

The Journal of the American Association of Woodturners  
Spring 2006 Vol. 21, No. 1 woodturner.org

# Woodturner

## Relief Auction

Page 6

Celebrate!  
AAW  
Turns  
20



## Louisville Symposium

Page 36

20  
Great  
Turning  
Tips

Page 60





# page One

## AAW Disaster Relief Fund

The AAW's first eBay benefit auction brought a well-received response from generous members and wood collectors. Nearly 40 pieces were donated for the auction, held in December, to benefit the AAW's new Disaster Relief Fund for members. The auction alone raised more than \$53,600. For details, see *page 6*.



**"Never Strikes Twice"** by David Nittmann; sold for \$3,950. 18" diameter. "The basket illusion in this piece is a study inspired by my longtime interest in thunderstorms. I have chased these storms on a regular basis to watch the light show where I live in Colorado. I thought it fitting that I donate this piece to the Katrina Relief Fund. Let us all hope that a storm like this 'Never Strikes Twice.'"



### **"Burl Cherry Returns to Help"**

by Bert Marsh; sold for \$2,000. "Brighton was the center of the hurricane that struck England in October 1987, causing much damage and destroying 70 percent of the trees. This was in no way comparable to the devastation Katrina caused, which I find so hard to imagine."

### **"NOLA, Jazz Me Once More"**

by Binh Pho; sold for \$6,000. "What do I remember about New Orleans? It was jazz, it was the fancy French Quarter. Now, Katrina is on everyone's minds. Together, we can overcome this tragedy. One day soon, NOLA will jazzzz again."



AMERICAN WOODTURNER  
is published quarterly by the

American Association of Woodturners  
222 Landmark Center  
75 W. Fifth Street  
St. Paul, MN 55102-7704

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

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

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



woodturner.org

#### AAW BOARD OF DIRECTORS

<b>President</b>	Angelo Iafrate
<b>Vice President</b>	Dave Barriger
<b>Treasurer</b>	Bill Haskell
<b>Secretary</b>	Jeff Jilg
<b>Board Members</b>	Tony Cortese John Hill Al Hockenbery Malcolm Tibbets Sean Troy
<b>Board of Advisors</b>	Ron Alexander Phil Brennon David Ellsworth Norm Hinman Mark St. Leger Linda VanGehuchten

*American Woodturner* (ISSN 0895-9005)  
is published quarterly in the  
Spring, Summer, Fall, and Winter  
by the American Association of Woodturners.

Yearly membership in the  
American Association of Woodturners is  
\$40 USA, \$45 Canada, and \$65 overseas and  
includes a subscription to *American Woodturner*.

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

Publications Mail Agreement No. 40035659  
Return undeliverable Canadian addresses to:  
Express Messenger International  
P.O. Box 25058, London BRC  
Ontario, Canada N6C 6A8.  
Printed in the U.S.A. by  
Colorfx, Inc., Des Moines, IA 50322.

# Woodturner

Vol. 21, No. 1  
Spring 2006

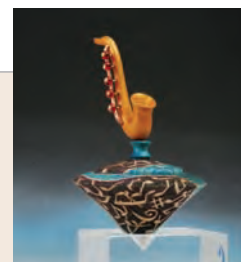
## Chatter, News, & Notes

- Chapters Celebrate Milestones ..... page 6
- 22 Chapters Chartered in 2005 ..... page 7
- Symposium Tips for First-Time Attendees ..... page 8
- Woodturning Vacations ..... page 8
- 20th-Anniversary Gouges ..... page 9
- Weekly Penturners Chat ..... page 10
- Niche Magazine Honors Curt Theobald ..... page 11
- Special Feature: 20 Top Shop Tips ..... page 60
- Calendar of Events ..... page 64

## On this issue's cover

### 6 Emergency Relief Fund

We passed the hat. We donated incredible pieces for  
an eBay auction. And right before our eyes, the AAW  
amassed more than \$63,600 for member assistance.



### 12 20 Ways Not to Turn a Bowl

"Stop! Don't do that!" After teaching hundreds of woodturning  
classes, Nick Cook offers his list of the most common errors—and how  
to avoid them—when turning a first bowl.



### 18 Jerry Glaser

Until he retired late last year, Jerry  
Glaser made renowned turning  
tools. What you probably don't know  
is that Jerry Glaser is one heck of a  
woodturner, too.

### 24 Negative-Rake Scrapers

Join Stuart Batty for a close look at how he turns  
whisper-thin bowls and goblets from exotic hard-  
woods. The secret is taking finishing cuts with a  
negative-rake scraper: a technique he adapted from  
classic woodturning of ivory and blackwood.



### 28 Sheffield Steel

Nick Cook did more than just wonder why so many high-quality turning  
tools originate from Sheffield, England; he visited their shops. Walk with  
Nick through three well-known companies.





**30 Rude Osolnik**  
At the AAW symposium in Louisville, be sure to visit an exhibit saluting Kentuckian Rude Osolnik, "The Dean of American Woodturners."

## 32 Still Evolving

You won't want to miss the AAW exhibit at the Kentucky Museum of Art that highlights the work of 22 studio artists over a 20-year period.

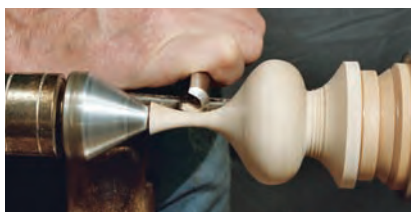


## 36 National Symposium

Pack your bags for Louisville: You won't want to miss a moment of the top-notch turning demos and festivities for the AAW's 20th anniversary.

## 42 Oh, Canada

When you read about Richard Kleinhenz's latest pen, you'll learn about two tips that may work for your next pen.



## 46 Spindle Gouges

If you only grab your spindle roughing gouge for knocking corners off of stock, you're overlooking many sweet experiences in turning.

## 50 Mixing Spoons

Bob Rosand has all the ingredients to turn a handy kitchen utensil at your lathe. Get to your lathe and mix up a dozen or more for gifts!

## 53 Finial Design

Cindy Drozda puts a lot of thought into her finely executed finials—and it shows. In this design article, she shares the process she goes through in perfecting her profiles.



## 56 Segmented Bowl

In the second of three articles about segmented turning, Jim Rodgers writes about designing your first bowl. As a bonus, Jim has put together a chart of software design programs.

woodturner.org

### EDITORIAL / ADMINISTRATION

**Editor** Carl Voss  
1922 Ingersoll Avenue  
Des Moines, IA 50309  
515-288-9545  
carlvoss@msn.com

**Art Director** Ray Neubauer

**Contributing Editors** Phil Brennon  
Nick Cook  
Alan Lacer  
Bob Rosand  
Jacques Vesery  
Kevin Wallace

**Managing Director** Mary Lacer  
**Office Admin.** Eunice Wynn  
651-484-9094  
fax 651-484-1724

inquiries@woodturner.org

### EDITORIAL SUBMISSIONS

Something new turning on your lathe?

Anything interesting in your AAW chapter?

Have you visited any turners, shops, or museums of interest?

**Please send article ideas to:**  
carlvoss@msn.com

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

### ADVERTISERS

For rates and specifications, please contact  
Associations Inc. at  
515-280-7313 or e-mail  
tvitzthum@associationsinc.us.

### A NOTE ABOUT SAFETY

An accident at the lathe can happen with blinding suddenness; respiratory problems can build over years. Take appropriate precautions when you turn. Safety guidelines are published in the AAW Resource Directory. Following them will help ensure that you can continue to enjoy woodturning.

### SUBSCRIBERS

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

**I**t is a bittersweet time for the AAW. At the same time we welcome new board members, we wish a fond farewell to our illustrious leader, Phil Brennion. Phil served on the board for four years—two as AAW president—and provided strong and inspiring leadership through some challenging growth. Just as many of his ideas are coming to fruition, we bid him farewell and wish him the best of health.

The AAW is turning TWENTY! As we begin a year of celebration, it's a perfect time to mark the progress of the volunteers who have worked tirelessly to grow our organization.

**Membership.** Our membership has grown from just 1,510 in the first year to nearly 12,000 woodturners on December 31.

**Chapters.** The chapter concept continues to be one of the AAW's best programs for education and mentoring. The AAW's first chapter—the North Coast Woodturners based in the Cleveland area—is celebrating its 20th anniversary this year. We ended 2005 by approving the charter of our 252nd chapter, the Panhandle Area Turners Society of Amarillo, Texas.

**Educational Opportunity Grants.** Last year, the AAW collected more than \$70,000 from our benefit auction held in Overland Park. These much-appreciated dollars will underwrite scholarships and grants to more than 40 individuals, chapters, and schools.

Bill Hunter (AAW Member #5) tells an interesting story about raising money for the first AAW scholarships. In the AAW's infancy, it took a lot of phone calls and arm-twisting by Bill and other founding board members to get

this program off the ground.

One of the first AAW scholarships went to a little-known Hawaiian woodturner named Michael Lee so he could attend his first formal turning class in Provo, Utah. Bill, whose work is featured on *page 32*, is gratified every time he sees Michael's work.

Is there a novice woodturner with Michael Lee's talent among the newest EOG winners? You bet! And I hope we're all around for another 20 years to watch woodturners emerge.

Planning is in high gear to make this year's symposium, being held June 22–24 in Louisville, a new benchmark for AAW events. In addition to a fine lineup of demonstrators, attendees should make plans to take in three woodturning exhibits just a stone's throw from the Galt House Hotel and Suites. See *page 41* for more details on the exhibits and the autograph-signing opportunities at the museum open house.

Other exciting drawing cards of this year's event include a drawing for five Oneway 2436 lathes (see *page 37*), an expanded Youth Turning Room (see *page 39*), and our biggest trade show ever.

Thursday evening, we are planning a keynote speech by Andrew Glasgow, executive director of The Furniture Society, and a slide show on design by Giles Gilson. If you are not familiar with these names, plan to attend and expand your woodturning horizons.



Angelo lafrate  
iafrateturns@cox.net

## AAW News

### Cortese named to AAW board

The AAW board of directors selected Tony Cortese, an AAW member from Dunnellon, Florida, to fill the unexpired term of former AAW president Phil Brennion. Phil resigned his position on the board in December 2005.



Tony Cortese

### Gil Hite, chapter win Delta lathes

Congratulations to Gilbert Hite and his AAW chapter, the Central Connecticut Woodturners, who were winners of the two Delta X5 lathes donated by Delta Machinery for the 2006 membership renewal drawing. Gil's name was drawn from AAW members who paid 2006 dues by January 1. The retail value of each lathe is \$2,250.

### Sharpening DVD to ship in April

The popular "Fundamentals of Sharpening" DVD (\$34.95 value) and the 2006 AAW Resource Directory will be shipped about April 15 by bulk mail to all 2006 AAW members.

### Deadline approaches for newsletter and website contests

April 15 is the deadline to enter the AAW's third annual contests for best chapter newsletter and best chapter website. Editors and web managers will be honored at the AAW symposium in Louisville. For more details, see [woodturner.org](http://woodturner.org).

### Linda Everett passes

Linda Everett, a former AAW board member from Virginia, died January 5 from cancer. During her three-year term, she served as AAW treasurer and Chapters chairperson.

## Chapters Celebrate Milestones

Congratulations to these chapters who are celebrating milestone anniversaries in 2006:

### 20 Years

**North Coast Woodturners,**  
Cleveland, Ohio

### 15 Years

**Cascade Woodturners Association,**  
Portland, Oregon

**Chiselers/Turners of NE Indiana,**  
Fort Wayne

**Hudson Valley Woodturners,**  
Suffern, New York

**Long Island Woodturners Association,** Hemstead, New York  
**New Jersey Woodturners,** Medham  
**North Carolina Woodturners,** Todd  
**Northeastern Oklahoma Woodturners Association,** Tulsa  
**Olympic Peninsula Chapter,** Port Orchard, Washington

### 10 Years

**Central Ohio Woodturners,**  
Worthington

**Channel Islands Woodturners,**  
Ventura, California

**Commanche Trail Woodturners,**  
Midland, Texas

**Duck River Woodturners,**  
Columbia, Tennessee

**Hill Country Turners,** Kerrville, Texas

**Keystone Turners,**  
Gilbertsville, Pennsylvania

**Lake Superior Woodturners,**  
Cloquet, Minnesota

**Magnolia Woodturners,**  
Canton, Mississippi

**Northwest Washington, Woodturners,** Arlington

**Prince Albert Woodturners Guild,**  
Saskatchewan

**Southeast Missouri Woodturners,**  
Kennett

**West Michigan Woodturners,**  
Grand Rapid

## eBay auction raises \$53,600

# AAW ESTABLISHES EMERGENCY RELIEF FUND

The outpouring of AAW members wanting to do something to help the victims of hurricanes Katrina and Rita has led to a new program, the AAW Emergency Relief Fund.

In December, an eBay auction organized by Binh Pho and John Hill netted more than \$53,600 for the fund. With just a day to solicit pieces, Binh got commitments for 39 pieces, including turnings on the cover and *page 1* of this issue. Fred Wilson Jr., an AAW member from Mims, Florida, assisted by setting up the eBay auction pages.

In addition, the AAW received more than \$10,000 in contributions from individuals, chapters, and regional symposiums. For example, the Ohio Valley Woodturners Guild in the Cincinnati area donated nearly \$1,500 to this new fund.

Unlike some charitable programs, 100 percent of the funds will go directly to members (no administration or fund-raising fees deducted). After the initial funding, 20 percent of the funds will be reserved for future relief of AAW members. Bottom line: There's now a fund to immediately assist AAW members when the



"Spirit of New Orleans"  
by Frank Sudol; sold for  
\$6,601.





"Top Jazz" by Bonnie Klein and Binh Pho; sold for \$3,550.

next disaster strikes.

To build this relief fund, the AAW is committed to sponsoring additional online benefit auctions. For more details about this program, contact the AAW office at 651-484-9094 or [inquiries@woodturner.org](mailto:inquiries@woodturner.org).

The AAW has already distributed \$54,800 to members in four states. One of the recipients was Joel Blazek, a member of the Bayou Woodturners. "We live in St. Bernard Parish, New Orleans, which was heavily flooded. With seven feet of water in our house, we lost most of the house, our furniture, books, and artwork. Most of my business equipment was ruined, along with half the inventory. I thank AAW for their show of compassion."

In September, six woodturners participated in an eBay benefit auction organized by Mark Lindquist and friends. That auction raised \$5,835 for the American Red Cross in support of Katrina victims.

# Twenty-two Chapters

chartered in 2005

In 2005, the AAW chartered 22 new chapters, swelling the numbers to 252 active chapters. With the addition of the Siouxland Woodturners in South Dakota, the AAW now has a chapter in all 50 states.

- Mid-Maryland Woodturners** Emmitsburg, Maryland
- Thousand Island Woodturners** LaFargeville, New York
- First State Woodturners** Wilmington, Delaware
- Mohawk Valley Woodturners** Syracuse, New York
- Blue Water Area Woodturners** Lenox, Michigan
- Southern Alberta Woodturners Guild** Alberta
- Brazos Valley Woodturners** Lorena, Texas
- Northwood Turners** St. Germain, Wisconsin
- Baltimore Area Woodturners** Cocheysville, Maryland
- Waxhaw Woodturners** Waxhaw, North Carolina
- Southern South Carolina Woodturners** Bluffton, South Carolina
- Show Me Woodturners** Festus, Missouri
- Majic Valley Woodturning Association** Hebburn, Idaho
- Virginia Woodturners Inc.** Newport News, Virginia
- Woodturners of Olympia** Olympia, Washington
- Siouxland Woodturners** Vermillion, South Dakota
- IKI Woodturners** Evansville, Indiana
- The Villages Turner Group** The Villages, Florida
- Classic City Woodturners** Athens, Georgia
- Michigan-Ohio Woodturners** Clinton, Michigan
- Kern Woodturners** Bakersfield, California
- Panhandle Area Turners Society** Amarillo, Texas

# Symposium tips for first-time attendees

Here's what veteran symposium attendees—demonstrators, vendors, volunteers, and former board members—offer up as suggestions for attending an AAW symposium. You'll find more tips for attending symposiums at [woodturner.org](http://woodturner.org).

## Accommodations

"I strongly suggest booking your hotel room at the host hotel in order to be closer to all the action. If you buy something in the trade show, you can take it to your room instead of carrying it around all day. If you forget your camera or anything else, it is easy to go back for it. Plus, you'll meet lots of woodturners in the hotel lobby and in the elevators!"  
—Bonnie Klein, lifetime honorary member and former AAW board member

## Choosing demonstrations

"Bring notebook, paper, and a camera—record tips, ideas, inspiration, drawings. As one great thinker once said: 'Knowledge keeps about as long as fish.'"  
—Alan Lacer, lifetime honorary member and former AAW president

"Make sure to check out the demos in the trade show. They are often some of the top turners in their booths doing demonstrations."  
—Rex Burningham, Crafts Supplies

"Include at least one design rotation in your program. The rotations that teach technique are great, but there should be some attention to the artistic qualities of what you do."

—Arthur Mason, lifetime honorary member and turning collector

"Be certain to attend the opening ceremony on the first morning and pay close attention to what each presenter will be demonstrating. Take notes. Mark your schedule accordingly. Don't be afraid to make adjustments based on comments from your co-attendees and friends as the event proceeds."

—Norm Hinman, former AAW board member (11 symposiums)

## Outside the demonstration rooms

"The main tip I have applies to all people attending all conferences in

---

**Woodturning Vacations** Below is a list of nonprofit organizations offering woodturning workshops in 2006.

### Colorado

The Anderson Ranch near Aspen has announced its summer woodturning calendar. Workshops conducted by Mike Mahoney, Dan Bailey, Beth Ireland, Christina Burchard, Nick Cook, Jacques Vesery, Mark Gardner, Merryll Saylan, David Ellsworth, and Ray Key. Information: 970-923-3181 or [andersonranch.org](http://andersonranch.org).

### Connecticut

The Brookfield Craft Center, a not-for-profit school for fine craftsmanship in northwest Connecticut, offers year-round short-term (one- to five-day) workshops. Instructors for 2006 include Angelo Iafrate, Beth Ireland, Keith Tompkins,

Jim Degen, and Anthony Harris. Information: 203-775-4526 or [brookfieldcraftcenter.org](http://brookfieldcraftcenter.org).

### Kentucky

20th Annual AAW National Symposium, June 22–24 at the Galt Hotel and Suites, Louisville. Information: [woodturner.org](http://woodturner.org).

