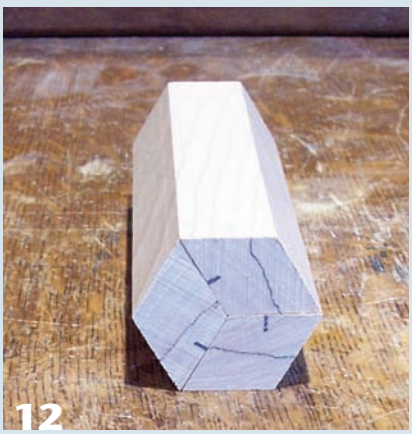
8 Inserting a clarinet reed, or any similar device, prevents binding of the blade. Too much pressure could cause the board to ride up the fence.

9 Diamond cutting is complete. This board was 1" (25mm) thick and 8" (20cm) wide. According to the diamonds table, six diamonds would come from the board. Looks about right.

The diagonal line helps order adjacent diamonds. The other pencil marks help keep them oriented when handled.

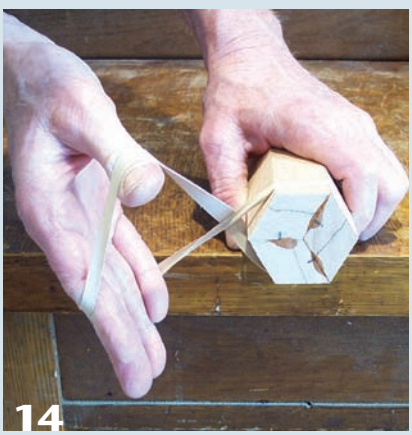


With the pencil marks as guides, fold the diamonds together to form a hexagon.



The assembled hexagon (without rubber bands). The pencil marks show one side of the board facing in and the other side out.

Apply a modest dab of thick CA glue at each end. Thick CA sits up on the surface, making the split easier later.



With glue applied, fold the pieces together and wrap them with a #84 rubber band, doubled over, at each end.

With rubber bands on each end, check that the ends are even, with clear center points and a neat hexagon. Spray with accelerator and allow some time for the unexposed CA glue to harden.

entirely and could tear out when the other pieces cut smoothly. The rubber bands exert uniform pressure all around and should give you a clear center point where all three angles meet. If you have cut the pieces cleanly, the sawtooth tracks on the pieces will hardly show.

Practice this next step without glue until you've got the hang of doing it smoothly. Lay your pieces out again, in order, at the edge of a table. Put a small bead of thick cyanoacrylate (CA) glue on the face-up ends of each piece, centered on the face *(Photo 13)*. Once again, fold the outside pieces onto the center piece, slide the assembly over the edge and hold it there, using your other hand to double a heavy #84 rubber band around the end *(Photo 14)*. Quickly turn it all around and do the same to the other end. Stand the assembly upright and press down to get all the pieces even *(Photo 15)*. Check that you have a neat hexagon with a clear center point on both ends. Look good? Spray both ends with accelerator and set the assembly aside to dry for a half hour or so to allow the unexposed glue to harden.

Note that six sides meet when the pieces come together. You have applied glue to three sides, which when folded together make contact with the three bare ones.

Mounting the assembly

Once the glue has hardened, remove the rubber bands and trim the ends flush if necessary. Use a square to mark lines across one face 1½" (38mm) from each end. You will be working between these lines.

Use an awl to make a pilot hole for the tail center on one end.

Mount the assembly, preferably using a four-jaw chuck and a revolving tail center with a cylinder point, not a cone, which could force the pieces apart. I strongly recommend using a four-jaw chuck to hold the assembly. This grips the work firmly and drives it, eliminating the need

for pressure from the tailstock center. In the second turning step, when the wood is thinnest, pressure can snap it apart. The chuck will grip four corners of your hexagon to hold and center it. (They define a rectangle that shares a center with the hexagon.) Just make sure the two other, opposite corners stick out between the jaws. A little space between the end of the assembly and the bottom of the chuck will eliminate splitting pressure if the end is not perfectly square. Tighten the tailstock center, back it out, then gently tighten again.

If you do use a drive center, make pilot holes on both ends just large enough to accommodate the points. Do not try to whack it with a mallet to get it on the drive center—you'll split the assembly or weaken it so it splits while turning. Be very careful how much pressure you apply to hold the assembly.

Wrap the tail end tightly with strapping (filament) tape, ten times around, plus one for those who love you *(Photo 16)*. If you are using a drive center instead of a four-jaw chuck, do the same for the other end. Here's my theory, occasionally tested: most disasters between centers are less a result of the initial catch than of the suddenly out-of-round piece plowing through the toolrest. A tightly wrapped assembly can hold together despite a catch, saving you and the piece.

When the assembly is securely mounted *(Photo 17)*, turn on the lathe at a moderate speed. If everything is right, the assembly will spin smoothly. You can check for variation by looking over the top of the spinning assembly and focusing on something in the background. If not centered, the assembly will appear to ride up and down against whatever you've focused on. If everything is centered, there will be no fluctuation.

Turning the diamonds

Only a few tools are necessary for turning diamonds. I use just two most of the time: a ½" (13mm) skew chisel and a steeply ground ¼" (6mm) bowl gouge. The small bowl gouge is important. In the second turning step, after reversing the pieces, you are cutting wood with gaps of air and trailing edges where the fibers are unsupported. The bowl gouge thickness minimizes deflection caused by the interrupted contacts, enabling clean cuts and reducing tearout. The small size takes nibbles rather than bites, which also cuts down on tearout. The skew chisel can produce impeccable cuts with sharp trailing edges. You can use a parting tool to establish your desired depth or diameter, but it will tear out the wood, so use it carefully. A larger gouge is handy for some initial roughing.

You can reproduce one of the examples shown in this article or strike out on your own. In this example, I made a cove at one end and a taper at the other, to show how they look across the hexagon and affect the resulting turning. In between is an unplanned jumble of shapes. Using a skew chisel will help start the cove and preserve the corners. When experimenting with shapes, try not to make the shape too busy at first, and keep in mind one rule of thumb: the minimum diameter should not be less than the original thickness of your board; a little larger is better. This will leave something to work with when you reverse the pieces. For example, my board was 1" (25mm) thick; for this, a minimum diameter of 1¼" (32mm) ▸

16

Holding the assembly together is essential for safety. When wrapped sufficiently, strapping tape holds well.

17

Gripping the assembly in the jaws of a chuck reduces the need for holding pressure from the tailstock center. Note the free corner of the hexagon in the chuck; the one directly opposite (out of view beneath) is also free.

The Cooper's Dream, 2000, Boxwood, dye, cocobolo, 14" × 4" (356mm × 102mm)

Photo: Bob Barrett

is about right. Use a vernier caliper to check the diameter. The flat areas at each end will be glued later; any flat area you leave will create a joint when the diamonds are reversed.

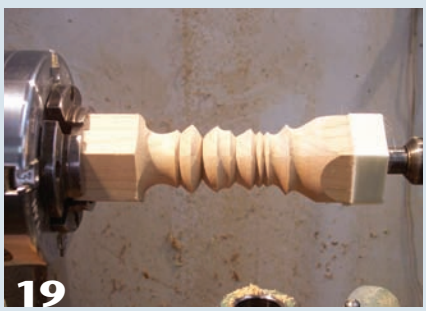
To get an idea of what you'll see when you reverse the pieces, set a small mirror on top of the piece, angling it sharply toward you, almost horizontal *(Photo 18)*. The profile will be reflected in the mirror, showing you how the interior space will appear. This is helpful for checking progress on a design, fine tuning, and blending the ends. The mirror will indicate whether the bottom of your cove will flow smoothly from one side to the other, or if a pointed arch will appear the way you want.

For the taper, you can start outside the pencil line and cut toward the center, using either the gouge or the skew. Your edges will be crisper with the skew. Notice how the cut makes arcs across the hexagon's corners, like you might see on a turned square-section newel post in your home *(Photo 19)*. Try to make the arc end at the pencil line; if you eliminate the line, you are making the hollow longer. Check your progress with the mirror.

When you are satisfied with the look, sand the assembly as you would a spindle. A firm backing will help save the hexagon's corners. (Sanding will be trickier after the reversal.)

No matter what finishing method you use, remember that after the reversal, access to the inside surfaces becomes more difficult, if not impossible *(Photos 20, 21)*. If you finish this side now, be sure to mask any flat surfaces that will be glued later.


18
The mirror is very helpful in refining details, and also in judging how large an opening you are creating.


19
The first side is complete. On the right, note the arcs across the hex faces. On the left, the cove doesn't really begin until you are past the corners and within the maximum diameter.


20
Here's a look at the profile before the diamonds are reversed, with easy access for finishing.


21
Here's what it looks like after the diamonds are reversed; access to the surfaces is more difficult.

Reversing the assembly

Take the assembly off the lathe and remove the strapping tape. To separate the pieces, you will use a simple but reliable method: splitting the joints with a hammer and flat screwdriver. CA glue is brittle, a property that makes it good for the temporary glue-ups needed when turning diamonds. If your wood is not porous, thick CA will sit up on the surface. When it comes time to separate the pieces, a few whacks on a screwdriver between two pieces will cause them to break apart.

If the glue bulged out and hardened

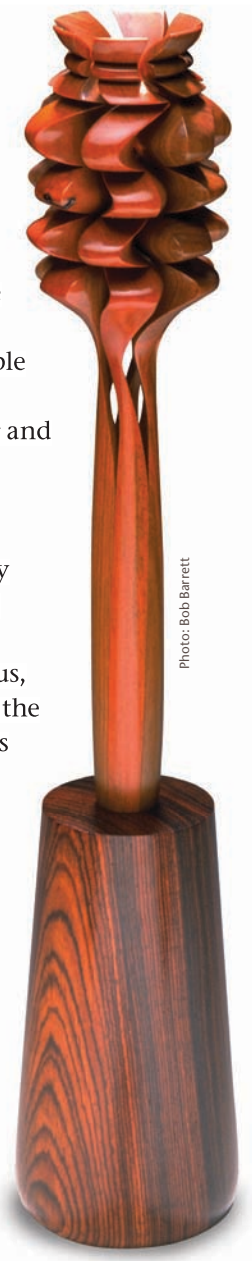


Photo: Bob Barrett

Foxglove, 2000, Permambuco, cocobolo, 19" × 3½" (48cm × 76mm)

Collection of Pete Shannon

on top of a joint, take a flat chisel and level it so that you can hold a screwdriver there. Put the assembly on a sturdy surface, such as the floor or a workbench. For small pieces, the corner of a chair can serve *(Photo 22)*. Position the blade of a medium-size screwdriver over the glue along the middle of a joint line. (Working in this middle area will help prevent damage to the corners). Give it a little whack with the hammer. Rotate to another joint line and do the same, and then to the third. Keep this up and the screwdriver will gradually work its way between the pieces and they will begin to separate. Turn the assembly over and repeat the process. Often the pieces will come apart cleanly with a single whack. But sometimes the glue doesn't want to let go, and you'll have to carefully separate a few fibers.

When you have separated all three pieces, reassemble them inside-out and put a rubber band around each end. On the inside, you should see a profile that looks a lot like what you saw with the mirror. Ideally, the contours on every piece will meet perfectly at both ends, but this isn't always the case. Slight variations can be cleaned up with small files and sandpaper later. If you want to add an ornament to the inside, shave off a small bit of each interior corner on one or both ends to create a triangular recess to take a mini-tenon.

Lay the pieces out and do a dry run of the assembly again so that you know where the pieces should go with glue applied. Use standard wood glue (aliphatic resin) for permanent assembly. Spread the glue evenly on all flat surfaces. It will take some practice to get the right amount. You might be turning away most of the waste, so be sure to apply glue on surfaces that will remain. Try to avoid squeeze-out, though small amounts are easily removed once the glue has hardened.

With glue applied, put the assembly together, lining up the adjoining pieces and doubling a rubber band around each end. Look at the ends to make sure that the angles meet at a point and you have a uniform hexagon. Don't worry about making the ends flush; the smooth blending of the inside surfaces is paramount now.

When everything is in place, clamp the joints as shown—three joints on each end need three clamps on each end *(Photos 23, 24)*. Don't rely on the rubber bands alone. Little C-clamps allow some room to operate, but it will be crowded. At first, just get the clamps tight enough to stay in place. Once they are all on and the pieces are still aligned, gradually tighten them a little more. Leave the assembly to dry overnight.

Turning the reversal

Mount the glued-up reversal on the lathe as before, making sure it is centered. Although the pieces should be permanently fixed, it is best to anticipate joint failure, so wrap one or both ends with strapping tape and put on your faceshield.

Start reducing the assembly to a cylinder, using either the gouge or the skew chisel *(Photo 25)*. Be patient; don't attempt to remove large amounts of material quickly. All three pieces now have trailing edges followed by air. A big bite of material can easily take a large chunk of the edge with it.

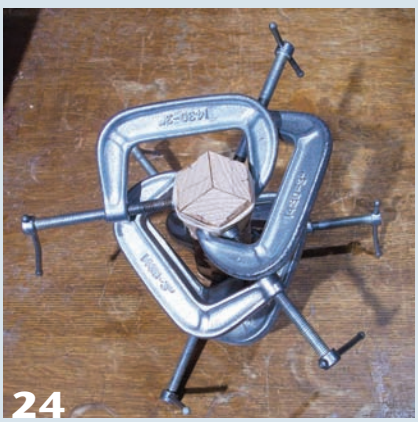
Once you have a cylinder, you can start cutting the outside contours ▸

22

A few whacks along the joint lines with a hammer and screwdriver should split the assembly just fine.

23

To make more room for the clamps, you can move the rubber bands toward the ends. Blocks protecting the wood from clamp marks aren't necessary unless you are preserving that area of the wood. Can you see the little bead of squeeze-out at the bottom center?



24

If there are gaps in the seams on top, you've tightened the clamps too much. The pencil marks are now on the outside.

After turning the hexagon down to a cylinder, the resulting cove and taper can be seen. This looks pretty good.

Or you can keep going . . .

And going . . .

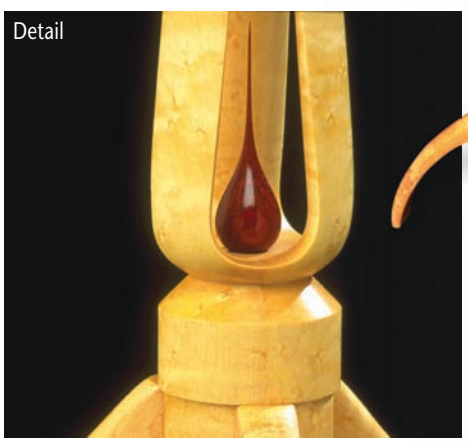
And going.

Free play will often produce a section that can be developed further.

(Photos 26–29). Try shallow cuts at first, gradually developing the shape you want. Stop often to check the results. Observe what happens when you trace the inside contour, and when you don't, and how that affects the edge line. Resist the urge to always make opposing lines meet. Note how the depth of the cut affects the breadth of each piece. Be careful not to go too thin, and check that there is only slight pressure from the tail center. As you reduce the material on the ends, be sure to keep enough of the glued portion to hold the assembly together.

Sanding these turnings can be finicky work. Reversing the lathe's rotation helps in cleaning up the trailing edges. Otherwise, try to keep sanding to a minimum. The cleaner your tool work, the easier it will be to get a smooth surface. Use cloth sandpaper to prevent shredding and a firm backing that conforms to the surface. This can be rubber, thin flats of wood, dowels—whatever works. Watch your hands—you've got some sharp edges spinning at high rpm. And don't press too hard; in some spots, more than half of each rotation may now be air, so aggressive sanding will ruin the clean profile and possibly take a nasty chop out of your finger.

Apply your finish, if that's the plan, then part the piece off and you've completed the project.



You've got a foot in the door. Next time, we'll add three more diamonds and swing the door wide open. ■

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. Peter will be demonstrating at the Hartford symposium in June.

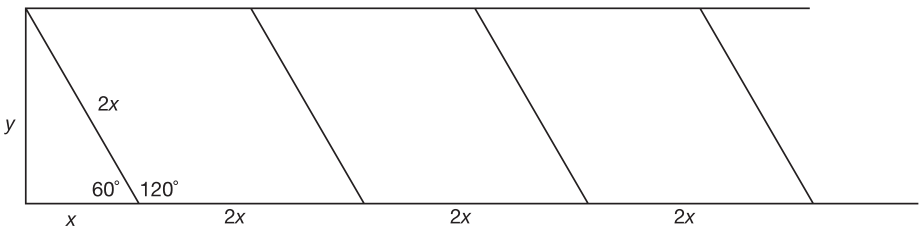
Photos: David Egan

Flame Table, 1992, Birdseye maple, bloodwood, 25" × 15" (64cm × 38cm)

Collection of Kenneth and Bernardine Clark

How do you know what size board to buy?

Let's say you've decided to start with some 6/4 cherry from your nearby lumberyard. You want a board that will give you at least three diamonds, but the stacks are full of boards of every possible width. Which one should you buy?



Formula for determining board widths:

y = board thickness
x = distance from edge to 60° cut
$x = (y \div \sqrt{3}) = (y \div 1.73)$
Bandsaw kerf = 1/16" (.0625)

For three diamonds:
Add $x + 2x + 2x + 2x = 7x$
+ two saw kerfs (.0625 + .0625)

Example:
y = 6/4 nominal board (actually 1.25")
$x = 1.25 \div 1.73 = .72$
$2x = 2(.72) = 1.44$
Width needed is:
.72 + 1.44 + 1.44 + 1.44 = 5.04 + .0625 + .0625 = 5.165

Round this up to 5¼".

Doing these calculations while at the yard is time consuming, so I came up with the table below for quick reference. If you look across the row corresponding to your board thickness and up at the corresponding column header, you can see how many diamonds you'll get at various widths. Using the example to the left, a board 1¼" thick will get you one diamond at 2¼", two at 3¾", and three at 5¼". Allow for some waste and any irregularities.

How wide is your jointer? If you buy a board wider than this, preparing it for the bandsaw will be a hassle. An 8" jointer can handle most of your needs. Otherwise, have the lumberyard true up the board for you.

—Peter Exton

Board Size and Diamond Yield

Board Thickness	x Value	Number of Diamonds: 1	2	3	4	5	6	7	8	9	10	11	12
	↓	Board Width											
½	9/32	⅞	1⅝	2¼	2⅞	3½	4⅛	4¾	5⅜	6	6¾	7⅜	8
⅝	⅜	1⅛	1⅞	2¾	3½	4¼	5⅛	5⅞	6⅝	7⅜	8¼	9	9¾
¾	7/16	1⅜	2¼	3¼	4⅛	5	6	6⅞	7⅞	8¾	9¾	10⅝	
⅞	½	1⅝	2⅝	3¾	4¾	5⅞	7	8	9⅛	10⅛			
1	9/16	1¾	3	4¼	5½	6⅝	7⅞	9⅛	10⅜				
1⅛	21/32	2	3⅜	4¾	6⅛	7½	8⅞	10⅛					
1¼	23/32	2¼	3¾	5¼	6¾	8¼	9¾						
1⅜	25/32	2½	4⅛	5¾	7⅜	9	10¾						
1½	⅞	2⅝	4½	6¼	8	9⅞							
1⅝	15/16	2⅞	5	6¾	8¾	10⅝							
1¾	1	3⅛	5⅛	7¼	9⅜	11⅜							
1⅞	1 1/16	3¼	5½	7¾	10	12⅛							
2	1⅛	3½	5⅞	8¼	10⅝								
2⅛	1¼	3¾	6¼	8¾	11¼								
2¼	1 5/16	4	6⅝	9¼	12								
2⅜	1⅜	4⅛	7	9¾	12⅝								
2½	1 7/16	4⅜	7⅜	10¼									
2⅝	1½	4⅝	7¾	10⅞									
2¾	1 9/16	4⅞	8	11⅜									
2⅞	1 11/16	5	8⅜	11⅞									
3	1¾	5¼	8¾	12⅜									

All measurements in inches. Intersection of board thickness with number of diamonds indicates necessary board width.* Example: A board 1½" thick will yield 4 diamonds at 8" wide.

*Board widths rounded up to the next ⅛"; 1/16" used for the bandsaw kerf (add 1/16" per interior cut for a table saw kerf).

Learn to Turn a Spindle Without Using a Skew Chisel

The "Compleat" Woodturner

Russ Fairfield

Izaac Walton's *The Compleat Angler,* published in 1653, is in its three hundredth printing. It is the third-most published book in the English language, after the Holy Bible and the works of Shakespeare. *The Compleat Angler* is an essay on the history, mental attitude, and skills required to be accomplished at fly fishing. For us woodturners there is also a history and set of skills to learn before we become accomplished woodturners. One of those skills is spindle turning.

There are many reasons why woodturners don't learn how to use spindle-turning tools: lack of interest because spindle turning is associated with beads, coves, and furniture parts; beginners have their eyes focused on bowls and want to turn them as soon as possible; and more than a few are afraid of the dreaded skew chisel. As a result, a generation of woodturners, expert and beginner alike, is missing half the experience and fun of turning wood. They are also missing an opportunity to show off their turning and artistic skills. It doesn't have to be this way. Devoting a couple hours' time to learning a few skills will make you a better woodturner.

This article is an introduction to spindle turning without making beads and coves or learning how to use a skew chisel.

Those who have been around woodturning for a few years will recognize the candleholders in this article as being similar to those made famous by Rude Osolnik. I chose this form as an introduction to the spindle because it is relatively easy to turn and it represents a historical art form that anyone would be proud to display. I could have just as easily

featured a weed-pot, but sticking dried grass in a piece of wood went out of fashion in the 1970s, along with leisure suits. This elegant candleholder form is timeless.

Why spindles are important

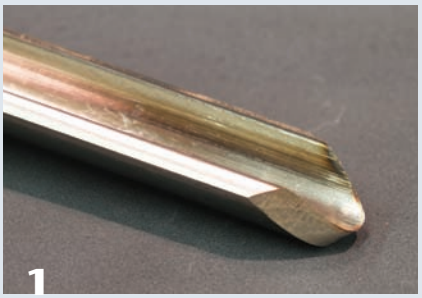
The spindle teaches us how wood should be cut. After that, everything else about turning wood becomes easier. When good spindle-turning techniques are learned, a person can analyze what is going wrong when those "other" turning tools cause problems. This doesn't mean that turning can't be learned from using a bowl gouge; it's simply easier to learn cutting techniques when the action is right in front of us, not hidden inside a form or buried in shavings.

Tools

You will need a ¾" (20mm) spindle-roughing gouge and a parting tool. That's it.

I am going to show you how to transform your ¾" (20mm) spindle-roughing gouge into a continental-style spindle gouge *(Photo 1)*. This large tool can make a planing cut as smooth as a skew chisel. Its large radius will make long sweeping curves easier and smoother than with smaller fluted spindle gouges. It becomes a safer tool when those pesky corners are gone—they can't "catch" when they aren't there. (Changing the shape of the tool doesn't prevent it from being used for turning square wood to round.)

While the modification of the spindle-roughing gouge is recommended, you could also turn these candleholders with a continental-style spindle gouge from Sorby or the forged spindle gouge from Henry Taylor. The Taylor gouges are available from Craft Supplies (woodturnerscatalog.com) in ½" (13mm) and ⅝" (16mm) widths. There is also the German-style spindle gouge available from Packard Woodworks (packardwoodworks.com) in ¾" (20mm) and 1" (25mm) widths. A similar ¾" (20mm) spindle gouge by Sorby is sold in Woodcraft stores.