### Maine

The Center for Furniture Craftsmanship in Rockport offers eight 1-week and one 2-week woodturning workshops in its 2006 curriculum. Instructors include Stephen Gleasner, Alan Stirt, Matthew Hill, Betty Scarpino, Nick Cook, Bob Rosand, and Beth Ireland. Information: 207-594-5611 or [woodschooll.org](http://woodschooll.org).

### North Carolina

The John C. Campbell Folk Art School in Brasstown offers year-round woodturning instruction. Among the instructors for 2006 are Nick Cook, Frank Penta, Michael Mocho, Dale Nish, Dave Barriger, Merryll Saylan, and Cindy Drozda. Information: 800-365-5724 or [folkschool.org](http://folkschool.org).

### Tennessee

Arrowmont School of Arts and Crafts in Gatlinburg announces its spring and summer woodturning workshops. Spring one-week workshops, beginning March 12, include: Cindy Drozda, Nick Cook, Ray Key, and Alan Stirt. Summer one- and two-week workshops

beginning June 4 include: Jean-Francois Escoulon with visiting artist Mark Sfirri, Clay Foster (master class), Matthew Hill, Beth Ireland, Stuart Mortimer, Michael Mocho, Graeme Priddle with visiting artist Michael Cullen, and Michael Werner. Information: 865-436-5860 or [arrowmont.org](http://arrowmont.org).

The Appalachian Center for Craft in Smithville announces its 2006 summer schedule of classes. This summer's instructors include Graeme Priddle, Simon Levy, Judy Ditmer, and Nick Cook. Information: Gail Gentry at 615-597-6801 or [www.tntech.edu/craftcenter](http://www.tntech.edu/craftcenter).



all fields: Regardless of the magnanimity of what is presented in the sessions, the really important stuff happens in the corridors.”

—David Ellsworth, lifetime honorary member and first AAW president

### Trade show

“When purchasing wood for your projects at the symposium, have your list ready with the sizes required. Many times the wood isn’t available in the size you request, so have alternatives in mind. There are numerous common names for the same wood, so know the scientific or botanical name of the wood you are looking for.

“If you are taking the wood with you, make sure you have a safe, cool, and dry space to store the wood in your vehicle. And if you plan to buy a lot of wood at the symposium, bring an inexpensive small folding cart with you. These are available at home centers.”

—Mitch Talcove, Amazon Exotic Hardwoods and 19-year exhibitor

“Wear comfortable shoes.”

—Brad Packard, Packard Woodworks

### Instant Gallery

“The Instant Gallery is one of the nicest benefits of registration. Make time to really look at the Instant Gallery—several visits, if necessary. It’s not about comparisons but rather being a part of a turning community. Be sure to participate by displaying your work, even though (to you) it may be considered inferior. As long as it’s honest and the best you can do, that’s all that is required.”

—J. Paul Fennell, demonstrator

## Commemorative gouges mark 20th Anniversary

In celebration of the AAW’s 20th anniversary, the AAW is offering two limited-edition bowl gouges made from the finest materials on the market today. These tools are being manufactured exclusively for the AAW and will be numbered 1 through 500.

The  $\frac{3}{8}$ " and  $\frac{1}{2}$ " bowl gouges are made from 10V tool steel specified by Jerry Glaser and sharpened with his grind.

Your hand has never held a handle like this. Each handle, turned by Stuart Batty, is made from highly polished cocobolo and is fitted with a tapered and polished stainless-steel ferrule as shown *below*.

The  $\frac{3}{8}$ " gouge is 12" long; the  $\frac{1}{2}$ " gouge has a 15½"-long handle.

The AAW 20th anniversary logo and the production number are laser-cut into the handle. Gouges #1 through #5 in each width will be auctioned at the AAW symposiums the next five years. The net proceeds from the sale of these tools will help fund the Educational Opportunity Grants and the Emergency Relief Fund.

You can order these limited-edition gouges for your tool collection exclusively through the AAW website ([woodturner.org](http://woodturner.org)) or by calling 651-484-9094.

The  $\frac{3}{8}$ " gouge sells for \$120; the  $\frac{1}{2}$ " gouge is \$140.



## WEBSITE WINNER: LAYERED BOWLS



"Spider," 4 $\frac{3}{8}$  x 1 $\frac{1}{8}$ "  
Wenge, black walnut, bloodwood,  
and lacewood

**Chris Kuehn of Fallston, Maryland, was the winner of the AAW Winter Website Contest. Jim McPhail judged the pieces.**

**Second place: Frank Kobilsek  
Mendota, Illinois**

**Third Place: Craig Magera  
Simpsonville, South Carolina**

## NEXT CONTEST: 8" BOWLS

Deadline: April 10

For more details, see [woodturner.org](http://woodturner.org), then follow the links to the AAW online forum.

## Weekly Penturners Chat how we talk

By Patricia Lawson

Are you old enough to remember the days when chatting on a citizen's band (CB) radio was all the rage? I confess that I'm more than old enough to remember the CB craze in the '70s and how much fun it was to be able to talk with people I had never met but with whom I shared some common interests. It was exciting to be able to push a button on my CB and chat with a trucker on the road or a guy or gal somewhere out there who shared my hobby.

Today, through Internet technology and chat rooms, the two-way radio chat has shifted gears. We can now talk with people all over the world by using our computer keyboard and a microphone.

One of the groups taking advantage of the technology is the Penturners Chat, a weekly online meeting where penturners from North America and other continents come together to talk about their favorite topic—penturning. This is a live voice chat hosted by members of the Penmakers Guild group ([groups.yahoo.com/group/PenMakersGuild](http://groups.yahoo.com/group/PenMakersGuild)) and is open to anyone who is interested in discussing and learning more about penturning.

The Penturners Chat is held every Tuesday. The starting time rotates depending on which time zone the host calls home. This structure makes it easier for penturners in different time zones to participate. The chats last for one to two hours and have included up to 30 participants.

The starting time for the Penturners Chat is announced each week in the online Yahoo Penturners group ([groups.yahoo.com/group/penturners](http://groups.yahoo.com/group/penturners)) and at [penturners.org](http://penturners.org)—two content-rich online e-mail groups for penturners.

The Penturners Chat currently uses the services of PalTalk ([paltalk.com](http://paltalk.com)), a free online chat room provider. Anyone can attend and join in the Penturners Chat by simply registering at the PalTalk website, then downloading and installing the free PalTalk chat program. Once you have the program installed, you test and set the volume of your microphone (available for \$15–\$25) and you are ready to chat.

Even though I've been turning pens for more than seven years, I've learned so much by participating. For example, I've learned about making segmented pens, casting my own polyester resin blanks, and working with snakeskin. Without this group, I would have never found out about a pipe shop that sells Lucite rods and ebonite.

Whether you are a beginning penturner or a master-level pen artist, if you are interested in learning more about penturning and in sharing your questions and ideas with other penturners around the world, the Penturners Chat offers a live (and lively!) place to visit on Tuesdays for a fun and educational gathering.

For help or more information, contact any of the Penturners Chat hosts (all AAW members) at these e-mail addresses:

Patricia Lawson [pensbypatricia@cox.net](mailto:pensbypatricia@cox.net)

Rich Kleinhenz [richk@beautifulhandmadepens.com](mailto:richk@beautifulhandmadepens.com)

Anthony Turchetta [penworks@turchetta.com](mailto:penworks@turchetta.com)

Don Ward [don@redriverpens.com](mailto:don@redriverpens.com)

Ten-ten good buddies. Catch you on the flip-flop!



## AAW Board of Directors

# Call for nominees

Do you believe in the AAW? Have you benefited as a result of being a member? If your answer to these two questions is yes, you may also feel that you should contribute something in return. If it is time and energy that you are willing to give, why not offer your services to the operations by running for the AAW board of directors?

The AAW elects a nine-member board to volunteer their time and energy to represent the membership for moving this organization forward. If you have been a member in good standing for the past three years, you are eligible to run. The nominating committee will select the six best candidates. Members will elect three candidates to serve a three-year term beginning January 2007.

This year's nominating committee includes Dave Barriger, chair;

Norm Hinman; and Trent Bosch. Information on duties is available in the *AAW Resource Directory*. Or, call any current director for details.

If you are interested in serving on the board, please send the following to the managing director, postmarked 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 affirm your organizational and leadership abilities.

**3.** A photograph of yourself. The nominating committee will review application materials and schedule phone interviews in late May and early June. Candidates will be announced in the Fall issue, ballots will be sent out in September, and election results will be announced in the Winter issue.

## Thank you to generous volunteers

Like all nonprofit organizations, volunteers are key to the success of AAW programs. Thanks to these members who made significant contributions in the last year, including:

- **Phil Brown**, Bethesda, Md.  
directory maps
- **Joe Donohue**, Sparks, Nev.  
website calendar updates
- **Ron Fleming**, Tulsa, Okla.  
"reTURN to the Land of Oz" photos
- **Bob Hawks**, Tulsa, Okla.  
"reTURN to the Land of Oz" photos
- **Blake Hickerson**, Lakeside, Texas  
symposium signage
- **Charlie Hoffman**, Minneapolis  
legal services
- **Jeff Jilg**, Austin, Texas  
website content
- **Herbert Kurtz**, Melrose Park, Pa.  
accounting
- **Joel Rakower**, Dix Hills, N.Y.  
accounting
- **Paul Vonk**, Mountain City, Ga.  
website and bulk e-mail
- **Fred Wilson Jr.**, Mims, Fla.  
AAW Relief Auction
- **Steve Worchester**, Plano, Texas  
website forum

## Niche magazine honors Curt Theobald



Curt Theobald, an AAW member from Pine Bluffs, Wyoming, won this year's *Niche* award for woodturning. Curt's piece, titled "The Wizard," was honored in February at the Philadelphia Buyer Market of American Craft. The works from 42 other professional artists also were recognized.

This piece represents a departure from Kurt's recognizable segmented pieces and includes wenge, aspen, veneer, and gold leaf. "Wizard" was first exhibited in "reTURN to the Land of Oz," the AAW's annual exhibit featured at the 2005 symposium in Overland Park.

*Niche* magazine, a trade publication for retailers of American crafts, annually honors the outstanding creative achievements of American and Canadian crafts artists. The judging criteria includes technical excellence and creativity, market viability, and a distinct quality of unique and original thought.

"The mystery of the future is exciting," Curt says. "There are many paths set before us that could lead to gold. But often if we look deep within, what we so desperately were striving for soon reveals itself as folly. It is only the narrow path that will lead to the hope we will find in truth."

Stop! Don't do that!

# Twenty Ways

## not to turn a bowl

By Nick Cook

When it was suggested that I write this article, I wondered if it was because someone thought I didn't know how to turn a bowl. I was assured that I drew this assignment not because I'm inexperienced at bowl turning but rather because I have had so many woodturning students.

I have been teaching woodturning for more than 20 years, and many of the classes have been basic, for beginners, or an introduction to woodturning. You can ask anyone who has been involved in one of these classes and they will tell you that my most frequently used direction is: "Stop, don't do that!"

Anyone who teaches basics at John C. Campbell, Appalachian Craft Center, Arrowmont, or Anderson Ranch Craft Center expects to have raw beginners in a class. We also expect novices with just a little experience and even expect a few who have been turning for a number of years.

The teacher's challenge is getting all of the students on the same page in the same book at the same time. Adult learners seem to have their own ideas about how to turn, and some are not the least interested in how I want them to turn. Some are self-taught; some



Photos: Marisa Pruss

No matter how eager you are to turn your first "keeper," don't begin turning with large or expensive stock. The 8"-diameter stock on the headstock is more appropriate.

have attended other classes. Others have read woodturning books and watched videos.

And others... must have been time-traveling to their eighth-grade shop classes when someone was attempting to instruct them.

### THE RIGHT STOCK

One of the biggest problems teachers face is that many students are itching to turn a really large bowl the first time they step up to the lathe. Or, they lug in something that cost them big bucks.



## Stop! Don't do that!

**1 Too big.** You will learn a lot more about turning techniques by turning lots of small, shallow bowls than you ever will by turning one or two really large pieces.

**2 Too valuable.** Whatever you do, do not pay for practice wood. There is plenty of free wood out there—the stuff really does grow on trees. Ask around at your AAW chapter; you'll find a resourceful group with plenty of practice pieces.

**3 Too hard.** Green wood is a great way to start. Wood lots and local tree cutters are great sources for practice materials.

**4 Too deep.** Start out with a small (8"-diameter) platter before attempting any type of bowl. When you are comfortable with that, transition to a shallow bowl—just slightly deeper, but still about 8" in diameter.

Keep the form open rather than making the openings smaller. The smaller the opening, the harder it is to cut the interior.

**5 Not ready for prime time,** (or finish). Don't worry about applying finish to anything—that will come later. Think practice pieces. I suggest that you use a screw chuck or faceplate and turn shapes that resemble bowl forms until you get to the point of becoming comfortable with the bowl gouge. When you get to where you do not have to think about what the tool is doing, you are ready to turn a bowl. Once you get a few decent-looking forms, turn the bowl around and begin hollowing the interior. Then, get out the finish.



## THE RIGHT SPEED

Too often, novice woodturners go from turning spindles to turning bowls without adjusting the lathe speed. Too big and too fast is a deadly combination.

## Stop! Don't do that!

**6 Too much speed.** Before mounting stock between centers or on a faceplate or chuck, switch on the lathe without anything mounted. This will give you the opportunity to see where the speed was set when the lathe was last used. Developing this habit will prevent an accident.

I encourage students to reduce the speed of their machines at the end of every turning session. This is easy on variable-speed lathes, but I meet resistance to this when students are learning on machines with step pulleys. Do it anyway; it's never too early to develop good safety habits.

**7 Too much of a hurry.** Another problem that can ruin your day occurs when you have a large piece on the lathe and stop the machine too quickly. This hap-

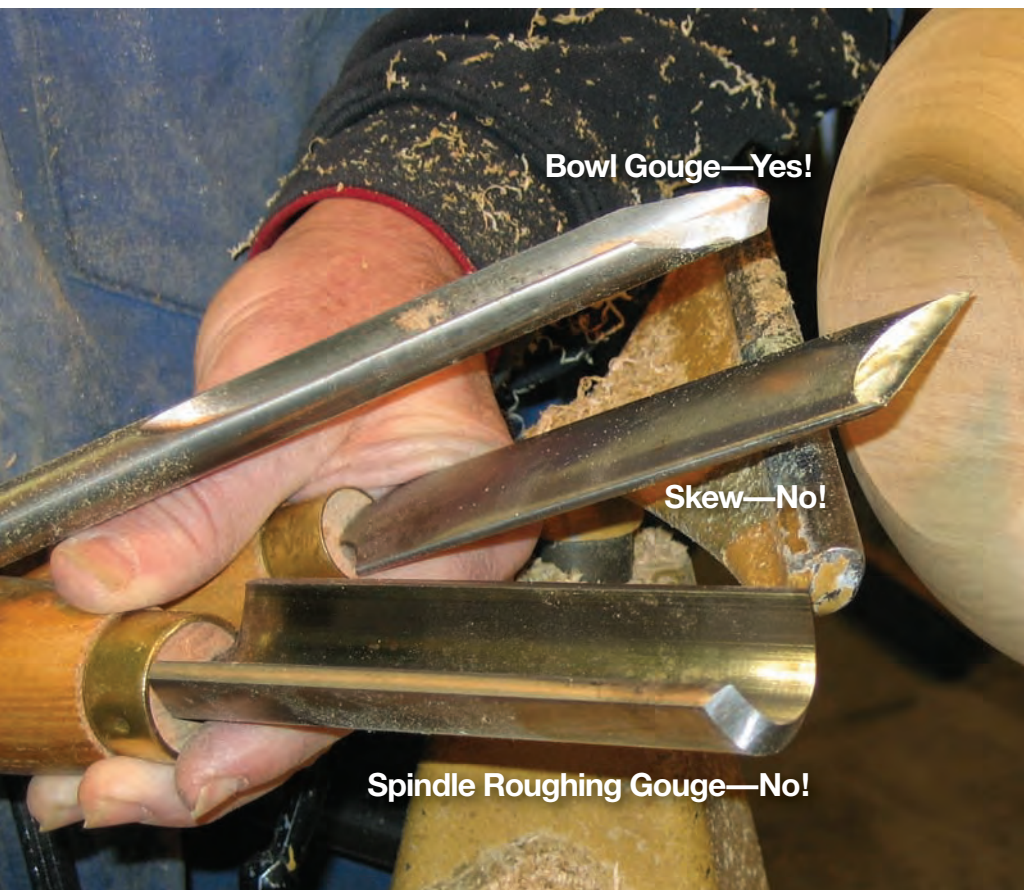
pened to my friend Andy Marinos, who suggested adding this tip to the Don't Do! list.

To turn the bottom of a bowl, Andy mounted his large flat jaws on his scroll chuck and mounted the rim of the bowl in the jaws. Without checking the speed, he turned on the lathe. It was going much too fast for the task at hand. Andy quickly hit the stop button on the machine, and the motor stopped. But, the chuck and the bowl had enough momentum to keep spinning—even with the lathe stopped. When it came off the spindle, the assembly caught his hand between it and the tool rest. Andy's wound required numerous stitches.

Here's a safer plan: Start the lathe at a low speed or use the setscrew in the chuck to lock it onto the spindle.

**8 Standing in the wrong place.** You should always stand to one side of the workpiece (out of the path of the spinning blank) when you turn on your lathe as shown in the photo *above*.





The bowl gouge, top, is the only one of the three lathe tools you should use for your bowl projects.

## THE RIGHT TOOL

Before anyone stands in front of a lathe, I review all of the tools, their uses, and how to sharpen each. I identify each tool, explain how it is used, show how to sharpen it, and also show the various cuts that can be made. I also explain what each tool is not designed to do. But sometimes, that's not enough.

## Stop! Don't do that!

**9 No roughing-out gouge for bowl work.** For bowl turning, never turn with a roughing gouge. This should be a no-brainer, but I have seen it done. In my mind, this tool should be referred to as a spindle roughing gouge.

Here's a classic example. One student mounted a large, square blank on a lightweight lathe and turned it on at too high of speed. Needless to say, I screamed from across the room, "Stop, don't do that!" When I got to where he was working, I also discovered that he was about to attack the piece with a 1¼" spindle roughing gouge. Oh, and it wasn't sharpened yet; it had just come out of the box.

You should not use the skew on a bowl either!