1 A ¾" (20mm) spindle-roughing gouge, modified into a continental-style spindle gouge.

2 The author's 3⁄16" (5mm) parting tool, ground to make it easier to make a shearing cut.

All of these tools share two common features with the modified ¾" (20mm) spindle-roughing gouge: they have a wide flute and a large radius across their cutting edge. This design makes them well suited for making the long shallow curves of these candleholders. (Smaller forged spindle gouges and conventional fluted spindle gouges are better suited to turning a form with tighter curves.) The modified gouge described in this article has the advantage of being heavier and stiffer, making it easier to use and control.

The other turning tool used in this article is a parting tool. Any type will do. I prefer a 3⁄16" (5mm)-wide diamond parting tool, ground to make it easier to make a shearing cut *(Photo 2)*. Any parting tool may be ground this way or it can be purchased with this profile from Craft Supplies.

The other items needed are a drill chuck, a 1" (25mm) Forstner bit, a drive center, a live center for the tailstock, a pair of spring calipers, and a rule to measure diameters and lengths.

A pair of candle inserts will make it safer to have fire and wood together in the same place (inserts may be required by law in some places). Additionally, inserts make it easier to match the taper on the bottom of the candle. You can find these inserts at Craft Supplies and Packard Woodworks.

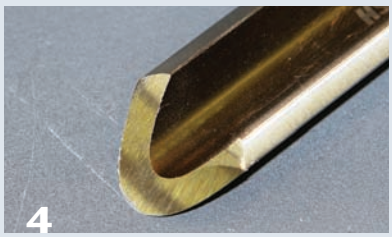
Lead shot will help keep the candleholders stable and it is available by the pound from gun and shooting supply stores. Five-minute epoxy will be used to hold the shot and a plug in the bottom of the candleholders. Of course, you will need sandpaper and your favorite finish.

Modifying a spindle-roughing gouge

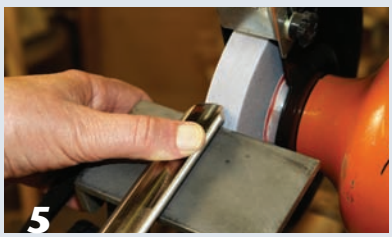
The ¾" (20mm) spindle-roughing gouge comes with a straight-across traditional grind and a 45° bevel. It needs to be ground freehand because it won't fit in a Wolverine sharpening jig. Freehand grinding is easy if you follow three steps:

1. Begin to reshape the profile on the end of the tool by sweeping back the sides of the tool at 45°. This doesn't compromise the strength and stiffness of the U-shape. To accomplish this, grind across the end of the tool *(Photo 3)*, with the tool held ▸

Step one: To reshape a spindle-roughing gouge, grind across the top of the gouge, flute-side down.



The profile of the tip should look like a thumbnail when viewed from the top. The tool is ready for step two.



Step two: To create the cutting edge, grind the bevel to meet the edge of the profile just created. Start in the middle of the tool's bevel.

Continuing in step two, roll the tool on the platform, changing directions so that both sides of the bevel are ground equally.

Make sure that the upper part of the cutting edge has a straight-to-slightly convex line in profile.

flute-side down on the grinding wheel. The profile of the tip should look like a thumbnail when viewed from the top *(Photo 4)*. From the sides, the profile should be either a straight line or slightly convex. You have just established what will become the cutting edge of the tool and are ready for step two.

2. Set the grinder platform to grind a 40°–45° bevel, as measured between the bevel and the bottom of the flute. Grind the bevel to meet the previously determined cutting edge. Start with the center of the tool on the wheel *(Photo 5)*. Grind the right half of the bevel with one smooth motion, swinging the tool handle to the right as you roll the tool on the platform *(Photo 6)*. Now change hands and go in the other direction.
3. Remove the burr on the inside of the flute with a slipstone. Sharpen the tool again with the grinding wheel.

Make sure that the upper part of the cutting edge has a straight-to-slightly convex line in profile *(Photo 7)*. That upper area of the tool can then be used for making a smooth cut.

The toolrest

An even, smooth surface on the wood depends on a smooth surface on the toolrest. Nicks and dings are telegraphed to the wood as the tool jerks and bounces when moved along the rough surface of a toolrest.

Use a flat mill file to remove any nicks in the toolrest. Clean the file with a file card or stiff wire brush. Hold it with the handle in your left hand and draw the file toward your body. Reverse the file and hold the handle in the your right hand when pushing it away from you.

Polish the top of the toolrest with 400 or 600 grit paper and a few drops of light oil such as three-in-one or mineral oil. Wipe it clean and the toolrest is ready to use.

The formula of thirds

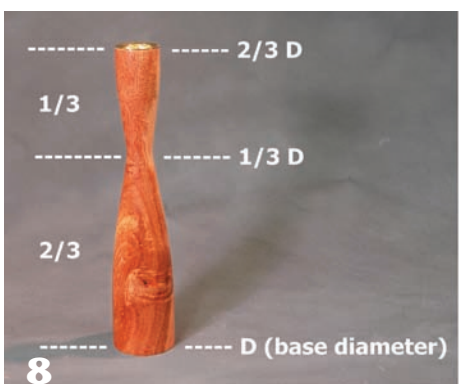
In this formula, everything is proportional to everything else by multiples of either ⅓ or ⅔. Applied to candleholders, here are the proportions:

- The thin waist divides the candleholder into two sections, with the bottom being ⅔ the total length and the top ⅓ the length.
- The diameter at the waist is ⅓ that of the base.
- The diameter at the top is ⅔ that of the base.

Using these proportions and their resulting dimensions makes it is easier to create an attractive form *(Photo 8)*. Additionally, duplicate pairs can be achieved without a lot of measuring or trial-and-error turning.

Selecting the wood

Any hardwood can be used for turning, but bold grain patterns always look more stunning than straight-grained wood. There is a wide variety of species and color available from all of our wood sources; finding a matching pair may be challenging, however.



The formula of ⅓ is used to create this candleholder.

Select two pieces that are 2" square and 10" long (50mm × 254mm) and as close to having the same grain pattern as possible. I am using a 10" (254mm) length because that seems to be the preferred length from wood dealers.

Determine which end of the blank will be the bottom and trim it square with the sides. Cut the blanks to 9" (230mm) long—that length is easily divided by three. The 1" (25mm) cut-off will be used later for a plug in the bottom.

Turning to round

Locate the center at both ends of the blank. Exact measuring to locate the center will result in the largest possible finished diameter. I always drill a small hole for the centers in each end using just the center spur of a Forstner bit. This makes a better hole than does forcing the points of the drive/live centers into the wood.

Mount the blank onto the lathe and turn it to a cylinder that is 1⅞" (48mm) in diameter, because that number is easily divided by three.

Pushing a tool into a spinning, square piece of wood can be a frightening prospect for a beginner. Let me take you through the process. To begin with, adjust the toolrest to the proper height. With the lathe off, rotate the wood to where it is diagonal in the lathe—the corners will be in the 12, 3, 6, and 9 o'clock positions.

Put a pencil mark on the wood in the center of the diagonal facing you. With the toolrest loose and all the way down, hold the tool so the bevel is on the wood surface, the cutting edge is at the line *(Photo 9)*, and the tool handle is held in a comfortable location at your waist or side. Depending on the height of the lathe, you may have to raise or lower the tool handle to achieve a comfortable position.

Raise the toolrest to support the tool in this position and clamp it in place. This is the height that the toolrest should be when starting to turn the square to round. A finer adjustment can be made later as the corners start to disappear. Also, move the toolrest closer to the wood as its diameter decreases.

Remove the tool and start the lathe. Select a speed that both you and the lathe are comfortable with. Something in the range of 1800rpm to 2200rpm is good.

Do the anchor-bevel-cut routine (ABC). Anchor the tool on the toolrest. Move the tool forward to where the wood is striking the bevel. Then, raise the handle to where the tool just starts to cut, and no more. Slide the tool along the toolrest and you will be cutting wood.

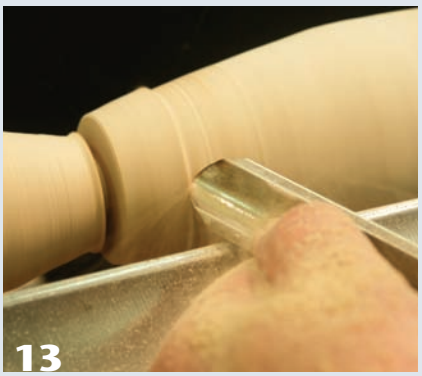
Now, angle the tool about 30°–45° toward the direction of the cut. Roll the tool slightly so you are cutting near the center of the tool. You will be pushing the tool into the wood and making a clean shaving. Repeat the cuts until the wood is turned to a cylinder. ▸

To set the height of your toolrest, place the corners of the wood diagonal to bed of the lathe and mark a line in the center of one side. Position the cutting edge of the gouge at the line, then set the toolrest height so that the wood will be cut at or above that line.

Locate the waist of the candleholder 3" (75mm) from the top for a 9" (230mm) candleholder.

Set the calipers at ¾" (20mm), which is ⅓ of the base diameter, plus ⅛" (3mm) for blending the top and bottom curves.

Turn the wood down to 1¼" (38mm) diameter for the top section.



Turn two large ogee (lazy "S") shapes to connect the top and bottom sections with the waist. With spindle turning, cut from the large diameter to the smaller diameter.

Make a light cut across the bottom and top using a parting tool to make sure both are square with the sides. Take care not to remove the drive and live center holes. Those will be used later for remounting the candleholders.

Layout

Locate the waist of the candleholder. This will be at 6" (155mm) from the base and 3" (75mm) from the top for a 9" (230mm) candleholder *(Photo 10)*.

Set the calipers at ¾" (20mm), which is ⅓ of the base diameter plus ⅛" (3mm) for blending the top and bottom curves. Turn the waist down to ¾" (20mm) diameter with the parting tool *(Photo 11)*.

Set the calipers to 1¼" (38mm) and turn the wood from the top down to this dimension *(Photo 12)*.

Turn the shape

Now comes the fun part—turn two large ogee (lazy "S") shapes to connect the top and bottom diameters with the waist *(Photo 13)*.

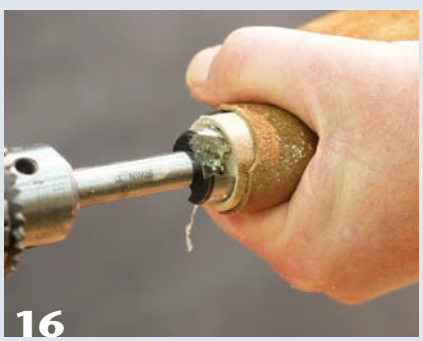
Run the lathe at 1800rpm to 2200rpm, and remember ABC. Begin cutting at either end and push the tool toward the waist with one long sweeping motion. Always cut downhill from the largest diameter to the smallest. This means cutting to the waist from both ends and meeting at the bottom of the curve.

The only criterion for the curves is that they do not end up interfering with the holes that will be drilled later in the top and bottom. That means the bottom will have a shallower curve for the first 2" (50mm) and the top for about 1" (25mm) before the curves sweep down to form the smallest diameter of the candleholder. Use the calipers to check the diameters at these critical locations.

Make a light cut across the top and bottom using the parting tool to make sure both are square with the sides *(Photo 14)*. Make a ⅛" (3mm) concave curve in the bottom by angling the parting tool. Part down to less than a 1" (25mm)-diameter with the trimming cut on each end.

Candleholders generally come in pairs, so make another that is the same as this one. Holding the finished candleholder alongside the one in the lathe will help you match the curves. The most important thing about a pair is that the waist be the same distance above the base. You may have to adjust the location of the waist so they will match. Close is close enough for everything else. Take them out of the lathe and stand them upright for a better comparison of their shapes.

With a Jacobs chuck in the headstock and a 1" (25mm) Forstner drill bit inserted, mount the finished candleholder between the bit and the live center of the tailstock. Reduce the speed of your lathe to about 400rpm.



Using a small piece of leather, hold the rotating candle holder with one hand and advance the tailstock with the other hand to drill the hole. Swap ends and drill the hole in the bottom.

Finishing

Sand and finish the candleholders before drilling the holes for the inserts and the lead shot. There are many ways to finish them. I sand to 600 grit followed by 0000-steel wool then apply a heavy brush-on coat of lacquer, wait two or three minutes, then wipe it all off, using new paper towels until the surface is dry. I buff it again with 0000-steel wood to get rid of extra

lacquer and smooth out any rough spots. I apply lacquer again, wipe it off again, and let it dry for about fifteen minutes. The candleholder can now be handled for drilling the holes.

Drilling

The drilling may be a bit different from what you are used to doing, and it depends on the Forstner bit having a center spur. Insert a Jacobs chuck into the headstock and place a 1" (25mm)-diameter Forstner bit in it. Leave the live center in the tailstock. Hold the candleholder between the spur of the drill bit and the tailstock live center using the holes already there *(Photo 15)*.

Set the lathe speed at about 400rpm. Hold the candleholder with your left hand *(Photo 16)* to keep it from turning while advancing the wood into the drill with the tailstock. Use a small piece of leather to help grip the wood. Drill the hole in the top to 1" (25mm) deep, or what is required for your candle insert. Swap ends in the lathe and drill a 2" (50mm) deep hole in the bottom.

Completing the candleholders

Attach the cut-off piece of wood between centers of the lathe and turn it down so that there is a tight fit in the hole in the bottom of the candleholder *(Photo 17)*. Taper it slightly to get a tight fit and then part it off to where there is no more than ¼" (6mm) in the hole.

Fill the hole with the lead shot to within ¼" (6mm) of the top. Mix enough epoxy to cover the shot and have some left to glue in the plug. Mount the candleholder and glued-in plug between centers in the lathe, spin it by hand to see that it runs reasonably close to true, make any necessary adjustments, clamp it tight, and wait for the epoxy to cure *(Photo 18)*. Using a parting tool, cut off the plug, but do not turn away the previously trimmed edge, which is square with the sides of the candleholder.

Sand the bottom of the base (this is optional). If you choose to do this, put a 2" (50mm)-diameter sanding mandrel and a 100-grit sanding disc in the Jacobs chuck in the headstock (or use your drillpress). Hold the candleholder so that the edge of the disc matches the recess in the bottom, and sand by rotating the candleholder *(Photo 19)*. Be careful not to cut away the wood at the edges of the base. Sand to as fine a grit as you wish. I usually stop at 220 grit.

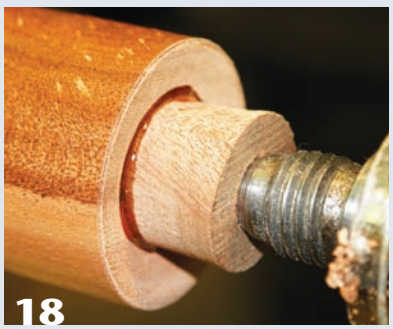
Wipe on a coat of lacquer, wipe it off, and let it dry. Give the candleholders a good buffing with buffing wheels, using both abrasives and wax.

Install the candle inserts *(Photo 20)*. Some of these are held in with a screw, while others use an epoxy or silicone adhesive. Use whichever is appropriate.

You have now learned the basics of spindle turning without having to use a skew chisel, and you have a pair of candleholders to prove it. Display them with pride. I think Rude would approve. ■

Russ Fairfield is an active member of the Inland Northwest Woodturners and the INW Pen Turners Association. He teaches woodturning classes at the Woodcraft store in Spokane, WA, and has traveled extensively demonstrating at local clubs and regional symposiums. For more information, visit woodturner-russ.com.

Attach the cut-off piece of wood between centers and turn it down so that there is a tight fit in the hole in the bottom of the candleholder.



After filling the hole with lead shot and epoxy, insert the plug and mount the assembly between centers of the lathe. Clamp tight and wait for the epoxy to cure.

Sanding the bottom of the candleholder is made easy by attaching a sanding mandrel in the lathe's headstock.

Install the candle inserts.

Hybrid Bottle Stoppers

Mark S. Nadeau

Bottle stoppers are a subject of some debate within the woodturning field. With the many options available, we can choose from different grades of cork or select silicone or metal stoppers. Metal stoppers are available in assorted shapes made from different metals with various kinds of plating. There are even several options of rubber seals. Pros and cons can be made for each option. Some turners do not use plated-metal stoppers for fear that the stoppers might eventually pit, peel, and then corrode. This concern motivates them to use solid stainless steel stoppers. Others use nothing but plated stoppers because they have not had a problem, they like the design, or they simply do not want to spend the extra money required to purchase stainless steel stoppers. Others are purists and will use nothing but corks for their stoppers.

If you like the idea of using stainless steel but prefer a traditional cork, a hybrid bottle stopper might be just for you. I combine Portuguese Flor corks with Type 304 stainless steel dowels for my hybrid bottle stoppers.

The idea came to me after turning my second bottle stopper. The first time I tried to turn a stopper, the maple dowel failed halfway through. My second stopper was successful, but the dowel was compressed out of round from the chuck jaws. I also experienced flex and vibration during turning because of a lack of stiffness in the dowel. The experience was irritating, and all I could think of was that the dowel on the stopper would probably not survive as long as a customer would expect it to. That led me to start using dowels made from Type 304 stainless steel. They are a bit more expensive and require more work per unit, but they are a lot less expensive than any of the metal stoppers on the market.

In addition to the cost factor, there are other benefits to a hybrid bottle stopper. There is no wood to affect the taste of the wine if the stopper is left in the bottle for a long time, and the 304 stainless steel is restaurant grade and will not rust. These stoppers have a nice weighted feel to them, similar to that of solid-metal stoppers. Customers comment positively on this aspect when they pick up one of my stoppers. The heft, solid construction, and quality materials are positive selling points. The other benefit is that I have no more broken dowels and get a lot less flex and vibration.

Understanding stainless steel

Stainless steel is not always stainless. It can tarnish. I have heard some people say that the higher the grade number, the better the stainless steel. In terms of corrosion resistance, this is typically not true. The 300-series stainless steels have better corrosion resistance than the 400-series stainless because they contain nickel; indeed 304 stainless steel is generally used to produce restaurant-grade products such as sinks and utensils. All of the 300-series stainless steels except Type 316 are also sometimes referred to as 18:8 stainless, because they typically contain 18% chromium and 8% nickel. The exception, 316 stainless steel, contains more than 8% nickel and has the added benefit of molybdenum for superior corrosion resistance in highly acidic and/or corrosive environments such as those found in the marine and photographic industries. All stainless steel photographic sinks and processing tanks are made from 316 stainless to resist pitting and corrosion caused by the harsh chemicals. If you were to use an old restaurant sink in a darkroom, it would most likely develop severe pitting very quickly. Types 304 and 316 are the only two grades of stainless that I would ever consider using on my stoppers. Type 316 stainless is far superior, but it costs about 18% more than 304. For the purposes of a simple bottle stopper, I believe 304 stainless steel is the perfect choice.

Avoid pitfalls

Use fresh, uncontaminated aluminum oxide sanding disks and cloth-backed

plumber's abrasive to prevent microscopic deposits of iron on the surface of the stainless steel. Neglecting this precaution could cause a film of rust to form on the surface of your stainless-steel stoppers. This problem could also occur if you are buffing solid stainless stoppers to alter the shine. Make sure to use a dedicated buffing wheel for stainless steel.

Making stainless steel dowels

Type 304 stainless steel rods, ⅜" (10mm) thick, can be purchased in 6-foot (1.8m) lengths from industrial supply companies such as Enco or MSC. A 6-foot-long (1.8m) rod can yield thirty stopper dowels. For purposes of this article, I purchased a 1-foot (30.5cm) Type 304 stainless rod from a local hardware store. However, the price was double what I would have paid per foot from Enco. Shop smart to make your stoppers cost-effective.

Use a permanent marker to mark the rod every 2¼" (57mm). A 1-foot rod will yield five dowels. The marks are approximately 3⁄32" (2mm) wide, which corresponds to the kerf of the cutting wheel, so measure the next length from the edge of each drawn line. Doing so will yield dowels that are 2¼" (57mm) long. There is generally about ¼" (6mm) of waste left over.

I use a new metal-cutting wheel on my angle grinder and cut the dowels freehand *(Photo 1)*. You could also use a cut-off wheel on a table saw or power miter box, but those wheels have a wider kerf. Be sure to use all sensible safety precautions such as clamps, gloves, faceshield, dust mask, and hearing protection.

Next, use the same cut-off wheel to make grooves in the last ½" (13mm) of each dowel *(Photo 2)*. These grooves will give the glue better holding power. Clean off any burrs on the cut ends of the dowel with cloth-backed plumber's abrasive.

Turning the bottle stopper

Choose your stock and square it up. For this demonstration I chose Macassar ebony. The bottle stopper blank is 1⅞" (48mm) square.

Decide in which end the dowel will be inserted. Find the center, mark it, and drill a ⅜" (10mm) hole to a depth of ¾" (19mm). A piece of blue painter's tape on the drill bit acts as a good depth gauge *(Photo 3)*.

To glue the stainless dowel into the wood, I use West System epoxy with the Type 206 slow hardener. This will yield a strong permanent bond. Be sure to put epoxy (or whatever glue you chose) on all mating surfaces *(Photo 4)*. Because of the hydraulic pressure of the glue, you will need to clamp the dowel into the blank *(Photo 5)*. Wipe off any excess glue that oozes out and keep the stopper clamped overnight. You will know if the dowel is fully seated in the hole when only 1½" (38mm) of dowel is protruding.

With the glue thoroughly dry, place the stainless steel dowel in a collet chuck or a scroll chuck with a set of pin jaws. Leave about ¼" (6mm) between the wood and the jaw face and bring the tailstock up to the wood for extra support *(Photo 6)*.

Turn the wood round and square up the bottom of the stopper blank. The ¼" (6mm) space between the wood and the face of the jaws facilitates truing the end of the blank using a parting tool *(Photo 7)*.

To make one of my "Mad Hatter" designs, I leave the bottom wide for the brim of the hat and round over the corner so that the brim is curled up.

Thoroughly sand the bottom. At a later step, the stopper will be positioned flush against the face of the chuck jaws, so that surface will not be accessible.

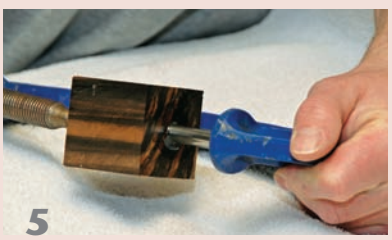
Take the stopper off the lathe and place a cork on the dowel. Some of the steel dowel will protrude past the bottom of the cork because of the stock that was removed with the parting ▸

Use a new metal-cutting wheel on an angle grinder to cut the stainless steel dowels. Safety precautions include using a clamp to hold the dowel when it becomes shorter, gloves, faceshield, dust mask, and hearing protection.

One rod will yield five dowels. Notice the saw kerfs at the end of each dowel. Those kerfs help the epoxy adhere.

Drill a ⅜" (10mm) hole in the center of the blank to a depth of ¾" (19mm). A piece of tape acts as a good depth marker.

Apply epoxy to the dowel and in the drilled hole.



Clamp the dowel and let it set overnight to allow the epoxy to cure.

Place the steel dowel in a collet chuck or a scroll chuck with pin jaws. Leave about ¼" (6mm) between the wood and the face of the jaws. Bring up the tailstock for extra support.