**10 Big gap at tool rest.** One of the most common problems is extending the tool too far out over the tool rest. Many times, students will continue cutting without moving the rest any closer to the blank. Once the tool extends more than 1" or so beyond the rest,

As your bowl takes shape, stop the lathe frequently and move the tool rest to about 1" from the stock.







When turning the outside of a face-grain bowl, turn from the bottom to the top (sometimes described as uphill).

stop the machine and move the tool rest closer. Lathe tools have been known to break over the tool rest—a very bad thing.

The height of the tool rest is determined by the tool you are using and your height and stance. Always place the tool on the rest first, touch the back of the tool to the blank, then gently lift the tool handle until the bevel makes contact with the wood. This will ensure the bevel supports the cutting edge. You will be less likely to get catches this way.

**11 Moving tool rest with lathe running.** Don't even think about it! Never move the tool rest with the lathe running.

**12 Not following the curve.** It is not uncommon for a

beginner to make straight cuts along the length of the tool rest, correctly move the rest closer but continue to cut in a straight line. To produce better profiles, move the tool rest around the shape of the bowl. The result is a cone-shaped bowl. This is where a curved tool rest can be helpful, although not a necessity.

Work on a continuous curve—not thinness.

**13 Wrong direction.** For face-grain bowls, cut uphill or from bottom to top on the exterior of the bowl. On the interior of your bowl, cut downhill or from the rim to the center.

**14 No body movement.** You are not bolted to the floor. To produce better curves, use your

When you remove stock from the interior of a face-grain bowl, always begin at the rim and work toward the center (also described as downhill).



body and move it through an arch. Learn that “woodturner’s sway.”

Place the tool handle against your hip and hold the handle with your right hand near the shaft and your left hand on the tool rest. Keep your left hand on the tool rest throughout the cut to provide additional support. Remember, if you move your feet, you move the pivot and lose the curve. Learn to swing your body, but don’t move your feet.

**15 Dull tools.** Beginners also have a problem determining whether a tool is sharp or not. It takes experience to be able to tell. Different woods react differently to being cut. Most beginners merely increase pressure as the cutting edge gets dull. This can be dangerous.

When in doubt, sharpen the tool. And, the best way to sharpen a tool for beginners is with jigs and fixtures; they all work, and they all provide excellent results. Hand-sharpening also works after you learn what you are doing, but the jigs and fixtures will provide consistent results each and every time.

Be sure to touch up your edge on the grinder before making your final cut. A dull tool will pull or tear at the fibers, leaving a surface that you can’t sand smooth. This is especially true on end grain.

Each instructor will show you his or her favorite grind for the bowl gouge. They all work if you take the time to learn how to use them. It is more important that you learn to consistently reproduce the grind you are using than which profile you choose.

Grinding by hand is important to learn, but for the beginner, jigs and fixtures are a great help.



A grinding jig helps many new turners repeat the same bevel on a lathe tool.

**16 Too much pressure.** Another common problem is applying too much pressure when cutting the surface. This will force the heel of the tool into the surface and bruise the fibers, leaving lines that remain invisible until you apply finish. Yikes!

These lines are almost impossible to sand away. You must recut the surface. Relax and let the cutting edge do the work rather than forcing it.

## THE RIGHT MOUNT

A lot of bowl-turning problems begin with how the material is attached to the lathe. Because every new lathe is shipped with a faceplate, this is the obvious choice for the beginning woodturner.

## Stop! Don't do that!

**17 Wrong screws.** Trouble can begin at the first step when you screw the blank to the faceplate. Here, several problems can occur. It usually starts with drywall screws; they are too thin

and too brittle. You exacerbate the problem when you draw up dry-wall screws with a power screwdriver, which pulls them up tight and snaps them.

Sheet metal screws are a better choice to attach turning stock to a faceplate. These screws are case-hardened and have deeper and sharper threads. Make sure you choose a length that is appropriate. Square-drive screws are also popular and are much easier to remove from hardwood.

For securing turning stock, one size does not fit all. For an 8"-diameter blank that is up to about 2" thick, I recommend #8×¾" screws. For a 14×8" blank, secure with #14×1½" hardened screws.

**18 Difficult grain.** You must also consider the material you will be putting the screws into. End grain requires larger and longer screws. Beware of punky or spalted woods; once the wood has started to decay, it is extremely difficult to get a screw to hold.

Sapwood does not hold screws as well as heartwood. To be on the



safe side, bring up the tailstock with a live center for insurance. This will give additional support if the screws do not hold.

Choose turning stock that offers a better chance for success. Dale Nish says it best: "Life is too short to turn crappy wood!"

**19 Poor grip.** Once you get excited about turning, it probably won't be long before you purchase a 4-jaw scroll chuck, which I think holds material better on the lathe. However, this chuck has its own set of challenges.

I have had many instances where students have made tenons too small or the recesses too shallow. Either case can cause the blank to separate from the chuck.

Punky wood and sapwood present the same challenges and grain problems as noted *above*.



If you want your bowl to stay in the chuck, you'll learn the value of properly sizing the tenon. If the chuck loosens, the bowl will fly off the lathe.

**20 Loose fit.** Green wood requires you to tighten the jaws of the chuck repeatedly as moisture is forced from the blank. Just as with the faceplate, remember to use the tailstock and center whenever possible.

Turn safely and have fun. But by all means, think about what you are doing and consider the risks involved. If you are unsure, ask someone with more experience. If it looks dangerous, it probably is.

"Stop, don't do that!"

Nick Cook ([nickcook@earthlink.net](mailto:nickcook@earthlink.net)) is an *American Woodturner* contributing editor. Nick, who lives in Marietta, Georgia, will teach afternoons in the Youth Turning Room at the AAW symposium in Louisville.



Sheet-metal screws should be your only choice for mounting turning stock to faceplates. At right, you can see how a drywall screw can break off, which leads to huge safety issues.

Jerry Glaser

# Turner, Innovator, Toolmaker

By Alan Lacer

You may be lucky enough to own a Glaser tool. What you probably don't know is that Jerry Glaser is one heck of a woodturner, too.

Perhaps one of the most influential yet humble personalities in the woodturning field is a mystery to most. Few know that his woodturnings appeared in major shows in the late 1950s and early 1960s. Even those aware of Jerry Glaser's name barely know of his contributions to woodturning tools, chucks, and jigs.

## The man

Although he lived most of his adult life in California, Jerry grew up on the west side of Chicago, where his father owned a Czech restaurant. Early influences there guided him to woodturning and engineering.

Jerry first tasted woodturning



during a 1934 shop class at Farragut Junior High. Those bowls—turned more than 70 years ago—would be well received even today at most AAW chapter meetings and exhibits.

As a teenager in the late 1930s,

Jerry attended an exhibition of Swedish crafts at Marshall Field's in downtown Chicago. In that show, he saw bowls with sculpted rims—evocative of natural-edge bowls that his friend Bob Stocksdales would make famous years later. "What impressed me were the turned bowls that had the undulating curved form on the edges," Jerry recalls. "I tried to incorporate this shape in my work much later on."

Jerry's engineering background gave him a solid foundation in understanding metals, and therefore, woodturning tools. His technical training as an engineer was at the Armour Institute of Technology (now the Illinois Institute of Technology).





In 1963, Jerry Glaser turned this 6×11½" teak bowl, which was featured in *Wood Turning in North America since 1930*. Jerry's work included a sculpted rim, a textured exterior, and carved feet—features that woodturners “discovered” decades later.

During WWII, Jerry worked in a Cleveland engine laboratory on the challenges of oil consumption in long-range bombers. Following the war, Jerry moved to California to accept a job with Northrop Aircraft Inc., where he specialized in gas turbine engines. Jerry later designed jet engines for General Electric, then landed at AiResearch, where he spent the last 28 years of his engineering career before retiring in 1987.

Make that retirement from engineering. He spent another 15 years developing woodturning tools. Now 86, Jerry only recently sold his firm to CryoSteel Engineering & Technology Inc.

Jerry continues to consult for the Los Angeles-based company.

### The woodturner

Close your eyes and imagine a bowl with a sculpted rim, a finely textured outside, and carved feet. Although this sounds contemporary, now imagine this piece featured in a major California art show in 1962. But that gets ahead of the story about Jerry as a woodturner.

In the early 1950s, Jerry returned to woodturning. After purchasing an Oliver lathe for \$75 at an auction and finding a California supplier of exotic hardwoods, Jerry was set to pursue turning in a serious manner.

Jerry was an invited artist in a number of West Coast shows. The “California Design Eight” in 1964 chronicles Jerry’s stature. This

*I think that the real advance in turning tools since the 1960s came with the use of high-speed steel and the development of the deep bowl gouge by Peter Child. High-speed steel and the improvements made by the use of high vanadium content steels have made a big difference in the edge holding of turning tools as compared to the plain high-carbon steels of years ago.*

—Jerry Glaser

*"Jerry's work was as good as anyone else around at the time. If he had stayed with woodturning, he would have gone all the way. He made a decision to go a different direction so we would all have good tools to work with."*

—Sam Maloof, furnituremaker



Jerry turned this 6"-diameter rosewood bowl in 1970. The wall thickness is  $\frac{1}{8}$ ".

*Opposite:* This 1989 sketch shows a Glaser concept for a rotating cutter for an ornamental lathe. "Jerry's drawings and penmanship are a direct reflection of his genius," says Paulo Marin, whose firm purchased Glaser Engineering in late 2005.

show included five pieces from Jerry, six Bob Stocksdale turnings, and several Sam Maloof furniture pieces. Prices tell a story: A Glaser cocobolo bowl was priced at \$50, a Stocksdale lignum vitae bowl went for \$18, and a Maloof side table had a \$350 price tag.

Jerry's work from that period looks like it could fit comfortably into a 2006 exhibition. The sculpted rims, bowls with texture on the outside—shallow carved scallops to add interest—and the carved feet all can be seen in work being done today. The carved feet were Jerry's solution to screws from his lathe chuck. "I just carved away the area with the holes, and what was left became feet," Jerry recalls.

More than one woodturner has pointed out he or she has seen examples of Jerry's turning in books printed in the late '50s through the '70s. Design books, exhibition catalogues, and technique books have examples of

Jerry's woodturning.

At this early stage of modern woodturning, Jerry appeared poised to become widely known as a turner. However, due to one small piece of steel, Jerry would become known for his huge contribution to the woodturning arena: a maker of fine tools.

### The toolmaker

While sharing the stage with the likes of Bob Stocksdale and Sam Maloof, it did not take too long to develop friendships.

On one of the early trips from Jerry's home in the LA area up to Bob's in Oakland, Bob remarked about a great scraper he had made from a special piece of steel—and wondered if Jerry could make a gouge from such a steel. Having noticed a name on the steel, it was an easy task for Jerry to determine the type of steel—M2 high-speed steel (HSS) developed during World War II.

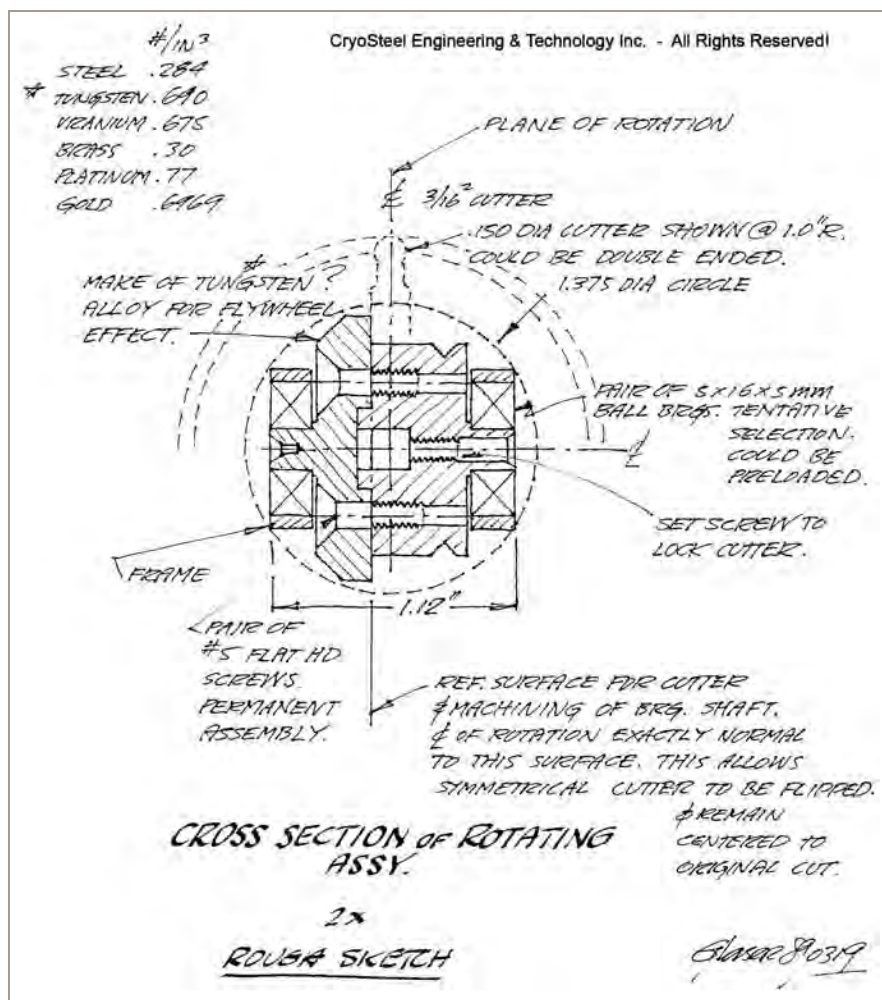
### Early tools

The first tools Jerry made for Bob Stocksdale were formed from square material that was milled to approximate the look of the hot forged tools Bob was using (they looked a lot like the British long and strong spindle gouges). It wasn't long until Jerry realized there was a lot of wasted effort to only achieve a "look."

After those initial tools, Jerry switched to milling the tools from round bar stock.

There was an event from this period that is worth noting. Jerry was a full-time engineer and a serious woodturner. Thinking that toolmaking was a direction





Copyright 2005 CryoSteel Engineering & Technology

that others should pursue, in 1966 Jerry sent a sample of the M2 high-speed steel to a leading British toolmaker. The suggestion was made that they should develop woodturning tools from such steel. The outcome: Jerry never received a reply, and British tools were not made at this early date in high-speed steel. The more significant outcome was for Jerry to develop a line of high-speed steel (HSS) tools independent of other makers.

## Timing is everything

As more woodturners incorporated artistic expression in the late 1960s, there was a void:

*"Jerry Glaser is bright as a button. You would not believe the details in his drawings from decades ago—ideas he never got around to executing. He has an incredible mind."*

—Stuart Batty

## Glaser's turning-tool milestones

What is remarkable about Jerry's investigations and tools were the early dates. If Jerry was not the first, he was certainly an early pioneer in these innovations.

- 1966** Introduces commercially available high-speed turning tools
- 1966** Introduces milled turning gouges from round stock rather than stamped or hot-forged
- 1966** Introduces first commercially available tools truly sharpened and hand-honed ready for use
- 1975** Introduces commercially available particle-metal turning tools
- 1980s** First to offer turning tools in an array of specialty steels, including M2, M4, A11, 15V\*
- 1980** First to introduce commercially available American-made deep gouge
- 1982** Develops commercially available grinding jig with holding and manipulation features
- 1985** Introduces interchangeable turning tools with single handle
- 1985** Introduces commercially made metal turning tool handles loaded with lead shot to dampen vibration
- 1985** Introduces multiple-based screw chuck (three different bases on the same chuck). This was the basis for many chuck designs that followed.
- 1988** Develops double articulating hollow turning/boring tool
- 1989** Develops first bowl skew
- 1995** Introduces cryogenically treated steel at -300°F for extra toughness

\*Many of these are particle-metal technology—something emphasized today by other toolmakers as a recent innovation.

The great American turning tool companies no longer existed (such as Swan, White, Witherby, and the older Buck Brothers companies). Thus, many turners of the time made their own tools or had them made.

With Jerry's love of turning, his engineering background, the lack of innovative woodturning tools on the market, and the dawn of contemporary woodturning, the stage was set for someone to fill the niche. Jerry shifted his energies from making woodturnings to making fine tools for others.

In the early 1970s, Jerry entered a partnership with Billy Auvenshine to form the Turnmaster line of tools. These had wooden handles and were of two types: the  $\frac{9}{16}$ "-diameter "Stocksdale Gouge" and a 1" scraper to complete the bowl-turning set. Soon, the set was expanded to include deep-fluted bowl gouges.

The handles were based on a sample sent by Bob Stocksdale to Jerry: first roughed on an automatic lathe, then fitted with ferrule and finished off. Each one was completed by Jerry's hand.

In the mid-1980s, the partnership of Turnmaster ended, and the company became Glaser Engineering. About the same time, Jerry moved from wooden handles to the shock-absorbing metal handles filled with lead shot. The line of tools expanded to include a double articulating hollowing tool, grinding jig, screw chuck, and a wider variety of tools and specialty steels as described on *page 21*.



Jerry Glaser turned this classic  $5\frac{1}{2}$ "-diameter walnut bowl in a junior high shop class in 1934.

One of these devices from the 1980s is worth commenting on. Jerry discovered the problem of repeatability in grinding tools that were on the market. After noting a jig for sharpening knives in the cutlery trade (a clamp on a long rod that reached the floor), Jerry created a sharpening jig that was a forerunner to the gouge grinding jigs that have followed.

The jig held the tool securely, and the pivoting action created a side grind on bowl gouges or detail gouges with ease. The belief that the support should reach the floor was based on the notion that most of the weight would be borne by the floor rather than the jig itself.

### Garage machine shop

In a crowded two-car garage tucked under his home near the Los Angeles International Airport, Jerry has assembled and ground all of his innovative tools.

The actual making of the tools had a number of steps. First,

*"Other than my marriage, working with Jerry's tools is the best thing that has ever happened to me. They are the only tools I use. And it is a good thing that I have enough of them to last me the rest of my life."*

—Hans Weissflog,  
German box maker

Jerry acquired the specialty steels from several different U.S. manufacturers. He then delivered the steel to Paul Romeo, a California machinist that Jerry





*Right: Some of the earliest tools Jerry made in the 1960s for his friend Bob Stocksdales. The bottom prototype gouge was machined from rectangular bar stock.*



worked with since 1987.

Jerry wrote the specifications for the milling and shaping and then tested the final results. Next, the completed steel was sent for heat treating and topped off with cryogenics, where the specialized steel is taken to -300°F to improve the toughness.

Back in his garage, Jerry personally fit the tools into his readily identifiable style metal handles—complete with lead shot to dampen vibration. The last step was for Jerry to sharpen each tool, finished off with hand honing of both sides of the cutting edge. No assistants, no outsourcing—just Jerry and his garage grinder.

### **What never made it to market**

If you push the envelope, there are bound to be failures.

“I’ve tried a number of things to improve my tools,” Jerry recalls. “The first one that didn’t work out was a ceramic cutter.

I contacted a firm in Japan and had them make me some 1½×9/16” shallow blades that I could mount in a special holder I made for this purpose. They didn’t last as long as I thought they should. And you couldn’t sharpen them at all.

“At that time I had a customer, Mike Shuler, who did and still does a lot of turning of glued-up bowls. The abrasive action of the glue joints was so severe that it required a lot of sharpening of the best steel tools I had to offer.

“The solution to this problem was to make him some tungsten-carbide tools. These worked much better than the steel ones, and my thinking was that the ceramic ones would do even better.

“I also made a boring bar with an articulated head for a while that was five feet long, made out of 1½”-square tubing, and filled with lead shot. The trouble with this was that it was a real effort to package and ship it. So that lasted only a couple of years.”

### **No name is his trademark**

There is one thing that is striking when you look at Jerry’s tools, jigs, and chucks: Nowhere does his name or the name of his company appear. I honestly can’t think of another company in the turning field where this occurs. When asked why, Jerry responded, “I just felt I never needed to.”

On Jerry’s setup bench where he put together each tool lies a strange-looking tool: It almost looks like a Glaser gouge with its metal handle and flute design, but it clearly is not. There’s a great story to tell about this gouge.

Years ago, Jerry was approached to sell his business, but he refused. His suitors decided to copy his tools and introduced similar metal handles, similar-looking gouge design, and likewise no identifying name on the tool. I had to ask Jerry why he looks at this tool almost every time he works in the shop: “It reminds me just how bad a copy can be.”



# Negative-Rake Scraper

A finishing tool that's up to the challenges of dense woods, end grain, and thin walls

By Stuart Batty

Scraping with a negative angle on a blade is not a new technique. It was originally developed centuries ago for turning ivory and blackwood. However, my technique is slightly different: A burr does the cutting. See what this tool and grind can do for your woodturning.

For those of you who do not know, I am a time-served, apprenticed spindle turner and trained in the art of cutting wood. I served my apprenticeship under

my father, Allan Batty (I am sure you all remember him. He is the old one).

When I spindle turn, I do not scrape. However, when I started making more artistic pieces, it became necessary to use some scraping techniques simply because a gouge cannot cut in restricted areas. A prime example is cutting deep in a narrow bowl or inside an end-grain box.

The usual technique of scraping is to grind a shape suitable for the form you intend to cut. The dry grinding wheel creates a burr at the front top edge of the tool, pushing some of the excess metal over the cutting edge. This burr is what does the cutting. However, because a traditional scraper does not have a negative-rake angle,



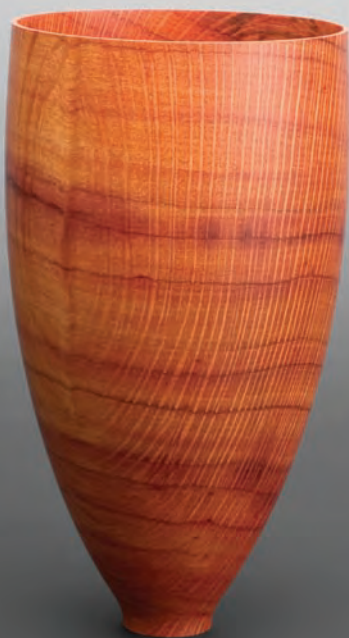
it is often far too aggressive and almost impossible to use on dense exotics—especially on end grain.

In the past, I would hone off the burr, leaving a smooth surface at the top of the scraper. This would make the tool less aggressive. By using a long tool handle, I would have enough control to ensure the tool did not get a catch on the end grain. But, this technique has some limitations.

## Deflection problems

If the piece is not extremely secure in the chuck, dense woods will pull themselves onto the scraper and rip out of the chuck. When the wood is thin (example: cutting end

Opposite: Cocobolo and Western Australian thin-walled bowls; 10×4×5". Below: Western Australian sheoak; 10×5". Stuart used a negative-rake scraper on only the inside walls. The wall thickness of each piece is 7/64".



Photos: Don Datoe

grain inside a bowl) and you turn with a traditional scraper with or without the burr, the wood will try to climb onto the edge of the scraper. A burr only compounds the problem.

Deflection is like a clock pendulum: As the wood deflects from the very small grab on the cutting edge, it will bounce away and then travel back at the cutting edge the same distance it deflected. This means the wood will now climb even further onto the cutting edge and cause a slightly larger grab on the cutting edge. While the piece is turning at 30 to 60 mph, rapid wood deflection accelerates. Each deflection will be around 1/8" to 1/4" apart, which means the wood will have grabbed and deflected some 24 to 48 times in 6" of rotation. This all occurs in less than one-tenth of a second—far too fast to pull the tool out. The biggest catch is the last one that caused the wood to fail.

BANG! There goes the thin-walled bowl. If you pick up the pieces from the floor, examine the increased catches. You will see a series of progressively deeper and deeper catches in the end grain.

## A different problem

As the tool starts to cut the wood, which does not flex, it will pull the thin blade into the end grain, causing a small catch. This will cause the blade to deflect (slight bend); it will then rebound back into the wood but even deeper, causing a larger deflection and rebound. This happens many times in a fraction of a second—far too fast for you to react in time before the big catch, which will pull a very large chunk out of the wood and kick the tool away from the work. This will give you a big



A narrow blade like on this negative-rake scraper is ideally suited to turn tall, narrow exotic bowls. The negative-rake angle is first ground on the 10V steel so the tool can be touched up many times with a new burr before requiring you to grind the negative angle again.

fright and make you very nervous about putting the tool to the surface. Therefore, you will hold the tool more firmly and when you put it to the wood surface again, it will just catch the tool even harder.

This is the time to try negative-rake scraping.

## Goldfield burls lead to negative-rake solution

I have been making square bowls since 1982; this is a style I pioneered, which stems from being a spindle turner. As a spindle turner, I cut a lot of pommels for both balusters and newel posts. (A pommel is the square shoulder cut at either end of the baluster or newel post.) Therefore, when I started turning square bowls, I found it easy to cut through the square corners or any broken surface, including natural edges.

Until recently, I always cut the corners of all the types of square bowls with a bowl gouge because the technique is very similar to cutting a pommel. I turned over

## THE CHALLENGES OF IVORY AND BLACKWOOD

Ivory has a grain like a dense exotic and will grab on any type of scraper that does not have a negative angle. However, because of its extreme density and 1.84 specific gravity (50 percent greater than any wood known to man), you can turn it with a negative-rake scraper without a burr.

Before mass production, ivory billiard and snooker balls were turned on the lathe. To get extreme accuracy, scraping was essential, and a negative angle on the scraper was required to avoid the ivory grabbing at the tool.

Blackwood is one of the densest woods, with a 1.2 specific gravity (20 percent heavier than water). It is one of the best woods for woodwind instruments due to its harmonics and resistance to absorbing moisture from the breath of the instrument player.

Blackwood is used for the majority of high-quality bagpipes. One essential part of the bagpipe is the chanter; this is the section of the instrument that controls the sound. The chanter is approximately 15" long and tapered along its length—it has a wall thickness of less than  $\frac{1}{8}$ " (3mm) along its full length. This piece of the instrument is by far the hardest part to turn and requires scraping to achieve the accuracy in wall thickness on the outside. The inside is drilled and reamed with a modified World War I French bayonet, which has a three-edge long blade ideal for this purpose.

It is almost impossible to scrape blackwood with a regular scraper blade either with or without the burr. Using a regular blade will cause the wood to grab at the tool and shatter the chanter. Instead, a negative angle is required for the blade to prevent any grabbing.

Due to blackwood's high density, it is not always essential to have a burr. Because the outside is all side-grain turning, the negative-angle tool without a burr will peel off wood fibers.



Photo: Stuart Batty

**"Off-Center Square Bowl," Western Australian sheoak; 14× 5×3½". "I used negative-rake scraping for the finish cuts on the wing sections of the piece."**

250 species of wood in a square bowl format before my spindle-turning technique ran into a wall and would not produce an acceptable finish. Not even my dad could solve this one!

No matter how I sharpened my gouge, the turned surface of Australian goldfield burls was always torn or chipped. Indeed, the damage to the surface was too deep to sand out. My wall thickness was approximately  $\frac{1}{8}$ " (3mm), and the damage was up to  $\frac{1}{16}$ " on both surfaces of the square bowl.

I knew that goldfield burls are some of the densest burls in the world, with specific gravities from 1.1 to 1.3. These members of the eucalyptus family grow in an arid region of Western Australia. They are one of the few woods that do not cut cleanly with any gouge cut—the surface always chips out.

I had over 20 types of these eucalyptuses to turn and was unable to get a good end result. I knew that it was not possible to scrape it with a regular scraper for two reasons—they were too dense, and the surface I was cutting was a natural edge. This combination would make a regular scraper grab and add to the fact that the surface I was cutting was only  $\frac{1}{8}$ " thick.

It was at this point that I considered the density of the wood and the fact that the surface was an intermittent cut and only  $\frac{1}{8}$ " thick. I decided to try the old ivory technique of grinding a negative angle (see sidebar at left.) However, after the briefest cut, the tool required a lot of pressure to remove any more wood, and at  $\frac{1}{8}$ " thick, it flexed too much.

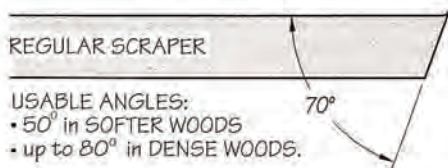
As I resharpened the tool and left the burr on it, I found out that the finish was exceptional. The tool I was using was a  $\frac{3}{8}$ " beading and parting tool. However, I was using an M2 steel that had an extremely short life—the burr would only stay on the tool approximately 15 seconds. Since I have the luxury of a lot of tools from teaching spindle classes, I applied the burr to all of them; this way I reduced my trips to the grinder. As one tool dulled, I would simply put it down and pick up the next, which allowed me to focus on the surface and concentrate on the cut.

Because maintaining a burr is critical, I no longer use M2 steel due to its short cutting life. I've switched to 10V (also known as A-11) because it has the ability to maintain the burr four or five times longer for this cutting. This is a 10 percent vanadium steel, more wear resistant than any cobalt steel. (Vanadium is the most wear-resistant alloy that can be



## SCRAPER PROFILES

REGULAR SCRAPERS w or w/o a BURR,  
DEPENDING on the WOOD.

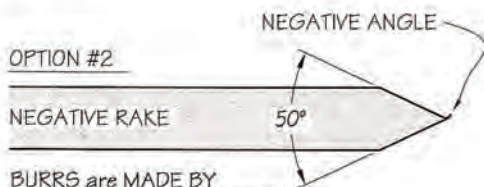


NEGATIVE ANGLE  
need not be LONG

### OPTION #1

NEGATIVE RAKE

USABLE ANGLES:  
45° thru 75°  
The LOWER the ANGLE  
the BIGGER the BURR.



BURRS are MADE BY  
DRY GRINDING, not BURNISHING.  
The COARSER the GRINDING WHEEL,  
the BIGGER the BURR.

Illustrations: Angelo lafrate



The burr produced on the edge of this scraper was ground with a 46-grit seeded gel (SG) wheel. "You must be able to feel the burr before you can use the tool," Stuart recommends.

Photo: John Hetherington

## WHY THE BURR IS SO IMPORTANT

Negative-rake scraping as I define it relies on one essential element: the burr. When scraping ivory and blackwood, the burr is not necessary, mainly due to the densities and structure.

When the blade is ground on the top at an angle and then ground from beneath to produce a burr on the upward edge, the burr does all the work. This is an excellent way to refine shape and remove small tool marks.

This is an easy technique to learn and a great way to get accurate shapes or thickness. Unlike a traditional scraper with a burr, negative-rake scraping is not an aggressive cut—even on dense end grain. However, this is not a bulk-removing technique, as the cutting life of the tool edge is short.

It is essential that there is a burr present on the cutting edge. Once the burr has been worn off, the scraper will not work well and will usually start tearing the grain. This is because you have to apply too much pressure to keep it cutting.

Negative-rake scraping does not require the handle to be higher than the blade like regular scraping or tilted/trailing like shear scraping. However, do not drop the handle too low or it will catch.

Negative-rake scraping is most suited for medium to extremely dense woods. It is not suited for spalted or soft woods. For example: It does not work well on redwood or some types of spalted maple. You can achieve better results for these woods by using a regular scraper with a burr.

added to steel, including tungsten.)

Working with these ornery goldfield burls opened my eyes to other opportunities. Now, I grab my negative-rake scraper for all my thin-walled cocobolo bowls and goblets. I also find it ideal for dense exotic woods and oak, yew, cherry, and ash.

Here are a few turning tasks that I've found ideally suited for negative-rake scraping:

- finishing the end grain on the inside of a bowl or goblet
- finishing the end grain on the inside of a box
- finishing the outside of a bowl with side and end grain

- turning where space is restricted
- turning square bowls

Try this technique with a negative angle on top of your scraper. Just remember the burr has a very short cutting life. If you can't feel the burr on top of the edge, it is time to grind the tool again.

As long as you don't point this tool uphill, you'll find this a user-friendly grind.

There's a good chance that your favorite lathe tools were manufactured in Sheffield—the heart and soul of Great Britain's fabled steel industry. For turning tools, the tradition runs deep.

# Sheffield

By Nick Cook

**A**fter attending the 10th Seminar of the Association of Woodturners of Great Britain, I had the opportunity to spend a few days in nearby Sheffield. What a trip it was.

For generations, Sheffield has been synonymous with turning tools and cutting edges in general. Most of today's manufacturers of turning tools are either in Sheffield in South Yorkshire or originated there. Sheffield has been home to Robert Sorby Tools for more than 200 years; Henry Taylor Tools dates back more than 170 years. Crown Tools, 25 years old, and Hamlet Craft Tools—even younger—are both relatively new to the area. All are within a few minutes' drive of each other.

Ashley Iles Ltd.—another name you'll recognize—originated in Sheffield some 50 years ago and moved in 1966 to Lincolnshire, just 50 miles down the road.


## Why Sheffield?

I spent time with Peter Gill and Philip Proctor at Robert Sorby, Brian Gandy at Crown, and Barry Surplice at Henry Taylor. All were very hospitable and provided me with more information than I ever thought I needed to know about steel and toolmaking.

My first question was, "Why Sheffield?" What makes this place so special when it comes to steel and cutting edges?

Sheffield had it all. Natural resources—everything required to make steel and process it—right here in the middle of England. Ironstone or iron ore was in the ground. They had plenty of timber for making charcoal.

Sheffield's two rivers—the Don and Sheaf—provided water power to operate crushing mills, grinding wheels, tilt hammers, and work bellows for furnaces. At one time, the Sheffield area was home to



Andrew Triplitt, a 26-year employee at Crown Tools, straddles a large stone grinding wheel running in water to shape turning tools. His father also worked for Crown.

more than 160 water wheels.

Sheffield also had millstone grit and sandstone for making grinding wheels. And, of course, there was plenty of clay for making crucibles to cast steel ingots.

Today, most of Sheffield's steel is produced for more specialized uses such as machine parts, taps and dies, and carving and woodturning tools.

New technology has made it possible to produce proper steel for just about any use. The addition of various elements increase hardness, durability, toughness, and wear resistance.

## Today's M2 steel

It is the science of metallurgy that allows the manufacture of an infinite variety of steels. Some are tough, some are hard, and others are rust-resistant. Most of



Sheffield's turning tools are made from M2 high-speed steel, today's standard for general-purpose cutting tools. M2 steel contains:

- carbon, which influences hardness
- chromium, to improve high-temperature performance and abrasive resistance
- molybdenum, which combines with carbon to improve hardness
- vanadium, to refine grain structure and inhibit grain growth
- tungsten, for toughness

The percentage of these elements in steel varies from one manufacturer to another.



Mick Mylnek, a 38-year Henry Taylor employee, uses a hydraulic power hammer along with hand-forging to shape turning and carving tools.

## Forming your next turning tool

Your Sheffield lathe tools are handmade by a small fraternity of craftsmen. Henry Taylor, for example, employs just 11 workers. Up the road at Robert Sorby, you'll see 36 workers; over at Crown, 24.

The toolmakers select and buy their own steel in billets made to their own specifications. The steel is then formed at a rolling mill into specific sizes and shapes.

Once rolled, the steel must be annealed to make it workable again. The annealing takes place in clay tubes, which are filled

with coal and heated slowly, then slowly cooled. This reduces brittleness and produces a tough but not overly hard material ready for cutting, shaping, and machining.

The steel is then cut into specific lengths for the tool to be made. Bowl and spindle gouges are sent to the milling machine, where a flute is cut. Spindle roughing gouges are forged into shape while other tools are either ground to shape by hand or with surface grinders. (Excessive heat in grinding reduces hardness.)

The tools are then heat-treated or tempered. Depending on the intended use of the tool, it may be single-, double-, or even triple-tempered. (The temper determines the degree of hardness, resistance to wear, and edge retention.) Skews may be double-tempered, while bowl gouges and spindle gouges are usually triple-tempered. The goal is to get to a Rockwell hardness of somewhere between 62 and 65.

There are three heat-treating facilities in Sheffield. Each tool manufacturer usually sticks with its favorite facility to maintain quality control and to trace the course of the tools. Some tool-



Mick Gibbs, a 20-year employee at Robert Sorby, tests each tool for hardness. Robert Sorby uses an industrial diamond to determine Rockwell hardness.



Learn more about the early years of Sheffield's steel industry by clicking on the Sheffield link at [woodturner.org](http://woodturner.org).

makers test the hardness of each tool while others test samples of each type of tool.

Once the tools are heat-treated, the craftsmen grind the final shape. Some tools are hand-ground on large water-cooled grinding wheels by an employee sitting astride a wooden horse over the wheel. Others use water-cooled abrasive belts and a variety of jigs and fixtures. You'll find a few tools ground on a milling machine. Amazingly, you'll see no grinding jigs or fixtures—these fellows know exactly what it takes.