Turn the blank round and square up the bottom face of the stopper blank. Sand that area.

Remove the blank from the lathe, push a cork over the dowel, and mark the excess length of the dowel using a permanent marker.

With a new 50-grit sanding disc on an angle grinder, grind down the stainless steel dowel just past the marked line.

The finished hybrid bottle stopper.

tool when you trued up the bottom. Mark the length of the protrusion with a permanent marker *(Photo 8)*. The ink will inevitably get on the cork, so keep this cork to mark all future stoppers. Choose the worst cork in the bag for this task, as there is always at least one.

With a new 50-grit sanding disk on the angle grinder, grind down the stainless dowel just past the marker line *(Photo 9)*. Remove the burr with cloth-backed plumber's abrasive.

Place the stopper back in the chuck with the bottom of the blank pressed firmly against the jaws for support *(Photo 10)*. Turn the stopper to the desired shape *(Photo 11)* and sand to your final grit. I sand my stoppers to 600 grit for a silky-smooth feel.

After applying your favorite finish, rough up the dowel with cloth-backed plumber's abrasive. This will help the glue adhere to the surface.

Use an FDA-approved glue to adhere the cork to the stainless dowel *(Photo 12)*. I use Franklin Titebond II water-resistant glue, which is FDA approved for indirect food contact. Clean up any squeeze-out with a damp paper towel. The cork will protrude past the end of the dowel about 1/32" (1mm) if everything was done properly.

Once the glue is dry, use a new 100-grit sanding disk in an angle grinder to smooth and level the cork and dowel *(Photo 13)*.

While this method of making stoppers is not perfect, I consider it to be a major improvement over the standard wooden-dowel-and-cork stoppers. The only disadvantage of cork is that it absorbs liquids and odors. If you use a cork stopper on a particular red wine, then that stopper should be used specifically for that wine. Using it on a white wine at a later date could affect the wine's taste. A solid-metal stopper on the other hand, can be washed thoroughly and used on another type of wine with little or no problem.

The Franklin Titebond II water-resistant glue that I use to bond the cork is not recommended for use below the waterline, so I tell my customers that they should not store the bottles horizontally when using my stoppers. Most people have no problem with this, unless they use a dedicated wine refrigerator with horizontal wine compartments. The issue of gluing the cork to the dowel is universal, no matter what material you are using for the dowel. Just make sure that the glue you use is food-safe. ■

Mark S. Nadeau is a photographer and woodturner who lives Portsmouth, Rhode Island. Questions and comments can be sent to mark@markscottnadeau.com.

Place the stopper back into the chuck with the bottom face pressed firmly against the jaws of the chuck for support.

Turn the stopper to the desired shape and sand.

Use an FDA-approved glue such as Titebond II to adhere the cork to the stainless steel dowel. Clean up any squeeze-out using a damp paper towel.

Once the glue is dry, use a new 100-grit sanding disk in an angle grinder to smooth and level the cork and dowel.

Mastering the Four-Jaw Scroll Chuck

A Primer

Dick Gerard and Stan Wellborn

Open-back Talon chuck with key.

Of the many ways that woodturners can mount stock onto a lathe, nothing seems to generate more interest—or debate—than the popular four-jaw, self-centering scroll chuck. It's fair to say that scroll chucks are the first choice to secure wood for turning as well as the number one lathe accessory, in large part because turners appreciate their convenience, versatility, and time-saving qualities.

This handy and practical device came into widespread use on wood lathes in the mid 1970s, derived from the gear-driven chucks that had been used in metalworking for many years. After its introduction, woodturners quickly shelved their faceplates and jam chucks to enthusiastically adopt the scroll chuck—and the turning craft hasn't been the same since.

Properly used, scroll chucks offer significant advantages over traditional methods:

- Screw holes are eliminated from the bottom of turned items, making more creative designs possible.
- Chuck jaws can grasp both a round tenon (also called *spigot* or *foot*) as well as square spindle stock.
- Indexing and off-center turning can be enhanced through the use of some scroll chucks.
- Production turners find scroll chucks a boon because changing out stock takes much less time than with traditional means.

This article explores the uses of the four-jaw scroll chuck for the beginner (and perhaps intermediate) woodturner. It is not an endorsement or ranking of any particular make, model, or manufacturer, but rather an overview of what is available, and the pros and cons of various designs.

Screw chuck attached in a Talon chuck.

Talon chuck showing safety slots and pin in jaws.

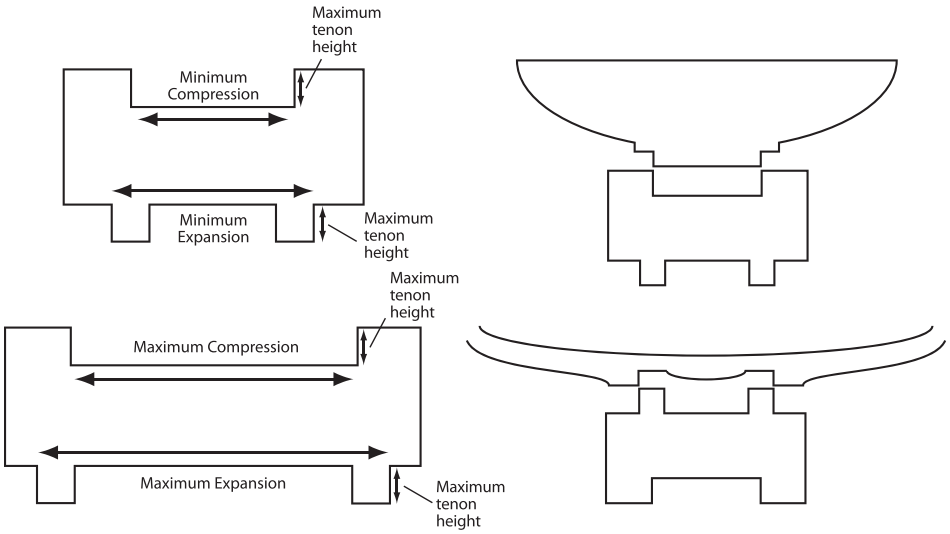
Limitations of chucks

Scroll chucks have their limitations. Perhaps chief among them is the potential for mishaps that can result in injury to the turner or damage to the turning. For larger work, and when the absolute best holding power is required, using a faceplate is still the safest way to go. As David Ellsworth tells his students, and notes in his recent book *Ellsworth on Woodturning*, "If the piece of wood is tall or heavy or out of round, or if it looks like it would smash your foot instead of just crunching a toe, don't even think twice—just stick it on a faceplate. The bottom line is that nothing holds a piece of wood to the lathe stronger and with less vibration than a faceplate."

Varieties of chucks

A plethora of chucks and chuck accessories is available in today's market. This is evident by opening any woodturning catalog or by perusing online woodworking forums where no one is shy about expressing blunt and candid opinions about chucks. Turners are enticed by various brands of scroll chucks—with a wide range of prices—as well as vacuum chucks, donut and jam chucks, collet and Jacobs chucks, eccentric chucks, and more. In addition, four-jaw chucks have an array of extensions and attachments of every configuration, including screw chucks, Stebcenter and spur drives, and jumbo jaws of various sizes. The world of chucks ▸

Template guides for turning safe tenons and recesses



can be a confusing place to navigate, even for experienced woodturners.

That world has expanded considerably in recent years. The leading industry manufacturers include Oneway, the Canadian company that produces the Stronghold and Talon models; Vicmarc, a manufacturer in Australia of the VM 100, 120, and 150 series; Robert Sorby, the English lathe tool producer that makes the Patriot brand; New Zealand-based Teknatool, maker of the Nova and Titan chucks; and Axminster, the British toolmaker that offers the Clubman and Super Precision chucks.

Increasingly, manufacturers in China and other Asian nations are bringing to the market less expensive scroll chucks that are gaining admirers for their rugged qualities, high performance standards, and their interchangeability with more established brands. These include several models made by Grizzly Industrial, the Barracuda line from Penn State Industries, and Pinnacle and WoodRiver chucks sold by Woodcraft, among many others. For lighter duty applications and for beginning turners, these chucks afford commendable quality and are certainly less demanding on the wallet.

Axminster engineering workshop and Axminster chuck.

What is a chuck and how does it work?

A *chuck* is a mechanical device that holds material during various stages of processing. Applied to woodturning, this primarily means a four-jaw scroll chuck. This design allows the four centering jaws to work in unison—unlike metalworking chucks in which the jaws may operate independently to accommodate off-center work.

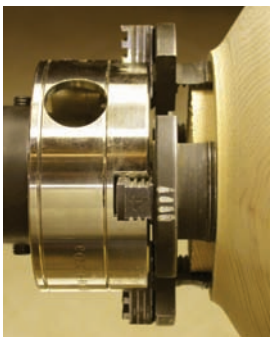
Four sliding base jaws, or *travelers*, are engaged by matching channels that are grooved into the chuck body. The chuck's top jaws that grip the wood attach to these slides. At the opposite end of the chuck is a threaded insert, cut to match the thread of the lathe's headstock spindle nose. The centering results from a machined spiral, or *scroll,* that rotates inside the body of the chuck and shifts the jaws in and out as the lathe operator tightens the grasp on the work.

A turner activates the rotational movement using a geared chuck key, hex T-wrench, or dual tommy bars, rodlike levers that are pulled counter to each other to encircle and secure the work. While lever-operated chucks are generally faster than key-operated chucks, and lower in price, they are less convenient and not as intuitive to use. Opening and closing mix-ups can easily occur if the user is not paying close enough attention because achieving a reliable hold takes more effort. Thus, the majority of chucks sold today use a single key, which allows a major advantage: one-handed operation.

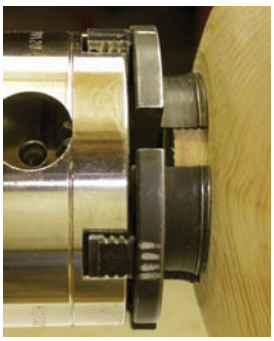
Quality control

While manufacturers take care to produce accurate products, any affordable chuck that has moving parts will exhibit some wobble or *slop,* which is built-in tolerance that results in a slight amount of run-out that is especially noticeable in larger-diameter pieces. The only way to completely remove this tolerance would be to engineer chucks to such a high degree of precision that few people could afford to purchase one. Metalworking chucks, for example, can cost thousands of dollars and weigh hundreds of pounds to eliminate tolerances in performance.

Many turners insist that some run-out is inevitable in wood lathe work anyway, because of spindle misalignment and the nature of wood itself. If a chuck shows signs of run-out that is noticeable to the naked eye, the first thing to check is whether the spindle adapter is improperly aligned



The diameter of this tenon is too large, causing the jaws of the chuck to stick out so far that they become a safety hazard. Additionally, if the tenon were slightly longer, the jaw would have more surface on which to grip.



The diameter and height of this tenon will hold the bowl blank securely and safely. The jaws are not protruding too far; the tenon is not touching the bottom of the chuck; and there is a flat shoulder on the bottom of the bowl that rests evenly on the top of the jaws.

or loose. Even the slightest run-out at the spindle will be magnified considerably in the turning itself. And, taking a blank out of the chuck and remounting it will almost always produce noticeable run-out. Some turners place a mark on the chuck's edge and a corresponding mark on the tenon so that they can remount the work exactly where it was originally. *Repeatability* is important in chuck performance, so that when pieces are reversed in the lathe they will require a minimum of reshaping to eliminate wobble.

Manufacturers compensate for these quality control issues by working to perfect a chuck's fit and finish so that the device will provide a lifetime of consistent service. External surface coating is applied to improve smoothness of operation and reduce chances of rust and corrosion. Materials are chosen for compatibility, balance, and resistance to wear. The scroll, base jaws, and top jaws use different metals that have surfaces tempered by heat and tough electroplating. Chucks come in both open- and closed-back designs, which may affect their operation somewhat. An open-back chuck leaves the gears exposed, which may allow grit and grime to impede the tightening of the jaws, but also facilitates cleaning. Oneway claims that after producing the Talon and Stronghold chucks for many years, no chuck was ever returned because of its open-back design. Vicmarc chucks, which have closed backs, have convenient indexing holes drilled around the outer edge of its chucks. The back can be removed for inspection and cleaning of the gears.