After grinding, the craftsmen polish and glaze the steel before mounting handles. The tools are then packaged and shipped off to distributors and dealers all over the world.

According to one manufacturer, about 75 percent of the woodturning tools produced in Sheffield are exported.

Peter Gill and Philip Proctor of Robert Sorby, Barry Surplice of Henry Taylor, and Brian and Edward Gandy of Crown Tools contributed to this article.



**"Nest of Walnut Tables;"**

22½×30×22". Rude captured the 1950s-style in furniture pieces that would fit today in many homes. (1970s)

Dean of American Woodturners

# Rude Osolnik

## A COLLECTION

A retrospective show of Rude Osolnik's work will be on display April 7–June 25 at the Kentucky Museum of Art. The last week of the exhibit coincides with the AAW symposium in Louisville.

Rude, who died in 2001, lived in Berea, Kentucky, not far from Louisville. He was widely admired and recognized both as a pioneer in contemporary woodturning and as the "Dean of American Woodturners." The pieces shown here represent some of his signature work.







**"Set of Five Walnut Candleholders."**

Height from 7¼" to 12¼"; 2½" at base. This signature design is part of many turning collections. (1970s)



**"Twig Pots."** Rhododendron, 8×6"; myrtle, 5½×3"; buckeye 2¾×4". Rude was a forerunner in turning waste products into art forms. (1980s)



**"Birch Plywood Bowl,"** 7×10". Rude created another signature design by gluing together waste material from furniture products into stunning turned pieces. The Renwick Gallery at the Smithsonian selected a bowl with these characteristics for its permanent collection. (1989)



**"Natural-Edge Bowl."** Western maple burl; 8¾×11". This represents evolution of the form and shape of Rude's work. (1987)

**"Cherry Bowl."** This represents the clean Scandinavian style of Rude's work. (1950s)

**Own a piece of Rude's shop**

During his 60-plus years of woodturning, Rude Osolnik amassed a legendary collection of wood, which overflowed into several barns at his studio in Berea, Kentucky. The Osolnik Family Trust is now closing the studios. Machines and tools that Rude used—as well as his extensive lumber collection—are for sale at [rudeosolnik.com](http://rudeosolnik.com). You can make special arrangements to pick up purchases before or after the AAW symposium.

# '20 Years— Still Evolving'

An exhibit celebrating the AAW's 20 years of growth opens April 7 at the Kentucky Museum of Art in Louisville.

**T**his exhibit highlights the evolutionary work of 22 studio turners over a 20-year period. The collection showcases representative turned pieces from each crafts-person from 1986, 1996, and today.

These pages include the work of William Hunter and Michelle Holzapfel. Kevin Wallace, an *American Woodturner* contributing editor and woodturning critic, provided the commentary on these pieces.

Other studio turners in this exhibit include: Michael Brolly, Shawn Christman, David Ellsworth, Clay Foster, Giles Gilson, Stephen Hogbin, Michael Hosaluk, Todd Hoyer, and Ray Key.

Also Stoney Lamar, Steve Loar, Bruce Mitchell, Liz and Mick O'Donnell, Liam O'Neill, Steve Paulsen, Michael Peterson, Merryll Saylan, Mark Sfirri, Alan Stirt, and Jack Straka.

**"Flying Loose,"** 1997. Cocobolo, 13½×10½×10". From a private collection. William Hunter's exploration of sculpture dates back to his earliest vessel forms. Over the last three decades, the artist has married the two approaches in myriad ways. "Flying Loose" represents one of Hunter's deconstructionist forays. It is the opposite of a closed vessel form, as it is very much open, as though dynamically flying apart. The work has a wonderful sense of motion, and the relationship between the object and base is truly holistic—they are not only related but mirror and play off of each other. Although it is quite unlike "Flutes in Palo Santo," it obviously embraces the same language, from the flute's surface to the use of sapwood as a focal element.

## **Bill Hunter**

Rancho Palos Verdes,  
California



Photo: David R. Barnes



Photo: George Post





**"Kinetic Garden,"** 2005. Cocobolo, 17×7½". From the collection of Patricia and Wolf Lixfie. "Kinetic Garden" makes clear both Hunter's love of the wood vessel form and his ability to consistently expand the language of woodturning. The work can be approached on many levels, as it is both undeniably beautiful and structurally complex, with the sculptural aspects of the work embedded in the individual elements. Hunter is not one to offer demonstrations of technique. In fact, to believe that this is what is central to the work is to miss the point: Hunter is always raising the bar for his contemporaries and setting a standard of excellence for his fellow woodturners to strive toward. Hunter is also hesitant to explain the thoughts behind a work, and, admittedly, a work such as "Kinetic Garden" speaks in such a poetic manner that any commentary seems both inadequate and superfluous.

Photo: Alan Shafer

**"Flutes in Palo Santo,"** 1988. Palo Santo wood, 11×10". From a private collection.

"Flutes in Palo Santo" is an excellent example of what made William Hunter one of the most highly respected artists in the field of woodturning. The finely crafted flutes on the perfectly proportioned vessel form are enough to make clear that he is a rare talent. Yet the vessel simultaneously presents an excellent example of utilizing the natural beauty of the wood—in this case the central sapwood design and the radiating lines—which crisscross the carved flutes, creating stunning rhythms and patterns.



Photo: Barry Blau

# Don't miss this exhibit in Louisville

On Wednesday, June 21, the AAW will host a reception and catalog-signing reception at the Kentucky Museum of Art. At this event, artists in attendance will sign catalogs for symposium attendees.

This exhibit will be on display during the AAW symposium in Louisville, then travel to the AAW Gallery in St. Paul for display through the summer.

A catalog of the exhibit will be available for \$25 through the AAW. For details, see [woodturner.org](http://woodturner.org).

## Michelle Holzapfel

Marlboro, Vermont



**Michelle Holzapfel** turns with her grandson, **Leander**.

### **"Self Portrait,"** 1986.

Wild cherry double burl, 18×8×8", turned and carved. From the collection of Bruce Kaiser. Michelle Holzapfel's "Self Portrait" is one

of the most important works in the history of woodturning. As a portrait, it represents what she was doing at the time—elevating the stature of the turned wood bowl both conceptually, by employing narrative, and technically, with sophisticated carving techniques. Created in the mid 1980s, it captures a moment in time when the field was being lifted into the realm of sculpture, so it is to an extent a portrait of the field at a particular point in time. Like Mark Lindquist, who connected the woodturning field with modernist sculptors such as Brancusi, and Stephen Hogbin, who connected the field with abstraction and cubism by cutting and reassembling bowl forms, Holzapfel brought the woodturned object into the realm of figurative, narrative, and conceptual art.







**“Captive Vase,”** 1996. Red maple burl, 12×2×2", turned and carved. From the collection of Kenneth Spitzbard. “Captive Vase” presents Michelle Holzapfel well into her career as a contemporary artist. Her language still concerns the bowl and vessel, forms central to woodturning, yet she uses them symbolically and metaphorically. At the same time, she is drawing from historical sources and open to a vast array of shapes, forms and objects, from jewelry to architecture. As her language has expanded, she has followed her muse, which has led her far from the explorations of her contemporaries, into uncharted territory. “Captive Vase” is an example of work that is alien to the New York art world with its use of natural materials and its quiet beauty, yet estranged from the concerns of most woodturners. I suspect that all of Holzapfel’s work is autobiographical, even when simply revealing the landscape of her mind. As such, it’s possible that “Captive Vase” has subconscious content, as it is not clear why she was driven to restrain the wood vessel. Perhaps it represents a sense that the medium and language had become restrictive in some manner or that she was herself imprisoned by the field, although the results are indeed captivating.



**“Draped Bowl,”** 2005. Maple, 15×16×6", turned and carved, bleached, pyrography. From the collection of Roger Bryan. To an extent, “Draped Bowl” is the opposite of Holzapfel’s “Self Portrait” of 1986. The bowl is no longer elevated and celebrated. Instead, it is covered—almost imprisoned by the beauty and technical mastery of the wood drapery. Is it that the wood bowl contains secrets that are not to be shared? Or is the bowl being rejected as a means of self-expression? Is the bowl covered because it is being put on a shelf and is no longer of use? Regardless of meaning, Holzapfel’s work continues to marry wide-ranging art world approaches, from trompe l’oeil to narrative, while honoring the traditions of craft. She remains an important and vital artist, and, with the beauty of works such as “Captive Vase” and “Draped Bowl,” I hope she continues to elevate the wood bowl, to set it free and to allow its value and significance to be seen.

Photos: David Holzapfel

# AAW 2006



**Pack your bags,  
it's time to head to**

# Louisville

**Don't miss one turn of the  
lathe June 22–24 at the  
AAW National Symposium**

Whether you say *Looavul*, *Luhvul*, *Loueville*, *Looaville*, or *Loeeyville*, the place to be June 22–24 is Louisville, Kentucky, for the AAW's 20th Annual National Symposium. You've made your reservations, right? If not, get busy!

The symposium committee has lined up more than 150 demonstrations to entice you. You don't want to miss any of the 900-plus pieces expected for the Instant Gallery. As a special treat, there are three incredible woodturning exhibits within four blocks of the symposium site.

If there ever were a year to make a special effort to attend, this would be it. Here's an overview of all the major events, including the 120 rotations.

For more details, see [woodturner.org](http://woodturner.org).





# National Symposium

3 DAYS • 30 DEMONSTRATORS • 120 ROTATIONS

## “There are no secrets in woodturning”



- Saturn Box
- Drunken Box
- Box With Pierced-Through Lid

“With my pierced-through box, I show how to turn this piece and how the out-of-center chuck works. I cut grooves from both sides until they meet in the middle of the wall thickness. Holes appear, and if it doesn’t break, you can see a nice pattern.”

—Hans Weissflog, Germany



## See how nature can inspire your turning



- Turn an Erosion Bowl
- Turn a Tree Plate

“We all see trees every day; we use them to build and enjoy turning them. If you come and watch this demonstration, you will see how tree images can inspire you to go home and turn and carve your own tree platter.”

—Neil Scobie, Australia

## Learn a new way to think about turning



- Creating With Turned Forms
- Adding Texture and Color to Turned Objects
- Bases, Stands, and Presentation

“There’s a whole new way to think of lathe-turned forms. I’ll demonstrate how to make several objects created by cutting apart forms generated on the lathe. Join me to discover creative ways to present your work.”

—Betty Scarpino, Indiana

## INCREDIBLE!

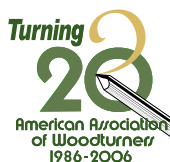
**Win one of five Oneway 2436 lathes  
Packard donates fifty \$100 gift certificates**

Feeling lucky? Here are even more wow! reasons to attend this year’s symposium in Louisville.

All fully paid symposium participants will be eligible to win one of five Oneway 2436 lathes (retail value \$5,645; includes standard equipment and shipping up to \$400) to be given away at Friday night’s banquet.

In addition, a special drawing will include fifty \$100 gift certificates donated by Packard Woodworks.

We can’t wait to see what lucky members will win new equipment for their shops.



**Trent Bosch & Allen Jensen, Colorado**

- Hollow Turning in Depth
- Utility Bowls in Depth



"We will present everything you ever wanted to know about bowls and hollow forms in a fun, informal atmosphere. Trent will discuss all the details of the

processes while Allen demonstrates the techniques, allowing them to cover the topics in depth. This is a demo you won't want to miss!"

**Andrew Brown, Kentucky**

- Demos in Classes
- Kitchen Projects



"Kitchen products bring joy to the user and cash to the turner. These projects will add a few proven sellers to any turner's line of products."

**Myron Curtis, Virginia**

- Accurate Turning of Spheres Using Tangents
- Point-to-Point Repetitive Spindle Turning

"Come to my demo, and I'll show you a simplified aid for turning two or more identical spindles. We will emphasize speed, accuracy, and safety."

**Mike Darlow, Australia**

- More Spindle Turning
- Faceplate Turning
- Spindle Turning

"I'll show you the finer points and less commonly used cuts in spindle turning. We'll focus on refining your techniques

to improve off-the-tool surfaces and minimize sanding."

**Cindy Drozda, Colorado**

- Finial Box
- Metalworking for Woodturners

"I will try to demystify metalworking and bring the skills to all woodturners with a moderately equipped shop. This is where you can learn to make your own bandsaw blades, drill and tap holes to make jigs and fixtures, and successfully cut



and finish metal parts. When you leave, you'll have sources for all the tools and materials used and a shopping list for equipping."

**J. Paul Fennell, Arizona**

- Decorative & Sculptural Design
- Personal Creative Expression
- Turning Hollow Forms



"Want to develop a feel for forms? My rotation will show how to create hollow vessels, with an emphasis on finding the right form, using light to gauge wall

thickness, and hollowing out with easily made tools."

**Jack Fifield, Kentucky**

- The Basic Natural-Edge Bowl

"Join me in beautiful downtown Louisville for an animated discussion of design. How do we approach that log? Where are we gonna go with it? Most of all, let's make those shavings fly! And remember Rude Osolnik's words: 'Your simple forms are your best forms.'"

**Clay Foster, Texas**

- Adaptations
- Multiple-Axis Vessel
- Figurative Art and the Turned Object



"From cave walls to teapots, the human figure and its components have been a recurring theme in art and craft. This session will begin with a survey of

figurative art and how previous artists, craftsmen, and product designers have incorporated the human form and figurative elements into their work. Special attention will be given to primitive art and contemporary craft. This will lead into the use of figurative elements and the turned object."

**Giles Gilson, New York**

- A Walk on the Wild Side
- Function, Aesthetics, and Common Sense

"This workshop is about understanding what the design process really is. Come and explore design how-to. I will show methods that lead to stronger aesthetics and more workable functionality in woodturning."

**Michael Hosaluk, Saskatchewan**

- A Closer Look at Spindles
- Box-making With a Twist
- Design in Turning



"We will investigate various aspects of woodturning, with a focus on the vessel. Be sure not to miss the subtraction of materials."



### Greg Jensen, Ohio

#### ■ Bowl Coring Made Easy



"Are you having trouble using your bowl-coring system? Let me take the mystery out of the process and make coring easy. I'll also demonstrate

sharpening of coring knives and bowl gouges and discuss drying techniques for cored blanks."

### Morton Kasdan, Kentucky

#### ■ Workshop Safety

"As a hand surgeon and woodturner, I want to do all I can to prevent injuries to my woodturning friends. Join me for a discussion of woodshop safety and emergency treatment of injuries."

### Richard Kleinhenz, New York

#### ■ Basic Penturning

#### ■ Designing and Building Custom Pens

"If you tried slimline pens some years ago and got bored, look again. Today's pens are a far cry from that! I'll cover equipment, techniques, and a variety of pen styles, from ballpoint pens to fountain pens."

### Alan Leland, North Carolina

#### ■ Three-Legged Stools

#### ■ The Ultimate Lazy Susan



"My lazy Susans are known for their striking grain patterns. Come to this demo, and I will show you how to

make up two or more boards so that it's difficult to see the joinery. I'll also show you how to process the wood to ensure a flat and stable surface."

## GREAT PANEL DISCUSSIONS

**"Cultural Appropriation,"** J. Paul Fennell, moderator; Clay Foster, Binh Pho, Graeme Priddle, and Curt Theobald, panelists. A discussion on the use of icons, symbols, and aesthetics from other cultures in turning. This discussion will seek to raise the awareness of issues surrounding cultural appropriation and how artists use and are influenced by these symbols with sensitivity and understanding.

**"Woodturning's Past, Present, and Future,"** J. Paul Fennell, moderator; David Ellsworth, Albert LeCoff, and Kevin Wallace, panelists. At the AAW's 20th anniversary symposium, there's no better time to discuss contemporary woodturning's history, its present state, and things that are happening now that will affect its future.

**"Prior Art as an Inspiration,"** Giles Gilson, moderator; David Ellsworth and Kevin Wallace, panelists. The panel will focus on how artists can use prior art as a trigger for ideas that evolve into their own work. They will also discuss the importance of understanding the history of the art for inspiration as well as to strengthen the validity of your work.



J. Paul Fennell

## Youth Turning Room

As part of the Youth Turning Program, the AAW will again offer free youth woodturning instruction in Louisville. The AAW will waive the \$245 registration fee (including the Friday banquet) for youth turners ages 10 through 17 when accompanied to Louisville by a registered adult AAW member. The youth must be registered by contacting the AAW office at 651-484-9094.

Each morning, Bonnie Klein will conduct a three-hour hands-on turning instruction for the youth. Spinning tops and carrot stick pins are on her project list for these beginner classes. In afternoon rotations, Nick Cook will conduct 90-minute hands-on projects featuring honey dippers and egg cups.

The Youth Turning Room will feature 25 brand-new turning stations donated by generous supporters: WMH Tool Group (JET Midi-Lathes on stands), Teknatool International (Nova Precision midi chucks and dead cup drive centers), Crown Tools (basic tool sets), Dust Bee Gone (safety goggles), and Woodcraft Supplies (face shields). At the Friday night banquet, a youth-only drawing will award the turning stations to 25 lucky participants. (Freight from Louisville will be the responsibility of the winners.)

This ambitious program will require at least 25 volunteer assistants in the Youth Turning Room during each rotation. If you'd like to help, please contact Bonnie Klein (bklein96@aol.com). This is your opportunity to change a life and help another generation of woodturners.

A separate table for youth participants will be set up in the Instant Gallery for them to "show their stuff."

—John Hill, chairman of Chapters and Membership Committee



Bonnie Klein



Nick Cook

### OUR BIGGEST TRADE SHOW EVER: 40+ EXHIBITORS

You won't see a larger exhibit of woodturning equipment anywhere than at the AAW symposium. Be sure to reserve at least a couple of hours to walk among booths sponsored by all the major lathe manufacturers and more than a dozen wood vendors. You'll also find booths dedicated to segmented software, sanding aides, and everything you could dream of owning for your woodturning shop. It's more fun than an after-Christmas sale!

**Mike Mahoney, Utah**

- Utility Items for Your Kitchen
- Burial Urns With a Threaded Lid
- Nesting Bowls



"Here's your chance to learn about the different tools for nesting bowls, including a

discussion on how to make your coring tool perform for you. And, of course, we'll talk about scale and proportions."

**Stuart Mortimer, United Kingdom**

- Introduction to Spiral Work
- Twisted Hollow Form
- Translucent Turning



"This will be twisted fun! I will show you how to make a triple twist on a thin-stemmed goblet. I will also show you how to turn and twist with a 12-bine spiral and turn a twisted finial. Join me."

**Michael Mocho, New Mexico**

- Making Connections
- On-Lathe Textural Techniques



"Learn how to use both commercial and shop-made devices to quickly add a variety of textures and low-tech ornamental effects to your work for contrast and detail. I'll demonstrate the application of rotating spiral tools, chatter work, indexed drilling, embossing, faceting, and more."

**Christophe Nancey, France**

- Making of a Seed Sculpture
- Making of a Vase With Pewter Inlay

"I will show you a beautiful way to inlay pewter into the natural cracks of burrs."

**Liam O'Neill, Ireland**

- Journey to the Outside

"My slide lecture covers my development from a production turner to wood sculptor. The climax covers outdoor woodturning, its development, and examples of my recent work."



**Binh Pho, Illinois**

- Piercing Technique on Thin-Wall Turning
- Airbrush Technique on Turning

"If you think your wood has its own beauty and needs no additional color, think again. Come to my demo, and you will never look at your bowl the same way again."

**Bob Rosand, Pennsylvania**

- Christmas Ornaments
- Small Turning Projects

"Be sure to come to my demo of Christmas tree ornaments. In a short time, I'll show you how to turn high-quality gift items from start to finish."

**Mark St. Leger, Virginia**

- Rock-on Lidded Box on the Bias
- Screwing Around Lidded Box



"Learn how to turn a lidded box on the bias, which will rock gently. I will emphasize tool techniques and present options for mounting work."

**Linda Salter, California**

- Assembly and Turning of Segmented Closed Forms
- Math-less Plans for Segmented Closed Forms

"If you follow some basic instructions and go step by step, a segmented bowl is not too difficult for most turners. My idea of a first segmented turning is a

closed form with 265 pieces and is suitable for beginners—yes, beginners!—or advanced segmenters. Learn some tricks to make it goof-proof."

**Craig Timmerman, Texas**

- Making Bowls Fly
- Turning a Multi-Axis Vase



"Ready for a change of pace from an average round bowl? Consider adding wings. We'll explore turning a bowl from a non-standard shape such as a rectangle, parallelogram, or rhombus."

**Keith Tompkins, New York**

- Turning the Rose
- Woodturning Form and Design

"I believe the principles of form and design are increasingly important teaching tools. Don't believe it? This demonstration may just convince you!"

**Jacques Vesery, Maine**

- Tattoo Me With Texture
- The Hans and Jacques Show
- Concepts in Design

"Through a presentation of several artists' work, in some cases in retrospect, we will learn how variations and growth help a body of work evolve. This is a great learning tool for anyone working in any medium. It is also an ever-changing presentation as new artists' work is added to the mix each year."

**Molly Winton, Washington**

- Surface Enhancements



"Want to make your turnings stand out? Burn, baby, burn! I'll take you through the process of pyrographic surface enhancements, from design inspiration to making and using homemade brands."



# Highlights

## Don't miss 3 woodturning exhibits

Plan to extend your stay in Louisville an extra day just to take in three exciting woodturning exhibits. Each celebrates woodturning as a craft and an art form from different perspectives.

### "20 Years—Still Evolving"

This exhibit at the Kentucky Museum of Art (four blocks from symposium site; 25-cent trolley available) commemorates the AAW's 20th anniversary. The exhibit showcases the evolutionary work of 22 woodturners by displaying a turned piece produced in 1986, another from 1996, and a current piece. See *page 32* for work from Michelle Holzapfel and William Hunter.

### "Step Up to the Plate"

A themed exhibition of both juried and invited work opens June 21 at the Louisville Slugger Museum (five blocks from symposium; 25-cent trolley available) with a reception. You'll get a sneak preview of this exhibit in the Summer journal.

### "Rude Osolnik—A Collection"

At the Kentucky Museum of Art, you'll see a display of some of the work

The "Step Up to the Plate" exhibit includes "Mighty Casey Has Struck Out" by S. Gary Roberts of Austin, Texas. Gary's whimsical turned piece rotates on a turntable.



created by Rude Osolnik, one of the pioneers of creative woodturning. See *page 30* for several signature pieces.

## Other highlights

### Instant Gallery

Surround yourself in a room jam-packed with inspiring new work displayed by symposium attendees. In past years, more than 600 member pieces have been on display.

### EOG Auction

Join us for the Friday evening auction of donated turnings. All proceeds benefit the Education Opportunity Grants (EOG) program. Last year's auction raised more than \$70,000 for the EOG.

## 10 Great Reasons to Attend

**1.** Search out the best dang sanding discs available—you'll find these and everything for your lathe and shop at North America's biggest turning trade show.

**2.** Watching demos all day makes a woodturner hungry. Wander a few blocks to Fifth and Main, where Jarfi's serves great sea bass and a to-die-for shrimp pasta.

**3.** You like things that turn, right? Watch the 16-foot-diameter paddlewheel from the deck of the *Belle of Louisville*, a National Historic Landmark.

**4.** Bring your chapter's calendar! There's no better place to scout out and sign up demonstrators for upcoming AAW chapter demos.

**5.** Collect woodturner autographs at the "20 Years—Still Evolving" opening night reception on Wednesday, June 21.

**6.** Big lumber: Check out some world-renowned turning (baseball variety) at the Louisville Slugger Museum.

**7.** Take a drive to historic Churchill Downs, site of the Kentucky Derby. Yes, the ponies will be running.

**8.** Lose all sense of time studying incredible pieces in the AAW's Instant Gallery.

**9.** Ask! Ask! Ask! Dive into the hallways and lunch areas, which are crawling with friendly woodturning experts eager to answer your questions.

**10.** Hold on tight! Six Flags Kentucky Kingdom features Chang, the world's tallest, longest, and fastest stand-up roller coaster.



## Getting to Louisville

### Air Travel

Discounted airfares are available through the following airlines. Please contact your travel agent for information and ticket purchases if you plan to fly to Standiford Airport (SDF) in Louisville, Kentucky. Be sure to mention the airline ID numbers so AAW will be properly credited. AMERICAN AIRLINES code A296AR NORTHWEST AIRLINES code NM9TQ UNITED AIRLINES code 537TE Reservations may also be made through Verene Travel, official travel agent for AAW, at 651-481-4970.

### Ground Transportation

From Standiford Airport to the Galt House Hotel & Suites

- Avis Rent A Car Systems has extended a discounted rate for those who want to utilize a rental car. Call 800-331-1600 and use Avis Worldwide Discount number J867085 to receive the discount.
- The Galt House offers prearranged transportation (\$10) with your reservation. Call 502-561-4022 in advance of arrival.

### Lodging

Ask for the American Association of Woodturners discount to receive our special rates. Be sure to reserve your room early. All rooms are blocked until May 20. Need a roommate? See the AAW forums.

### Galt House Hotel & Suites (host hotel)

140 N. Fourth Street  
Louisville, KY 66211  
Reservations: 502-589-5200  
single/double, \$99  
executive single, \$119

### Louisville Metro KOA

900 Marriott Drive  
Clarksville, IN 47129  
800-562-4471  
koa.com (listed under Kentucky)  
lmkoa@insightbb.com

Directions to the Galt House Hotel & Suites will be mailed with your confirmation package. A detailed demonstration schedule for Thursday, Friday, and Saturday is included in the registration packet on-site or at woodturner.org.

# Oh, Canada

This project demonstrates two ideas you can incorporate into your next pen project. First, use a laser service to cut positive and negative shapes of contrasting woods—like the maple leaf shown here—that fit together seamlessly.

Then, add contrasting species right on the barrel.



By Richard Kleinhenz

**C**rafted items based on a flag motif are always attractive to the citizens and friends of that country. Here's a stylish fountain pen that's easy to make and sure to please more than just Canadians.

Although this design reflects Canada's maple leaf, consider this a springboard to incorporate just about any custom laser design into your next pen.

The contrasting bands on the barrel can be more than a pleasing design variation. With this technique, you can save a project and add what penturners call an "oops" band to cover a breakout or other defect in the turning stock.

## 1 Get started

The pen shown features the Baron fountain pen kit with titanium-gold plating from Arizona Silhouette ([arizonasilhouette.com](http://arizonasilhouette.com)). Other kits that work for this design include the Junior Gentlemen II from Crafts Supplies and the El Grande from Berea Hardware.

Platings introduce two interesting variables—color and

wear characteristics. The titanium-gold plating is one of the top platings in looks and durability.

The stock for this pen is a kit available from Kallenshaan Woods ([kallenshaanwoods.com](http://kallenshaanwoods.com)). The kit includes a drilled and rough-turned holly cap (upper barrel) section with the maple-leaf outline and a bloodwood leaf to fit in the cutout. The kit includes stock to make the bloodwood end sections for the cap and the main barrel.

Other custom items required are a pen mandrel for your lathe and a set of bushings specifically for the Baron pen kit (available from the kit manufacturer or distributor).

For lathe tools, you'll need a thin parting tool,  $\frac{3}{4}$ " skew, or  $\frac{3}{8}$ " gouge.

## 2 Assemble the feature barrel

With a hobby knife, dental pick, or your fingernails, press the maple leaf into the cutout. Be careful not to break off the stem—or worse—lose the broken stem. If you lose the stem, whittle scrap bloodwood to fit the space. After placing a leaf in the cutout, flow thin cyanoacrylate (CA) glue over the entire area, locking the leaf into place.





This variation uses the Sierra kit, available from Berea Hardwoods and Arizona Silhouette.



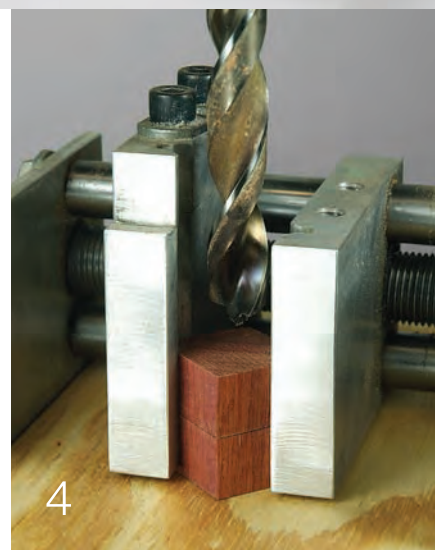
After the CA glue has set, check to see if the barrel slides freely onto the larger of the brass tubes. Check for obstructions: It is possible that a drop of CA glue wicked through the seam and dried inside or that the laser-cut leaf dropped down too far. You'll need to remove the obstruction with a round file or rasp or sandpaper wrapped around a dowel.

### 3 Begin assembly

When the barrel section slides on freely, glue it onto the brass tube using five-minute epoxy. Make sure you have good coverage; apply epoxy to the inside of the barrel (especially in the area of the inlay). This step is important when you final-turn the barrel because an air pocket could lead to problems that appear later.

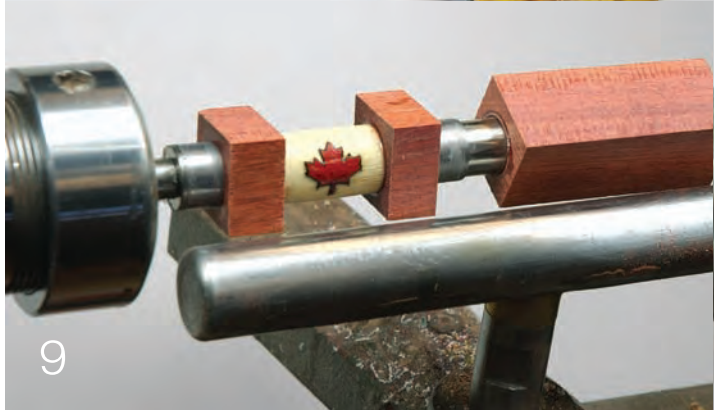
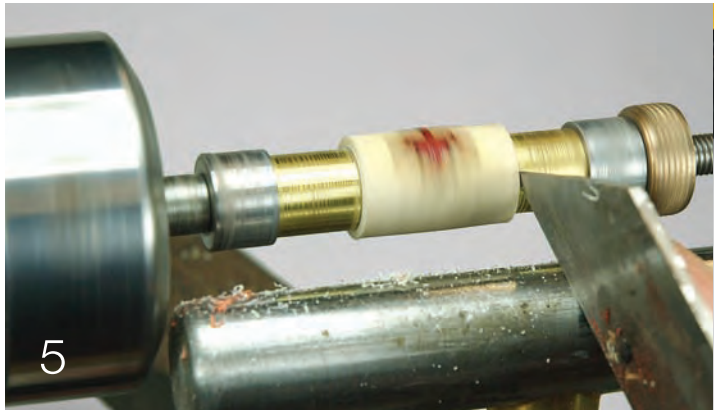
### 4 Add the bloodwood accents

While that tube dries, measure the exposed brass tube ends and cut two pieces of bloodwood about  $\frac{1}{32}$ " longer. Drill the pieces using a  $\frac{15}{32}$ " (12 mm) bit. If you can cut and drill reasonably square, there is no need to engage a pen mill. Sand one of the faces of each block so you can make a clean joint against the center section. You can stack and drill both pieces in one operation as shown at *right*.



### Custom laser-cut designs

The appeal of the maple leaf on this design relies on precise laser-cutting. One company that specializes in this custom work is Kallenshaan Woods ([kallenshaanwoods.com](http://kallenshaanwoods.com)) of Las Vegas. Do you have your own custom design you'd like to incorporate into a pen? Send Kallenshaan your own design plus rough-turned wood sleeves in two contrasting colors. For a small fee, Kallenshaan will return laser-cut pieces to you.



## 5 Mount the barrel

Mount the barrel on the lathe using the two largest bushings. With a parting tool, square up the wood shoulders and turn away excess epoxy. Test-fit the blood-wood pieces you cut; each should butt up snugly against the center barrel and extend just beyond the ends of the tube. If you're not satisfied with the fit, use a pen mill to square up the faces. A poor fit will detract from the beauty of the pen.

## 6 Clamp the upper barrel

Glue the end pieces using five-minute epoxy or gap-filling CA glue. Although you can glue end block, barrel, and end block all at the same time, I prefer performing this in separate steps. This gives me the opportunity to make barrel-length adjustments. By breaking this into three steps, I can also verify that the joints are 100 percent square to the tube.

## 7 Prepare the main barrel

While the glue sets, prepare the main barrel. For details, see the tip box *opposite*.

Glue the smaller brass tube into the hole using your favorite glue or adhesive. Epoxy, polyurethane, and thick CA glue are favorites of penturners.

With a pen mill, square the end faces of both pen barrels. A custom-turned sleeve adapts the





thin pilot to the brass tube. It is important to have the end faces absolutely square—anything off square will show up as a gap against the metal hardware pieces in the final pen. It's also important to clear off any glue inside the tube with a round file or a pocket knife.

## 8 Remove burrs

At this point, remove the small burr at the end of the brass tube and add a small taper by using a simple deburring tool available from machine-shop supply houses. This step streamlines the pen assembly later.

## 9 Turn the barrel

Mount the pen mandrel on your lathe and the barrels on the pen mandrel. Both ends of the tubes are the same on this Baron kit, so you don't have to pay attention to the order of the bushings. Two cautions: First, do not over-tighten the mandrel nut. And don't

use pressure with the tailstock; the live center mounted in it should just support the mandrel.

Turn the stock round, using a  $\frac{3}{4}$ " skew or  $\frac{1}{2}$ " spindle gouge to reduce the stock to the bushing diameter. Once the main barrel is round, stop the lathe, loosen the tailstock and mandrel nut, and retighten with minimal pressure. This minimizes the mandrel bowing effects that result in non-concentric turned barrels.

Take your final cuts with a sharp skew, reducing the barrel to bushing diameter. Your goal is to avoid sanding the cap tube with the leaf inlay.

## 10 Finish the pen

If sanding is required, you run the danger of pulling red dust into the white holly. If that happens, I've had good luck cleaning the holly with lengthwise strokes with a white Scotchbrite pad. Drenching your pen stock with an initial coat of thin CA is a worthy strategy to avoid this finish dust problem.

Finish the blanks on the mandrel. My current favorite finish is thin CA glue. Sand to 400 grit, then apply three or four coats of thin CA, spreading it with your finger wrapped in a plastic bag (the bags from your pen kit are ideal).

Aerosol accelerator is an economical way to speed the CA curing. Avoid applying too much accelerator, which causes the CA to

foam or cloud.

To level the CA layers, lay a skew flat on the tool rest and scrape at or just below center. Then sand with 400-grit sandpaper until you remove the shiny highlights.

Next, finish with Micro-mesh 1500, 1800, 2400, 3200, and 4000. Inspect that you have not broken though the CA anywhere, indicated by a dull area. If you break through the finish, apply fresh coats of thin CA glue and repeat the steps above.

Remove the mandrel and polish the pen at a buffing wheel loaded with white diamond compound.

## 11 Assemble your pen

To assemble, follow the instruction sheet packaged with the hardware kit. Because I don't like to pull attention away from the cap design, I often leave out the small black decorative ring and gold-trimmed centerband.

Your drill press makes a convenient pen press. First, turn a piece of hardwood scrap round, as shown at *left*; this becomes the upper anvil in the drill chuck. A scrap of plywood or solid counter-top material turned on end provides an excellent hard surface.

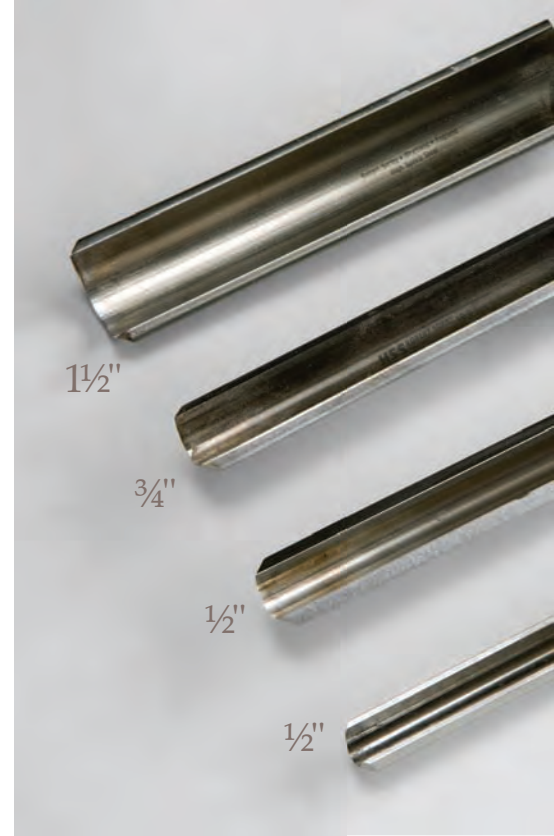
Penturner Richard Kleinhenz ([richk@beautifulhandmadepens.com](mailto:richk@beautifulhandmadepens.com)) lives in Wappingers Falls, New York. He will demonstrate penturning at the AAW symposium in Louisville.