Safety considerations and gripping power

Various safety measures have been built in to prevent the jaws from loosening or flying off the chuck. For instance, Oneway has added grooves that are cut in the face of the chuck in which a pin rides as the jaws move. A shorter groove keeps the jaws from extending beyond the body of the chuck—a benefit in schools or beginner classes to protect knuckles from the spinning steel. A longer groove allows maximum travel while not interfering with easy disassembly if required. Nova and Vicmarc employ a pin in the jaw travel slot. These designs usually reduce jaw travel and, as a result, more top jaw sets are required to cover a range of diameters.

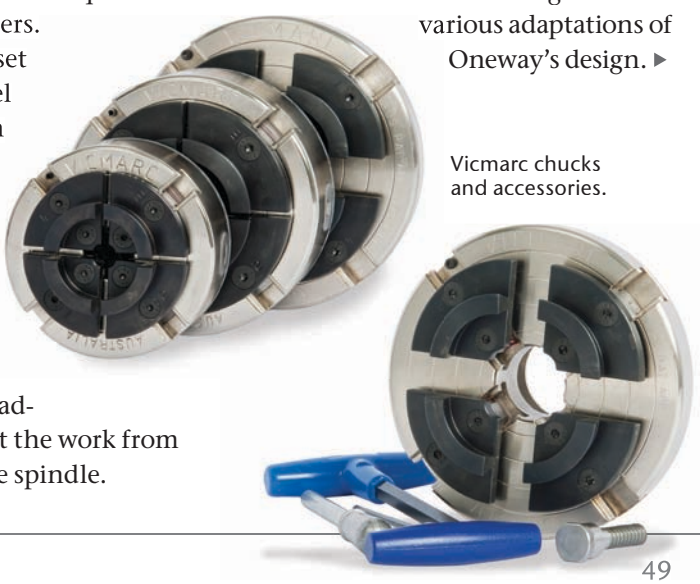
Chucks should have set screws of hardened steel to securely attach them to the lathe's spindle. Moreover, because many turners increasingly use reverse, or clockwise, turning, it is *critical* that the chuck attach tightly to the headstock spindle to prevent the work from unwinding right off the spindle.

In addition, to mitigate the prospects of a failure, experienced turners seldom rotate chuck-mounted stock at high speeds, especially in the roughing-out stage. So long as one is getting a good clean cut, slower is safer. And, prudent users know to crank in the live center from the tailstock to provide additional support when turning a bowl blank.

When a bowl is properly mounted in a chuck by its tenon and the turner experiences a catch or dig-in, the tenon must stay attached in the chuck (even if the bowl itself breaks off). To reduce the chances of a failure, chuck designers have created several innovations that have been adopted by most manufacturers. The most crucial aspects of these are the gripping powers of the top jaws—the ones that clamp the wood. No matter how good, smooth, expensive, cheap, large, or small—if the top jaws are not capable of holding the blank securely, then the chuck is essentially useless.

Types of jaws and mounting the stock

Perhaps the most contentious issue among veteran turners is which of the two main types of jaws on the market has superior holding power. The most common style is the dovetail shape used by Vicmarc and other makers. The other is the patented Oneway grooved cam-milled design and the various adaptations of Oneway's design. ▶



Vicmarc chucks and accessories.

Using a parting tool to turn a tenon works well to create a 90° shoulder and a flat base surface. If dovetail-style jaws are used, the sides of the tenon should match the jaw shape.

Place marks on the bowl blank that relate to the jaws of the chuck so the bowl blank can be remounted in the same position. Doing so will help keep the bowl blank in alignment for "repeatability" and will minimize wobble.

A platter or bowl blank also can be expansion-mounted; the jaws of the chuck are placed inside a turned recess.

Jaws are made to clamp externally on a round tenon (or glue block) in what is known as a *compression* hold, or to extend internally into a hollowed recess, known as *expansion* or *tension*. How well a jaw grips depends on the fit between the jaws and the tenon (or the dovetail shape in the event you are using the chuck in expansion mode), the jaw diameter, and the diameter of the wood. Every jaw, with the exception of Oneway's patented top jaws, is designed to fit only one size and one dovetail shape. Any other size or shape will compromise holding power to some degree.

Wood is held more strongly in compression than in tension. For turning bowls and vessels, most turners use a tenon to hold the piece in compression mode. For plates and platters, a recess is often used, and—as long as the jaws are not overtightened in the recess and as long as no major catches occur—the use of the recess with the wood in tension is suitable.

Nova chuck

Don't apply too much force when tightening the jaws in either expansion or compression mode. Many turners tighten the chuck so much that they split the recess or they crush the fibers of the tenon, thus decreasing the holding power of the chuck and jaws. Crushing the fibers of the tenon is also a prime culprit for introducing unwanted vibration and chatter into the turning process. With that said, however, when holding green wood, it is necessary to periodically tighten the jaws as turning progresses. The tenon will loosen as jaws sink deeper into the wet fibers as the wood dries during the turning process.

Wood should be held in a concentric grip, which arguably should occur when using a scroll chuck. Many turners, however, insist that the best way to ensure a concentric grip is to hold the tenon in the jaws and tighten the chuck just enough to hold the piece snugly. Then, rotate the chuck to the opposite side opening and then tighten a bit further, repeating the process on each side. Progressively tightening in this manner makes it more likely that all the jaws will compress equally and will be concentric on the tenon.

Tenon size and recess

The size of the tenon or recess should be proportional to the intended finished size of the object and the size of the jaws being used. Most chuck jaws are manufactured in such a way that maximum gripping power is achieved at only one diameter: when the jaws are nearly closed. At this point the maximum amount of jaw surface is holding the tenon. At larger openings, less and less of the jaws' surface is gripping the stock.

A useful rule of thumb is to make the tenon about 30%–40% as wide as the largest diameter of the stock. Large bowls 12"–20" (30cm–50cm) in diameter, for example, require a tenon 3½"–6½" (9cm–16cm) in diameter. Bowls that are 4"–12" (10cm–30cm) in diameter can be held on a tenon that is 1¾"–4" (45mm–100mm) in diameter. Tenon height should be a maximum of 3⁄16"–7⁄16" (5mm–11mm). In general, the better the fit of the wood blank to the design of the chuck, the better it will hold. Experienced turners make a template out of cardboard or plywood with a semicircular cutout of the minimum and maximum distances that their chuck will accommodate to facilitate a proper fit.

Tenon or recess profile

The walls of the tenon or recess must match the profile of the jaws. On chucks with a dovetail design, the tenon or recess must correspond to that shape. Other manufacturers machine the profile of the jaws such that a straight-sided tenon or recess must be used.

The bottom of the tenon should not rest on the inside bottom of the chuck. Rather, the shoulder around the bowl's tenon should sit in solid contact with the top of the chuck's jaws. Since the exposed

surfaces of the jaws are machined flat, a corresponding flat area must exist on the wood immediately surrounding the tenon. This ensures maximum holding power and safety by providing sideways support for the bowl blank during turning.

Design diameter is the size that the jaw was machined to before separation into the four quadrants. The simplest way to check design diameter is to open the chuck to ⅛" (3mm) between the sides of the top jaws. Measure across the circumference and you have design diameter. When the owner's manual claims that a certain jaw has a range of 2"–3" (50mm–75mm) you can be sure only of one thing: design diameter is somewhere in between, probably 2¼" (60mm).

The Oneway jaws are a radically different design in two areas. For external gripping, the milled, serrated profile will grip any diameter within its capacity (not just design diameter) with eight nearly form-fitting contacts. For internal chucking, the jaw shape is a 10° dovetail. Additionally, Oneway mills a small circular ridge on the outside of the jaws that bites deep in the dovetail recess for extreme holding power in the least visible area of a recess.

Process for mounting and turning a bowl

It is commonly accepted in today's turning world that the bottoms of bowls be finished in such a way that the method of holding the blank is no longer a visible feature. Usually, this means that a tenon is removed after hollowing or is incorporated into the design.

At the start of the turning process, a bowl blank also can be held with a large screw, upon which the blank is threaded using a predrilled hole. Screw chucks are usually provided as accessories and, when used, are held in the chuck's jaws. Alternatively, the blank can be mounted on a faceplate, using screws. Held either way, and with the tailstock brought up for extra security, a tenon can be turned on the bottom of the bowl. The outside of the bowl can be completely finish-turned before the blank is reversed and attached by its tenon to the scroll chuck for hollowing.

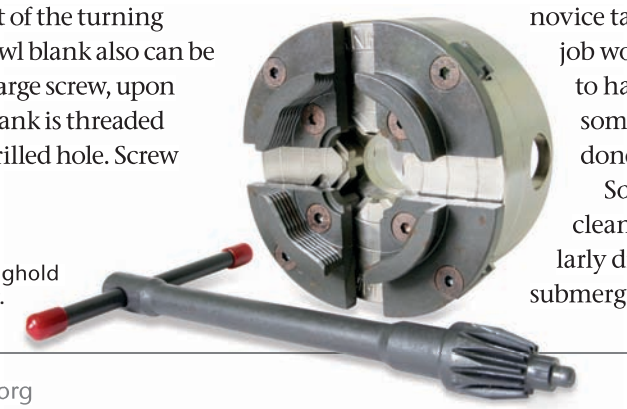
When the bowl is complete, the tenon is removed, either by turning or by sawing it off. If a lathe is equipped with a vacuum chuck, that is often the fastest and easiest approach. Other options are the jumbo or mega jaws marketed by several chuck manufacturers. These jaws hold the rim of the bowl with rubber buttons. Last but not least, the bowl can be remounted onto a jam-fit chuck, then secured with the revolving tailstock center for removal of the tenon. The small nub left in the center can be carved off.

Chuck maintenance

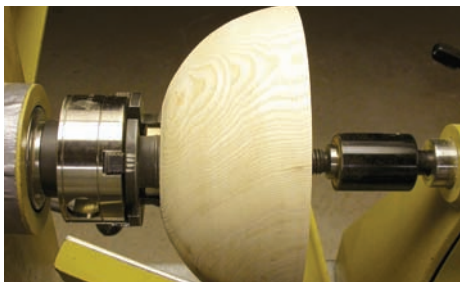
Modern-day chucks can take years of daily use, and even abuse, and still perform admirably. But over time, plus exposure to the normal abrasion of metal on metal, compounded by the introduction of dust or rust, moving parts will show wear; safety will be compromised. To minimize this, one can periodically disassemble the chuck, remove all dust, dirt, and grime and administer a dry lubricant to moving parts. Manufacturers usually offer detailed instructions on taking a chuck apart and reassembling it, and it is a very instructive process. Any novice taking on this job would be wise to have on hand someone who has done it before.

Some turners clean their particularly dirty chucks by submerging them in mineral spirits or acetone for a half hour to loosen accumulated residue, then using an air hose to blow them out. At a minimum, experienced users recommend periodic spraying with a dry, Teflon-based lubricant rather than using oils or greases.

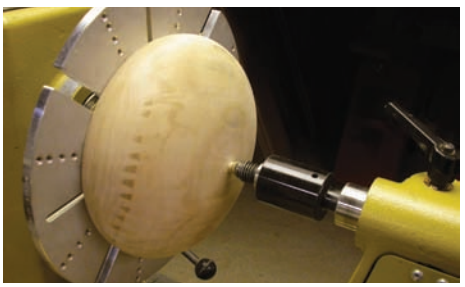
When maintaining the chuck, remember to inspect the screws that hold the jaws to the slides. These should be checked with every use to ensure that they are tight and fully seated. Also, examine the grooves and dovetails as well as the heads of the screws that join the jaws to the slides. If they are packed with sawdust, clean them with a short blast of compressed air or a scratch awl. If care is taken, chucks should provide many years of use. ■



Oneway Stronghold chuck and key.



Use the tailstock for support as long as possible while roughing out a bowl blank to provide maximum safety.



The bottom of a bowl can be turned by mounting the bowl in jumbo jaws in expansion or compression modes. Whenever possible, use the tailstock for added support and safety.

Dick Gerard, an Honorary AAW Lifetime Member and current vice president of the Central Indiana Chapter, previously served on the AAW Board and currently teaches and demonstrates. Stan Wellborn turns wood in Washington, DC, where he was a journalist for many years. Photos and drawings by Ed Kelle.

A Pool Cue Stand

Abraham Tesser

I am a furniture maker. What I build generally requires little turning: legs for tables and chairs, an occasional stool seat. Most of the turning I do is for relaxation. I will turn a bowl or candleholders simply to unwind and punctuate the completion of a project. Recently, however, a client put the lathe front and center with a request.

Frank Gilmurray had just finished a poolroom in his home and wanted a unique way to display his collection of pool cues. His only two constraints were that the display had to fit in the corner of the room and that there be no surface that invited people to deposit their drinks.

It occurred to me that an octagonal base would fit nicely in a corner; the wall lines would follow two sides of the octagon and there would be no unfriendly corner jutting into the room. My design called for a revolving, circular tabletop on the base, which would have a dome-shaped surface to discourage setting down drinks. The cues would be displayed vertically, so the tabletop would contain circular depressions in which the butts of the cues would rest. A central turning would hold an octagonal plate near the top to receive and hold the cue sticks near their tips. A finial would support a small octagonal plate with a central depression, sized to hold a cue ball at the very top. With such a design, the collection of cue sticks would be elevated so they could be easily viewed and accessed.

Frank's pool cues are precious to him and warrant protection, perhaps to the point of coddling. So, the pool

Revolving circular tabletop with concave surface and leather-lined depressions for accepting the butts of pool cue sticks.

Pool cue stand of walnut and maple with Danish oil finish, 62" × 16" (157cm × 41cm)

Leather-clad octagonal plate with slots for accepting the tops of pool cue sticks. Note the leather taps (gates) on the underside of the plate. These gates hold the cue stick in the slot.

cues never touch anything hard, not even wood. They stand passively (unrestrained) in their leather-lined depressions on the tabletop, cushioned by leather-lined slots near the top. In front of each slot is a leather gate. When the cue stick is mounted, it is pushed past the gate and into the slot. The leather gate is stiff enough to hold the cue when the stand turns, yet a stick is easily pulled past the gate when it is selected for use.

I chose walnut in order to provide a contrasting dark background to the cues, which are mostly light in color, but added some curly maple parts and accents. The white ball atop the finial picks up the color of the maple accents and provides an elegant topping for the stand.

Turned elements

There are twelve separate spindle turnings, which include eight small turnings at the bottom of the stand. The stand sits on four small turned bun feet. Above each foot is a small decorative turning, joined to the stand and the foot with an integral tenon that goes through the bottom of the stand and into a mortise in each foot. All of the small decorative turnings are approximately the same height, but each has a different profile from the other.

The four major spindles are, perhaps, a bit more interesting. One spindle is under the tabletop. My lathe would not quite accommodate the length of the central turning, so I created it in two sections, separated by an octagonal piece of maple. The maple octagonal shape occurs six times in the stand, so the small octagon does double duty: it hides the joint and repeats a unifying motif. The fourth spindle turning is the finial that sits above the top pool-cue holder. Each of the major spindle turnings is connected with mortise and tenon joinery.

There are three faceplate turnings. Two are in the base and serve as bearings for the spindle turning underneath the table. The table itself is on lazy-Susan hardware. The lower spindle is connected with a tenon to the table and turns with the table, yet does not actually contact the bearings. The two bearings are maple and the bottom one has a walnut laminate in it.

The more interesting faceplate turning is the table itself, which I built up from laminates of walnut, with one maple layer. My Delta lathe has a 12" (300mm) swing so the table had to be turned outboard. After the initial shaping, I turned a circular groove to accommodate the lazy-Susan hardware.

There is one other design detail worth noting in connection with the major spindle turnings. The maple highlight appears only on one side of the design. The reason is primarily aesthetic. Most turned profiles are symmetrical: regardless of how you look at them, the profile on one side of the axis of a turned object is identical to the profile on the other side. I wanted to bring asymmetry into play.

For me, turning is a form of relaxation. My love for it is, of course, frequently interrupted by bouts of deep frustration when a catch spoils things. Imagine my satisfaction when all the turnings in this piece finally came together. I was pleased with the results and, more importantly, the finished stand was much appreciated by the client. Forget the frustration; I am ready for my next turning project! ■

About a decade ago after a full and happy career as a research psychologist, Abraham Tesser became a furniture designer/maker. His woodwork has been featured in juried shows; stories and images of his work have appeared in newspapers and magazines. Tesser also lectures and teaches about fine woodworking and furniture design. For more information, see TesserFurniture.com.

Finial with octagonal plate made for holding a cue ball.

Mark Sfirri Honored With "Distinguished Educator Award" from the Renwick Alliance

Roberta A. Mayer

Photo: John Carlano

The 2010 James Renwick Alliance Distinguished Educator Awards have been announced, and one of the three honors goes to Professor Mark Sfirri of the Fine Woodworking program at Bucks County Community College in Newtown, Pennsylvania. The prestigious award recognizes Sfirri's long and highly productive career.

Mark received his MFA from the Rhode Island School of Design in 1978. This institution was and is widely regarded as one of the top-ranking art schools in the United States. Part of Mark's formal training involved working with Professor Tage Frid, a renowned teacher and author. Over the years, Mark developed his own unique and personal style based on his use of multi-axis lathe turning, a difficult technique for even the most experienced turners. Examples of his distinctive asymmetrical turned forms are in the permanent collections of nearly twenty museums, including the Renwick Gallery of the Smithsonian American Art Museum.

It is easy to imagine that this degree of professional success could be intimidating to novice woodworkers, but that is never the case with Mark. In the classroom, he easily shares his skills and knowledge, often with good humor, building confidence in his students and encouraging them to explore and develop their own creative ideas. Since 1981, he has taught and inspired hundreds of men and women, attracting a wide range of students to his classes from those just out of high school, to those considering mid-career changes, to older members of the community looking to hone their skills. Not surprisingly, Mark's woodturning classes are always full.

Mark routinely encourages the submission of work to juried art exhibitions, and his newest students are often surprised and pleased when the work is accepted. Derek Weidman, for example, received two awards from the AAW over the past two years for his turned and carved heads. Joanne Shima was delighted when one of her student pieces, a wonderfully whimsical child's

Photo: Mark Sfirri

Joanne Shima, *Child's Chair,* 1987, Wood, paint, 22⅝" × 13¾" × 11½" (57cm × 35cm × 30cm)

Permanent collection of Renwick Gallery, Yale Art Gallery, Wood Turning Center

Photo: Kevin Sprague

Jake Antonelli, *Containers,* 2004, Poplar, cashew paint, each 9" × 4" (23cm × 10cm)

Doug Finkel, *Source Bench,* 1998, Poplar, rope, 16" × 24" × 12" (40cm × 61cm × 31cm)

Permanent collection of Renwick Gallery, Wood Turning Center

Photo: Double Image Studios

Derek Weidman, *Dream,* 2009, Cherry, ebony, acrylic paint, 7" × 3" × 2½" (18cm × 8cm × 6cm)

Photo: William Smith

chair inspired by Tinker Toys and Oreo cookies, was acquired by the Renwick Gallery and the Yale University Gallery for their permanent collections.

Many of Mark's students have become well respected in the woodworking field. Doug Finkel went on to have his *Source Bench* acquired by the Renwick Gallery. He also was an International Turning Exchange resident. Doug Jones, founder of Random Orbit (along with his wife Kim Kulow), now teaches at Santa Fe Community College in the woodworking program. Jake Antonelli, who teaches at the University of the Arts, had his work featured in the Portfolio section of *American Craft*. Many other alumni from the Fine Woodworking program have transferred to prominent four-year schools and then established their own highly successful careers.

When Mark was nominated for this award, these former students eagerly showed their support with letters expressing sincere enthusiasm and appreciation; their praises were heard. Mark is only the second recipient of a Distinguished Educator Award working in the craft medium of wood. Moreover, the timing of this award is perfect, as it follows a major retrospective exhibition at the Hicks Art Gallery at Bucks County Community College of work by Mark's students over the past three decades—appropriately titled "FW@ XXX: The Fine Woodworking Program at Bucks County Community College at Thirty" to reflect the continued relevancy of fine handcraftsmanship in the digital age.

In addition to his influence in the college classroom, Mark has given over a hundred lectures and workshops across the United States and around the world including Canada, New Zealand, France, England, and Ireland. His work as an artist has been featured in a wide variety of books and journals. His research into the origins of the American studio furniture movement has led to a special focus on the life and work of Wharton Esherick (1887–1970) and related publications in *Woodwork* as well as *Journal of Modern Craft*.

The recognition of excellence and innovation in teaching fits well within the larger mission of the James Renwick Alliance to advance scholarship in the field of contemporary American craft and provide educational opportunities to both professionals and the general public. The Alliance, a nonprofit organization founded in 1982, also plays an especially important role in raising funds for the Renwick Gallery of the Smithsonian American Art Museum in Washington, DC. The Renwick Gallery is housed in a historic and impressive Second Empire-style building by architect James Renwick, Jr., and is located across the street from the White House. With the support of the James Renwick Alliance, the Renwick today contains the finest examples of handmade objects by American craft artists from the nineteenth century to the present day. The award ceremony will take place during Spring Craft Weekend at the Renwick Gallery, April 23–25, 2010. ■

Mark Sfirri, *Slate Bench,* 2005, Mahogany, paint, 17½" × 71" × 20" (75cm × 180cm × 51cm)

Photo: Burns Austin

Artist and Collectors

Connections with Nikolai Ossipov

Kevin Wallace

Woodturning connects countries and cultures and, as international traditions and approaches are shared, the field evolves. In moving from Ukraine to the United States, Nikolai Ossipov brought old world carving approaches to contemporary woodturning. The artist passed away in 2007, leaving behind a distinctive and impressive body of work.

Ossipov was born in a Siberian territory of Russia and migrated with his family to Odessa, Ukraine, at age 6. His father was an illustrator who began teaching Nikolai about art at an early age. Throughout his formal education, Ossipov worked with wood at every opportunity. While in high school, he also attended the Odessa Art School, eventually going on to study at the Odessa Federal University, where he graduated with a professional degree in Art and Graphics in 1976. He worked as an illustrator after graduating, an experience that is evident in his work.

In his spare time, Ossipov created functional objects out of wood for friends and family. "The traditional and fundamental material of Russia is wood," Ossipov once said of his relationship with the material. "The earliest towns were built entirely of wood, from their buildings and roads to their furniture and accessories. Perhaps my fondness for wood as a material carried down through my genealogy."

When Ossipov was accepted to the Odessa Art Union in 1978, he began his professional career as a woodworker, creating commissioned pieces. These included carved interior and exterior works for public buildings and private clients, as well as works for exhibit at the Art Union Gallery. His carvings ranged from small sculptures to large installations and his public and government commissions included life-size sculptures for outdoor gardens, wall sculptures for interiors, and large lighting fixture compositions for interior and exterior needs. He also created smaller scale wall reliefs, freestanding sculptures, and functional objects such as mirrors, boxes, and furniture for private clients.