### Avoid shattered barrels

One of the biggest disappointments for penturners occurs when the stock cracks as the drill bit exits the barrel. Here's one preventative strategy. Cut the barrel stock about  $\frac{1}{4}$ " longer than the smaller tube (total length about  $2\frac{3}{8}$ "). After you mount the  $\frac{25}{64}$ " (10 mm) bit in your chuck, set the depth stop to drill  $2\frac{1}{4}$ ". Drill through the center of the stock; the bit will not exit. Then cut to the desired length ( $2\frac{1}{8}$ " for this project).

# Spindle Roughing Gouge

By Bob Rosand



**N**ext to the small round skew that I use, the spindle roughing gouge (SRG) just might be my favorite woodturning tool.

Most people just use this tool to knock the corners off of stock for spindle turning and then grab other tools. But if sharpened and used properly, the spindle roughing gouge is capable of so much more than that.

In my woodturning shop, I use it for everything from roughing square stock and turning the icicles on my Christmas ornaments to turning Rude Osolnik-style candlesticks. My SRG is perfect for long sweeping curves and for 1/16"-diameter tenons.

Because I primarily work on small-scale projects, I make extensive use of a 1/2" SRG manufactured by Ashley Isles tools. But, the principles are the same for all roughing out gouges whether they be 1 1/2", 3/4", 1/2", or 3/8". Most turners have a 3/4" SRG in their tool kit, and I used one for many years, but my overall favorite is still the 1/2" SRG.

If you've limited the use of this tool to knocking the corners off stock, you've missed some sweet turning experiences.

## Sharpening the spindle roughing gouge

Sharpening the roughing out gouge is really quite easy. But like any other tool, you have to know what you want the finished product to look like before you begin grinding. In the case of the SRG, you want the tool sharpened at about a 45-degree angle. See the tip box *opposite* about the importance of your grinding angle.

I've met a fair number of people who grind their SRG as though it were a spindle gouge. Experience tells me you lose the effectiveness of the gouge unless it's ground straight across—the straighter the



For freehand grinding, use one hand as a fulcrum, then rotate the tool with your other hand. Apply light pressure.

better. If you look at the SRG from the front, you will see that it is horseshoe shaped with a rounded area and two flats. The flats are what I find to be the most useful in my turning.

There are three ways to sharpen the SRG: freehand, on a large platform, and with sharpening jig.

**Freehand.** Most grinders include a standard platform (about 1x3") that locks in front of the wheel. If this describes your platform, you can still sharpen the SRG on it with practice. When I sharpen using this method, I create a fulcrum with my fingers.

As shown *opposite*, place one





When using a V-arm with a sharpening jig, use one hand to keep the tool in place and the other hand to roll the tool.



Touch the tool to the grinder, then check to see if the angle you selected removed all of the bevel blackened with a felt-tip marker.



When sharpening with a large platform, press the tool down with one hand while rotating the tool with the other hand.

hand on the tool rest and the tool on top of your hand. With your other hand, hold the tool and rotate it while grinding.

Now, lower the tool handle, touch the tool to the wheel, then raise the handle until you are sharpening the bevel—not the edge.

When I started turning, I never quite grasped the idea of sharpening the bevel and not the edge, but it's really quite simple when you think about it. If you sharpen the bevel, the bevel will always remain the same. But if you sharpen the cutting edge, you slowly change the bevel, making the tool angle blunt and unusable until you

reground a new bevel. Save yourself time at the grinder and learn to sharpen the bevel.

**Large platform.** You may be fortunate enough to own a grinder with a platform about 3×5". If so, sharpening the SRG is easier. Adjust the platform so that its angle approximates the 45-degree bevel. Now, place the SRG on the platform. With your thumb or fingers, hold it flat on the platform and rotate the tool with the other hand.

Here's a reliable way to test that the platform angle is correct. Mark the SRG with a felt-tip marker,

then touch the tool to the grinder. If you have a parallel shiny grind line, the angle is perfect. If the mark resembles a little triangle, adjust the platform up or down. I usually do this by tapping my tool handle on the platform.

**Sharpening jig.** Some turners prefer to sharpen with a jig such as the Wolverine jig. Actually, I'm kind of spoiled and do most of my sharpening using a jig. This jig system includes a V-arm that adjusts in or out.

Place your SRG in the V-arm pocket and make a rough setting. Use the felt-tip marker method described earlier, then touch the tool to the grinder. As with the platform method, a parallel grind line tells you that the setting is perfect. Got a triangle marking on the grind? Move the V-arm in or out until you nail a perfect angle. Now, sharpen the bevel.

With all of these methods, a light touch of the tool to the grinding wheel is all that is required. Once you have established the desired bevel, you only want to touch it up at the wheel.

If you generate a lot of heat when sharpening, you are pressing down too hard. Unless I am changing the bevel angle of a tool, I use little or no downward pressure when sharpening.

### Technique counts for more than tool angle

That bevel on your spindle roughing gouge should be at about 45 degrees; anywhere from 48 degrees to 42 degrees is acceptable. More important is how you use the tool: Lower the tool handle, rub the bevel, then slowly raise (pivot) the handle until it starts to cut. Think about this routine every time you take a cut until it's second nature to you.

If the angle is a degree or two from 45 degrees, it will make no difference in your cut. Technique does matter.

## 5 ways to put the spindle roughing gouge to use

The simplest use of a spindle roughing gouge is to true up a cylinder. That is to take a square block of wood and make it round. If I think back to my days as a fledgling turner, this was a major accomplishment. Here are some tips to help you master this tool.

When you turn with an SRG, the wood grain should run parallel to the bed of the lathe, not perpendicular as though it were a bowl.

The SRG was not designed for and will not work well for roughing out or turning bowls. Don't even think about it! See the tip box *opposite* for more details.

**Roughing cylinders.** When you rough down a cylinder, place the tool on the tool rest, point the flute of the tool in the direction you intend to cut, rub the bevel (not cutting yet), then slowly raise the handle until the tool begins to cut. That will give you the proper cutting angle. If you do this each and every time you approach the wood, it will soon become second nature to you, and eventually you will not think about it.

**Trueing stock.** You can then begin to true up the stock you are working on. When you move the tool toward the headstock, point the flute in that direction. When you are cutting toward the



When trueing a cylinder, point the tip of your spindle roughing gouge toward the tailstock, as shown at *left*. Rotate the tip toward the headstock when you true in the opposite direction.

For turning the neck of a weed pot, roll your spindle roughing gouge on its side. This tool isn't designed for turning tight curves, but is excellent for long, sweeping curves.



tailstock, point the flute in that direction. You will eventually develop a rhythm to cutting.

**Smooth tool rest.** Take a few minutes and closely examine your tool rest. If it has lots of nasty nicks and dings in it (from other turners, obviously not from your work), you need to remove them with a file and 220-grit sandpaper.

These nicks will translate

directly into your work. Another little trick that will keep the tool moving along the tool rest is to occasionally rub the rest with a chunk of paraffin wax (available where canning supplies are sold). If the wax builds up, simply clean it off with your fingernail and reapply fresh wax.

**Shaping.** If you intend the cylinder you turned earlier to become a weed pot, the SRG can be helpful. I use a spindle gouge to shape the body of the weed pot, but I rely on the SRG to shape the neck of the weed pot. In the photo *above*, I am doing just that. You can use the spindle gouge to do this shaping, but the spindle roughing gouge does it better. Note that the tool is very much on its side, and I am taking advantage of the flat

### ½" spindle roughing gouge: Hard to find

Most woodturning catalogs sell standard spindle roughing gouges. However, the ½" SRG is a bit harder to find. Packard Woodworks ([packardwoodworks.com](http://packardwoodworks.com); 800-683-8876) sells a ½"-wide version of the ¾" SRG. My favorite is the Ashley Isles round-bar style. One U.S. source is Tools for Working Wood ([toolsforworkingwood.com](http://toolsforworkingwood.com); 800-426-4613).

If you buy the tool with a handle, I highly recommend knocking off the factory handle and making a new one at least 2" longer. This will increase the leverage of the tool, and it will work much better for you.

—Bob Rosand





For delicate work like the icicle segments of a Christmas ornament, turn the spindle roughing gouge on its side. With a soft touch, you can complete this piece supported only by the chuck (no tailstock).



How small? With a 1/2" spindle roughing gouge turned on its side, you can turn these 1/16 x 3/8" ebony perches for ornamental birdhouses.



The details of this acorn birdhouse were turned with a spindle roughing gouge.

areas of the SRG to make a nice smooth neck on the weed pot.

**Delicate work.** I also turn delicate work—like the icicles on my Christmas ornaments—with an SRG. As shown in the photo *top*, the turning stock is clamped in a spigot-jaw chuck and is not supported by the tailstock.

Turn the SRG on its side, taking advantage of the flat area. I turn about 90 percent of the entire icicle with an SRG before cleaning up the shape with a 1/4" round skew or 1/2" skew. If I had ground the SRG back as though it were a spindle gouge, I could not have accomplished this.

Despite its name, this tool is capable of refined work. The photos *above* show a 1/16 x 3/8" ebony scrap being turned for an acorn

birdhouse. I turned this detail with my 1/2" SRG rolled on its side. With a light touch and a sharp tool, you, too, can accomplish this.

You can produce the same work with a parting tool or skew laid on its side, but the SRG—especially when properly sharpened—does it much better.

Bob Rosand (RRosand.com) will demonstrate at the AAW symposium in Louisville. He is an *American Woodturner* contributing editor and lives in Bloomsburg, Pennsylvania.

### Let's get it right: It's a SPINDLE roughing gouge

Roughing gouge? Gives us the shivers. Roughing-out gouge? Also wrong.

Nick Cook, Alan Lacer, and Bob Rosand are among the many woodturning teachers who agree that the terms roughing gouge and roughing-out gouge are big problems. Some new woodturners—left to their own devices—believe they can attack bowl stock with this tool. Not true! Worse: It's dangerous!

This is a tool for spindle work only. Please join our campaign to attach the correct name onto this tool: spindle roughing gouge.

The 1 1/2" and 3/4" tools are probably better suited for rough work, but you can accomplish a lot of detail work with a 3/4" and 1/2" SRG. As with any other tool, all it takes is practice and an effort to learn the tool's capabilities.

Stir up a project at your lathe

# Mixing Spoons

By Bob Rosand

Here are all the ingredients you need to turn a popular kitchen utensil.

Every holiday season, my wife, Susan, and I organize an open house. We love all the activity—it's a grand time for us to renew old acquaintances and make some new friends.

The down side of an open house is that it's a bit like putting on a crafts show: Susan and I need to come up with a little something new each year to peak the interest of loyal customers.

This year, I resurrected an oldie but goodie. Enter the mixing spoon! From my experience in the kitchen, I find myself grabbing this handcrafted wooden utensil before the mass-produced ones—just because the hand-turned ones feel better in my hand. I bet you've experienced the same feeling.

A mixing spoon is a relatively straightforward project. It doesn't require a high level of skill (even I can turn one!) and requires a

minimum number of tools. This is not an overly difficult project for a beginner or a novice. Probably the most difficult thing about turning these utensils is getting used to turning "shadows" and finessing the chatter or vibration when you get close to the finished diameter.

Best of all, it's a fun project to turn, and it's useful. Turning mixing spoons has the added advantage of keeping your significant other happy—especially if he or she enjoys cooking.

## Get started

For tools, you'll need a  $\frac{3}{4}$ " spindle roughing gouge. You will also need a  $\frac{3}{8}$ " spindle gouge. Besides your turning tools, you will need access to a jointer, belt sander, or both.

Scraps of hardwood such as walnut, maple, or cherry are ideal for this project. Your turning stock should be about  $\frac{3}{4} \times 2\frac{3}{4} \times 13$ ".



**1** To prepare the stock, center and mount the stock between centers. The stock is about  $\frac{3}{4} \times 2\frac{3}{4} \times 13$ ".



**2** With a  $\frac{3}{4}$ " spindle roughing gouge turned on its side, reduce the handle portion of the mixing spoon.







**5** Leave a sturdy tenon that will support the pressure from sanding the handle.



**7** With 400-grit sandpaper, sand the handle portion of the mixing spoon.



**6** Using the spindle gouge or the long point of a skew, reduce the tenon at what will be the bottom of the spoon.



**8** Don't worry about sanding the paddle portion of the spoon; focus on the handle and transition area.

Stock wider than 3" allows you to adjust the shape of the bottom of the mixing spoon.

### Prepare the stock

Stock preparation is about as easy as it gets. Find the center of both ends and place the stock between the tailstock and live center. (I use revolving centers and a Stebcenter.)

Make sure that the stock clears the tool rest before you turn on the lathe.

I use the  $\frac{3}{4}$ " spindle roughing gouge to true up the paddle and shape what will be the handle of the stirrer. Because of the shape of the turning stock, you will be turning "shadow" for the paddle or mixing portion of the spoon, which disappears as you come to a final diameter for the spoon handle. The top of your handle should be about  $\frac{5}{8}$ " in diameter. The thinnest handle diameter I turn is about  $\frac{3}{8}$ "; handles tapered less than that break easily.

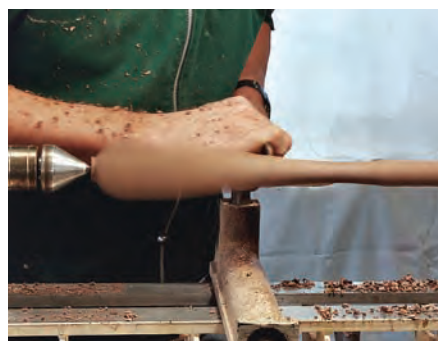
As you approach the finished diameter, the chatter will increase. Here are four approaches to reduce or eliminate chatter:

- ease up on your cut
- support the stock with your hand
- speed up the lathe and take lighter cuts
- turn with sharp tools

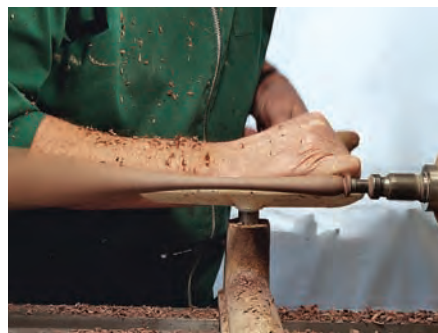
At the bottom and top of the paddle, I rely on my  $\frac{3}{8}$ " spindle gouge to round the corners, but the spindle roughing gouge does the rest of the utensil.

Don't remove too much material from the top or the bottom (headstock/tailstock) of your turning stock. Otherwise, the spoon may pop out of the lathe when you apply pressure as you sand.

Once you're satisfied with the shape of the spoon, sand it. This is also the time to add a few decorative cuts at the top of the spoon; the long point of the skew is ideal for this.



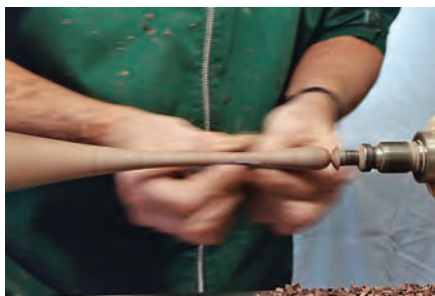
**3** Turn the handle with a  $\frac{3}{4}$ " spindle roughing gouge. The paddle portion of the spoon will continue to spin as a shadow.



**4** After shaping the handle of the mixing spoon with a spindle roughing gouge, refine the end with the  $\frac{3}{8}$ " spindle gouge.



**9** With the long point of the skew, cut two or three decorative rings into the handle.



**10** Sand through 400- or 600-grit sandpaper. If you didn't reduce your tenons too much, you can apply pressure to the spoon while sanding.

When sanding, don't worry about sanding the paddle portion of the spoon. You will sand this portion later.

Once you have sanded the handle and cut in the decorative lines, you can remove the spoon from the lathe. What you will have is a mixing paddle with a thick bottom or paddle.

## Shape the paddle

Now, move to the jointer and set the outfeed table for a light cut (about  $\frac{1}{32}$ "). Place the top of the spoon on the outfeed portion of the jointer. Using push pads, run the bottom portion through the jointer with a light pass. Turn over the spoon and pass it through the jointer again. Repeat this process until you are satisfied with the paddle thickness. The spoons shown here were tapered to about  $\frac{3}{16}$ " in the paddle area. If your jointer blades are sharp with no nicks in them, you will have to do little sanding to finish the spoon.



**11** After the handle portion is sanded, the spoon is ready to be tapered.



**12** With the handle on the outfeed table, taper the paddle portion of the spoon. Be sure to use a pushblock for each pass over the jointer.



**13** Flip over the paddle, then taper the other side of the stock. Taper each side of the stock with equal passes.

Finish shaping the spoon with a 6"-wide belt sander. When you're satisfied with the shape and smoothness, return to the lathe for a final sanding. For this step, mount a 3"-diameter disc sander in a Jacobs chuck. Begin with 220-grit sandpaper, then progress to 600. Then sand the transition area between the paddle and handle of the spoon.

If you are not comfortable running the spoon over the jointer bed, you can complete this entire step at the belt sander. (This is the method I used before I switched to the jointer.) This sander-only



**14** As an alternative, taper the paddle on a 6" belt sander.



**15** A 6" belt sander is ideal for roughing out the curved profile on the bottom of the spoon. Be sure to keep your fingers clear of the belt.



**16** At the lathe, finish shaping the spoon with a 3" disc sander mounted in a Jacobs chuck.

method works fine but takes a bit longer. If your belt sander isn't hooked up to a vacuum system, this step raises a lot of dust.