In 1990, Nikolai Ossipov visited his uncle in California and, over a six-month period, frequented art shows and galleries. "I was astounded by the breadth of opportunities that were available to artists in the United States, not only in the many shows and galleries available, but also by the abundance of tools and materials," Ossipov recalled. "At that time, living in Ukraine was like living on a powder keg; it was unclear where the country would be in five years as a result of rapid increases of corruption and crime rates and generally low opportunities for work and education."

Ossipov decided to immigrate to California with his six-year-old son, Yevgeniy, filing the necessary paperwork before returning to Ukraine. In 1992, the two moved to California to begin a new life. Soon afterward, woodturner Brenda Behrens, who had been creating carved vessel forms for years, befriended ▸

These twelve turned and carved vessels by Nikolai Ossipov are made from boxwood and range in size from 2½" to 3⅞" (65mm to 100mm) in height and 2½" to 3⅛" (65mm to 80mm) in diameter. They are all displayed in a single case.

him. She recognized his talents and introduced him to Dr. Irving Lipton, who had amassed the largest collection of woodturning in the United States. "I remember when I took him to Irv's place for the first time. Our drive home was very quiet and I asked him if he was okay," Brenda Behrens recalls. "He said he was overwhelmed with the experience and was so inspired and could hardly wait to get home to begin a new creation."

"Over almost three decades of working with wood, I have developed experience that allows me to realize my ideas with increased fluidity." -Ossipov

"I owe Dr. Lipton credit for the fundamental success and exposure of my work in the United States," Ossipov said. "The relationship I developed with Dr. Lipton over the course of nine years transcended that of artist-collector; he became one of my closest and dearest friends as a result of the unconditional help and support he bestowed upon my son and me."

Moving to the United States proved a major turning point in the direction of Ossipov's work. In Ukraine, the majority of his work was created on commission and involved only carved techniques. In the United States, he turned his attention to woodturning and the integration of carving techniques to create collectable works of art.

"Nikolai had a natural talent and was very fast at what he did," Behrens recalls. "He needed a lot of encouragement and praise and when he received this attention, he was the most productive." Dr. Lipton provided attention and praise, acquiring a number of works from Ossipov, many of which he bestowed to museums. He also introduced the artist to his closest friends, curators, artists, and fellow wood-art collectors.

Dr. Lipton passed away in 2001, but the introductions he made for Nikolai to the woodturning world continued to benefit Ossipov's career. "I have been collecting Nikolai Ossipov's work for many years, since I visited the late Dr. Irv Lipton and asked him who he would recommend that I add to my collection," Joe Seltzer says. "He immediately said Nikolai and arranged for me to meet him. Today I have several exquisite small pieces of Nikolai's in my collection. Notable is his sense of style and design, with flowing curves and meaningful use of negative spaces, which remind me of Art Nouveau and Art Deco."

Indeed, these two art movements had the greatest impact on Ossipov's work, along with the art and architecture of the Renaissance, Baroque, and Rococo periods. "The dynamic, undulating, and flowing rhythms, in addition to curvilinear and floral motifs of these movements, are very evident in most of my work," Ossipov noted. "Over almost three decades of working with wood, I have developed experience that allows me to realize my ideas with increased fluidity," Ossipov stated of his development as a woodturner. "I have always loved working with the line. The process of redefining, refining, and resolving it has allowed my work to develop in form, theme, and technique. Forms have become increasingly sharp and unified. Themes have evolved from specific and particular to interpretive and abstract. Technique, with each passing year of experience, has become increasingly natural to me, although the tools I use to carve have not changed. Although carving is a specialty, it has infinite applications that I have sought to explore through my experience in the woodturning field."

"Nikolai was a lovely person to work with," Seltzer says of his relationship with the artist. "He was extremely generous in periodically sending me images of new pieces he made in boxwood. While I have a few larger pieces, the dozen vessels in this wood and size form a strong sub-collection within my wood-art collection. I was deeply saddened when I learned that he had died."

Ossipov felt as strongly about Seltzer—making clear the depth and importance of artist/collector relationships in contemporary woodturning. "I hold Joe in highest regard, not only for his complete support of my work, but also for the active participation and dedication he has to the wood-art community," Ossipov offered. "I believe his unequivocal efforts and energies are responsible for the subsistence of the wood-art scene. As a result of his intelligence, kindness, and warmth as a person, I value our relationship very highly." ■

Kevin Wallace is director of the Beatrice Wood Center for the Arts (beatricewood.com) in Ojai, California. He has authored and co-authored a number of books on woodturning. Photos by William Smith.

Inspiration and Collaboration
Members' Gallery

Gary Zeff

I started turning in 1982 when woodturning was blossoming and have been fortunate to follow the unprecedented advancements in this art form. Like many others, I studied the techniques and expressions of the top turners. I took classes, attended symposiums, and joined a local chapter in an effort to create a personal style. I realized quickly that my interest leaned more toward unique designs than to technical expertise. While I appreciated the skills needed for creating thin-wall vases, beautifully carved bowls, and segmented vessels, I was more drawn to the work of Michael Hosaluk and Todd Hoyer.

In the late 1990s, I researched artists in other media, looking for ideas I could incorporate into my work. Isamu Noguchi sculptures and blown glass were strong influences, which led me to design suspended objects. I collaborate on pieces with artists outside of woodturning. My first series in this exploration included vessels hung from horizontal rods held on a stand. The steel stand and branch crosspiece were made with the help of a blacksmith.

I envisioned my current series while looking through the book, *500 Baskets: A Celebration of the Basketmaker's Art.* Not surprisingly, I was attracted to pieces that were suspended. I was intrigued with works that used date palm inflorescence. Searching the Internet for *baskets, fiber art,* and *galleries* sparked more ideas.

African Oasis III, 2004, Silver maple, patina on brass, patina on liquid bronze, bocote, steel, 24" × 23" × 5" (61cm × 58cm × 13cm)

Having no experience in basket weaving, I hoped to find an artist in Colorado who might be willing to collaborate. Happily, I was introduced to a distinguished fiber artist, teacher, and author, Robin Taylor Daugherty. Robin and I met, discussed some designs and design elements, and agreed to collaborate on a few pieces. Robin works with a wide variety of natural materials such as bark, sea grass, and reeds; I was amazed to see the enormous selection from which we could choose. Our exchange of ideas, images, and techniques regarding color palettes, textures, and proportions stimulated and encouraged the creative process. We were constantly working at peak energies.

Working with an artist in a different medium has been an exciting and fulfilling experience on many levels. Exposure to new materials, different techniques, and design concepts provides me with fresh avenues for expression and a

more critical way of looking at woodturning and art in general.

Gary A. Zeff is a turner in Boulder, CO. You can see more of his work at sculpturalwoodturning.com.

Robin Daugherty

Over the years I have enjoyed using wonderfully tactile wooden tools, from looms to awls, in order to weave fabrics, tapestries, and baskets. My collaboration with Gary Zeff was my first with an artist in a different medium; the artistic facets of woodturning inspired me.

Working with another artist was not a simple matter of someone handing me a vessel and saying weave away! Gary and I each had distinctive ideas for the finished pieces. We had great fun arguing and butting heads. We thrashed out shape, color, proportion, weaving techniques, additional materials, and even glue, which fortunately Gary knew more about than I did.

We laughed a lot and when doing so, we positively identified the elements most important to each of us. There were compromises, so instead of calling our end results a collaboration, our sculptures are more of a compromise, yet the end result is greater than the sum of its elements.

Robin Taylor Daugherty, a weaver of cloth, tapestries, and baskets for nearly fifty years, has been a teacher and lecturer on basketry. She is the author of Splint Woven Basketry, *two instructional videos, and several articles.*

Detail

Sanctuary, 2009, Carob, bamboo, palm inflorescence, wool yarn, patina on brass, 32" × 6" (81cm × 152mm)

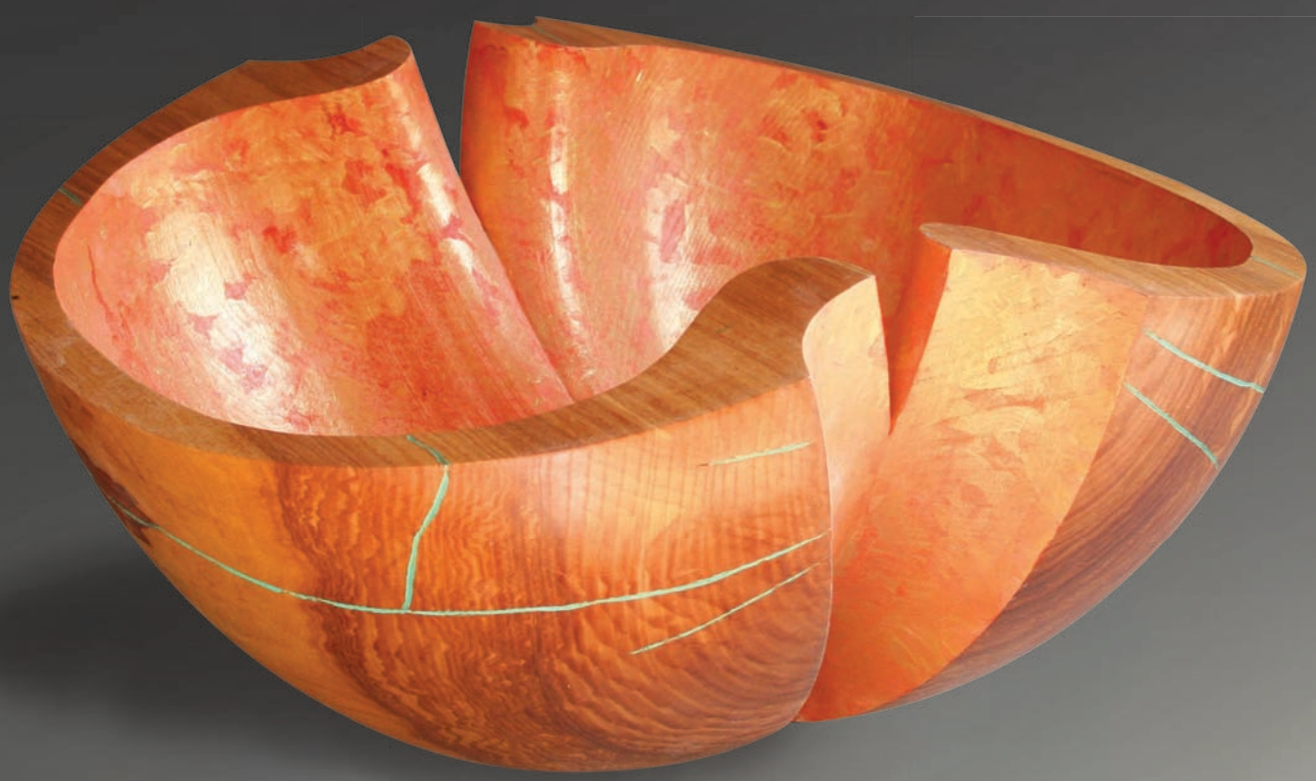
Radiance

As I was making the final cut, the turning exploded off the lathe; fragments scattered across the floor. I carefully brought the pieces together. Reuniting it was surprisingly easy. I knew the requirements: patience, glue, and the acceptance that unity is made from parts or diverse pieces, whatever their origins.

I am reminded of the Korean woodturners quoted in *The Unknown Craftsman* by Yanagi, who when asked about a crack in a turned wood bowl answered, "What does it matter? Just mend it."

Working in a craft, there are moments when one sees the materials and processes as metaphors for human behavior or experience. With every new shape, the form radiates unity by bringing the fragments together into an integrated and coherent whole under one name.

—Stephen Hogbin



Stephen Hogbin, *Radiance,* 2008, Ash, paint, 16" × 17" (40cm × 43cm)

The piece shown was included in the "Unity and Diversity" exhibition at the Canadian Pavilion of the Cheongju International Biennale in South Korea in 2009. The second venue is at the Museum of Vancouver, Vancouver, BC, for the Cultural Olympiad, January 13–April 17, 2010.