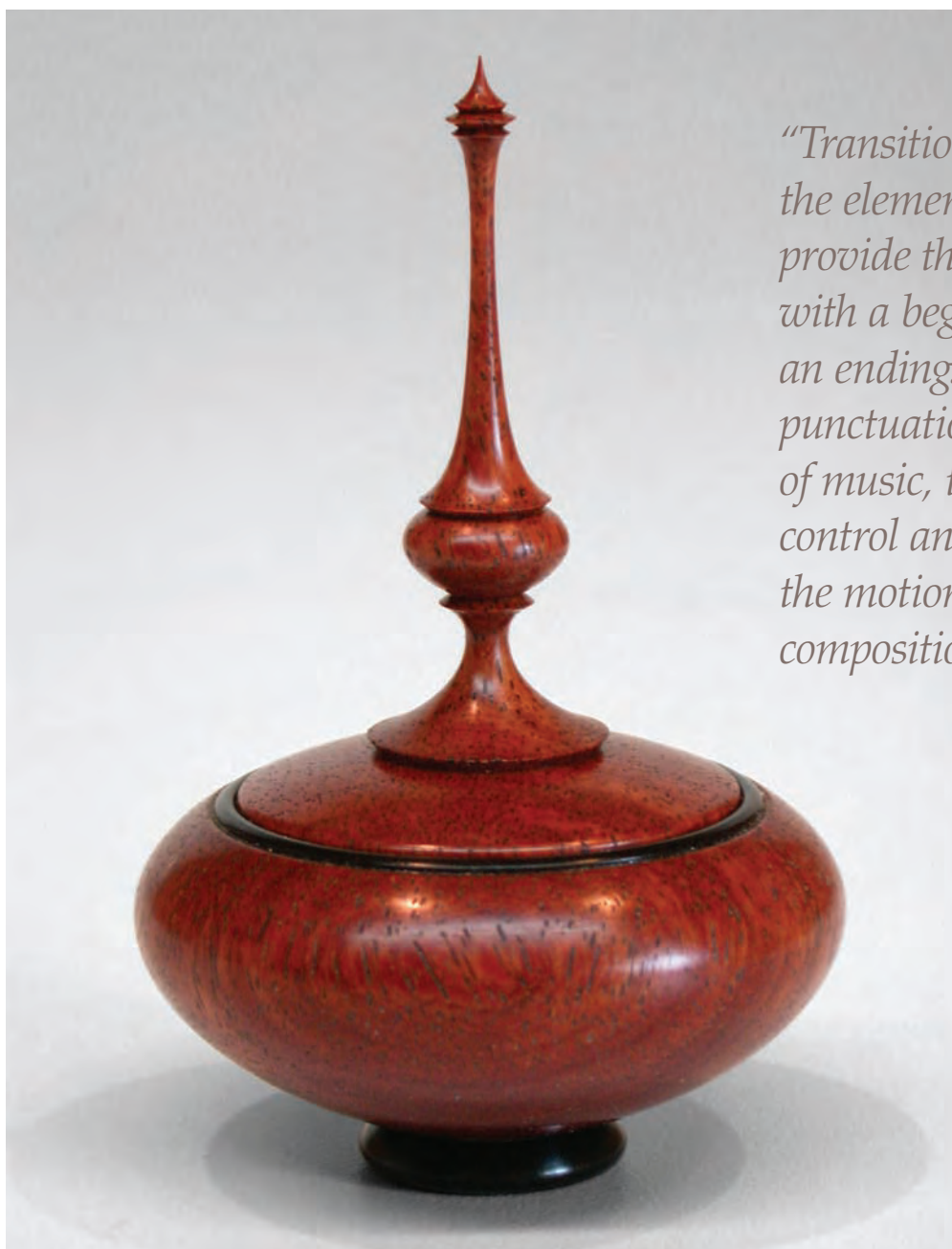
Finish the spoons with two or three coats of penetrating finish (I use Water-Lox), let them dry, and buff them.

Bob Rosand (RRosand.com) is an *American Woodturner* contributing editor who lives in Bloomsburg, Pennsylvania. He will demonstrate at four rotations in Louisville.

Finished photo by John Hetherington; how-to photos by Bob Rosand.



An analytical approach to



*"Transitions separate the elements and provide the composition with a beginning and an ending. Like the punctuation in a piece of music, transitions control and direct the motion of the composition."*

# Finial Design

By Cindy Drozda

Cindy Drozda's pieces soar with her exceptional finials. Cindy shares the steps she applies to produce her heavenly designs.

I admit it, I do love finials. I love the way a finial completes the personality of a lidded vessel, then invites you to reach out and lift up the lid. In my eyes, a well-done finial is a pleasing and lively composition that adds another dimension to a piece.

As an artist, I love having the opportunity to express motion and energy through a finial, and I enjoy its technical challenge. By adding a finial to my vessel, I also get to indulge in my love of working in a small scale, even when I'm making a larger piece.

Precise spindle work requires intense energy. There is little room for error, and the tiniest cut makes a huge difference in the finished piece. Planning the piece is critical; finial turning is not one of those projects where I want to "let the wood decide" what the finished piece will look like.

The goal of this article is to explore the process of analyzing forms and compositions. Using my philosophy on finial design as an example, I present a vocabulary for describing the positive and negative design aspects of a turning. To illustrate this philosophy, I have made an 11"-tall large-scale model of one of my favorite finials. Two more models in the same scale are examples of variations on this design that I consider to have missed the mark. Finial #3 is my vision of success; #1 and #2 are the variations.

Just to set things straight, I am not suggesting that my finial is the "best" finial design or that I know more about "the perfect finial" than anyone else. There is no such thing as "the perfect" shape, finial, or composition.

## Line describes form

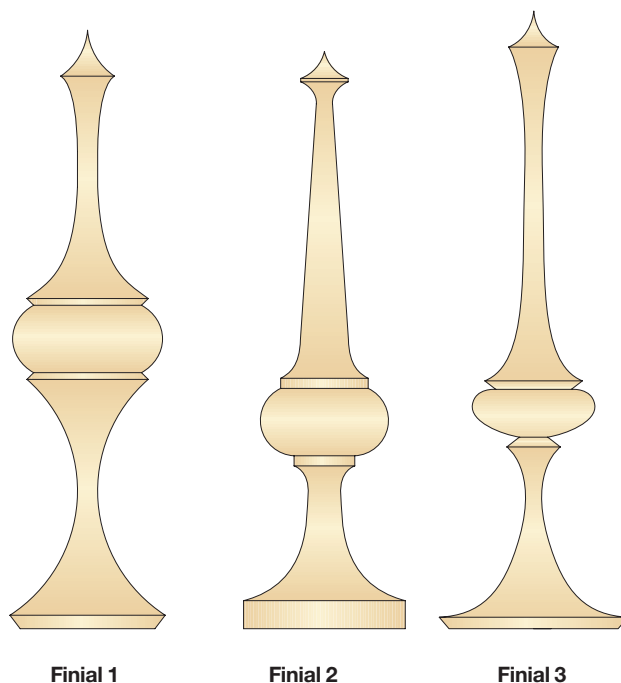
Woodturners often say that the form (shape) of a piece is the most important design feature. When I look at vessel and bowl forms, I see form as lines. The curve of a bowl, for example, is a single curved line. To me, this line expresses motion. The motion changes momentum and speed with the radius of the curve and the length of the line.

What I refer to as the elements of a design are the composition sections where the motion of the line is interrupted, is stopped, or changes direction.

An element is a form that stands alone. If we look at my finials, I consider the individual elements to be those separated by fillets or V-grooves.

Combining elements in the proper proportions establishes the energy of the composition. I see my finial taking the motion of the top line of the vessel and continuing it upward so that it reaches for the sky. I want the finial to complete my vessel with a feeling of lightness and liveliness, as if it were dancing to music. To accomplish this, the elements are dramatically separated.

Of course, this is not the only way to use finials—different designs might display different energy. My work expresses its unique combination of energy to evoke emotions. Another person's work might be saying something completely different and would use different elements in a



different way, just as not all pieces of music sound alike.

My hope is that members reading this article will understand how to verbalize what they are expressing in their own work.

I believe that knowing the "why" of design success is important. It is not enough to say "I like it." In fact, to say simply "I like it" might only express a personal preference. I want the ability to say "this is or is not a successful piece of artwork, and here's why." Being conscious of what is happening in my own and other artists' work enables me to strive for success without relying only on trial and error.

One exercise that I use is to make several examples of a design and look at them together. Taking time to just look and analyze often allows me to see what I would not have otherwise seen during the creative process. A real challenge for me is to look at work that I don't personally care for and see it



as a successful piece of artwork.

## **Traditional becomes contemporary**

A spindle turner takes pride in creating perfectly symmetrical beads and coves and smooth, straight tapers. Each cove or bead element represents a portion of a circle with the radius remaining constant throughout. Finial #2 shows what my favorite finial design would look like if, keeping the same proportions as Finial #3, the elements were shaped like traditional spindle elements.

Finial #3 is my current favorite finial design. I have taken the traditional bead and made it asymmetrical, with the widest diameter above the centerline. The coves are not constant radius coves. They are continually changing in radius as the motion initially accelerates, slows down to almost a stop, and then accelerates again to the top of the next fillet. The fillets are undercut to give them the drama and crispness of dance steps.

By tweaking their proportions, the traditional spindle elements of beads, coves, tapers, and fillets are made into contemporary design elements.

## **Proportion expresses motion**

In a symmetrically turned object, you can simplify the study of proportion into two dimensions. Each element of the design has a height and a diameter. An abstract design adds a third dimension, altering your perception of the object's proportions.

I find it easier to understand proportions when looking at two dimensions, rather than three.

With only height and diameter to plan for, I am able to draw my finial designs on graph paper before turning.

In Finial #1, I put my contemporary elements together in static proportions. I repeated the diameters, making the beads too bold while causing the coves to lose their dramatic dancing effect. The upper and lower cove elements were made too close to the same height, which stalled the upward motion of the finial. The overall effect is clunky when compared to Finial #3.

The Golden Mean, a ratio of 1:1.618 (often approximated as  $\frac{1}{3}:\frac{2}{3}$ ), has occurred in nature and in human-made objects and structures as far back as recorded history goes. When people are asked to pick the object they prefer, the one with proportions that comes close to the Golden Mean wins every time. Even when it is not perfectly measured out, we find that getting close to the Golden Mean is pleasing to the critical human eye.

In my experience, trying to have every element in a complex composition interact using Golden Mean proportions would have me tearing my hair out! Efforts to design a finial using a calculator can result in a static design. It is usually more visually exciting to incorporate Golden Mean proportions in only one or two relationships between elements. My view of the Golden Mean is that it is a place to start, not a strict set of rules to follow. When designing a finial, I like the results that I get when I try not to duplicate any of the dimensions within the piece. That's as close as I get to a "rule to follow."

## **Transitions are the punctuation**

When motion is interrupted or redirected, I call that "transition." Points like the joint between the lid and the vessel—where the piece contacts the surface it sits on—or the smooth change of direction in an ogee curve, are transitions in the piece. Transitions separate the elements and provide the composition with a beginning and an ending. Like the punctuation in a piece of music, transitions control and direct the motion of the composition.

## **A symphony in wood**

An orchestral symphony is a blending of individual instruments, all playing their separate parts, into a composition that is much greater than the sum of those parts. This is the same way that I look at a painting or drawing composed of lines and color. A turned piece, in a similar manner, is a composition of shapes and textures with each element playing its part.

Every composer works in a different way, and a wide range of music appeals to a wide range of personal tastes. When we woodturners express our passions for life through our work, the result is artwork that enriches our culture.

When we all openly share our personal knowledge and feelings with the rest of the woodturning community, we grow further and at a much greater rate than we ever could on our own.

And now it's your turn....

Cindy Drozda (cindydrozda.com) lives in Boulder, Colorado. Cindy will be one of the demonstrators at the Louisville symposium.

# Segmented Turning School



By Jim Rodgers

Planning isn't everything, but it certainly plays a huge role in successful segmented turning. Here, you'll learn the steps to transforming your drawings into the accurate information you'll need for each piece. Sharpen your pencil, grab a pad of graph paper, and let's begin the journey.

Note: This is the second article in a three-part "Segmented Turning School." The first article, "Cut Accurate Segments," appeared in the Winter 2006 issue. That article and supporting features included information on building and calibrating a cutting sled.

## Planning is a good thing

In segmented turning, planning takes on a bigger role than in many other turning adventures:

- You must have a plan to create your design—shape, colors, and woods.
- You must have a plan to create the data necessary to build a cut list from which you'll cut individual ring segments. Proper cut planning will ensure that all your parts fit together with sufficient allowances for reshaping the vessel at the lathe and to accommodate construction errors.

This article will show you two ways to generate the data needed to build any segmented vessel. First are the manual steps, which will help you understand the process. The second method—segmented software—is easy to navigate with rudimentary computer skills.

## Steps in planning a vessel

Here are the basic steps necessary for planning the construction of a segmented vessel:

- Create a detailed drawing on graph paper
- Add the vessel inner wall to the drawing, factoring in extra thickness
- Draw in stock thicknesses, thus defining the rings or layers
- Determine wood species for color, contrast, and textures
- Measure maximum outside diameter (OD) and minimum inside diameter (ID) for each ring
- Plan the number of segments for each ring
- Calculate segment/ring cutting data, using one of several methods to be discussed
- Build a cut list
- Prep lumber
- Cut segments

By following these steps, you can build a glorious vessel.



## Execute a plan on paper

Even if you jump right into segmented software, it's important that you understand and appreciate the key steps. This section describes the steps necessary in designing and planning a simple segmented vessel such as the "Quick-Start Project" shown *opposite* and in the Winter 2005 issue.

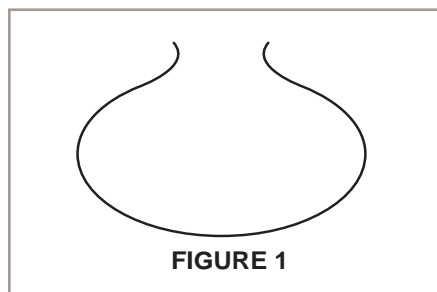


FIGURE 1

**1** On graph paper, draw a full-scale drawing of your vessel. The full-scale size will make it easier to capture critical measurements.

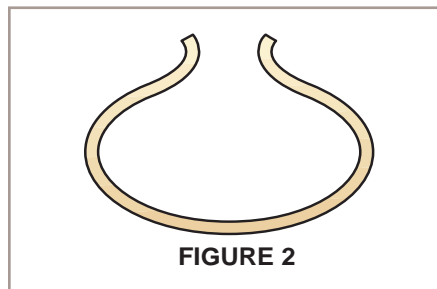


FIGURE 2

**2** Complete the drawing by adding the interior wall, thus establishing the wall thickness. I suggest an initial wall thickness of  $\frac{1}{2}$ " to  $\frac{3}{4}$ " to allow latitude in aligning the rings during construction, for glue-line overlap, and to accommodate changes in the exterior shape during turning. You can always reduce the thickness later.

**3** Next, determine the thickness of each layer of segmented rings; this will be the thickness

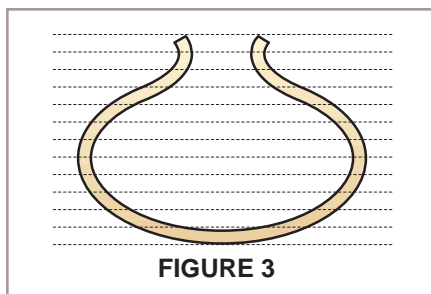


FIGURE 3

of the stock you use to build the rings. The rings shown are all  $\frac{3}{4}$ " thick. If you vary the ring thicknesses, you will alter the appearance. Add horizontal lines marking out those stock thicknesses.

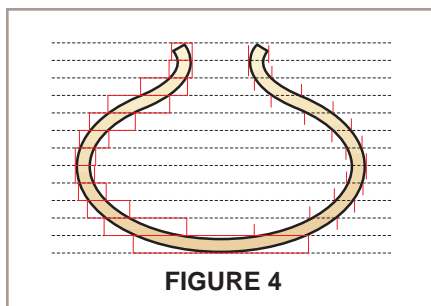


FIGURE 4

**4** For each ring, mark the maximum outside diameter (OD) required for construction and the minimum internal diameter (ID). Mark both left and right sides. This step is necessary to accommodate the curvature of the wall. The more the shape curves, the farther apart your OD and ID lines will be. Marking both vessel sides will allow you to easily measure the actual diameters in the following steps.

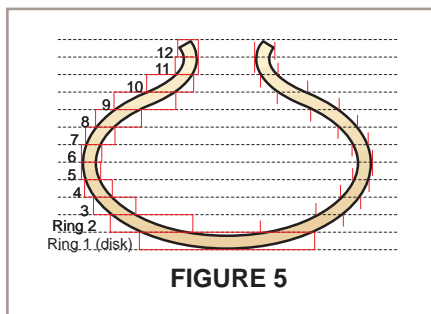


FIGURE 5

**5** Number each ring for easier identification.

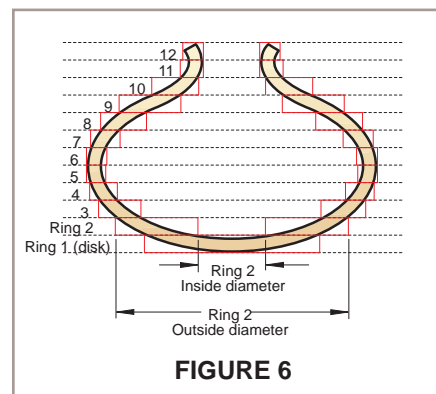


FIGURE 6

**6** Determine the measurements for the individual segments for each ring. This requires transferring the measurements with a compass to another piece of graph paper and adding additional lines as shown. This example begins with Ring 2 of the "Quick Start Project" referenced in the Winter 2005 journal and posted on the AAW website (woodturner.org). (Ring 1 is solid stock.) Measure the ID and OD of Ring 2.

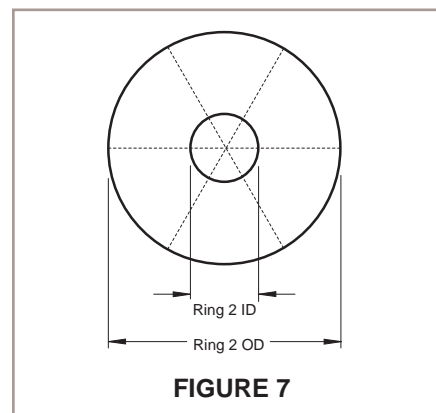


FIGURE 7

**7** On a separate sheet of graph paper, draw a circle equal to the OD of Ring 2. From the same centerpoint, draw the ID circle of the same ring. Divide the aligned circles of Ring 2 into the desired number of segments and extend two of those dividing lines beyond

the circles. In this example ring, use six segments.

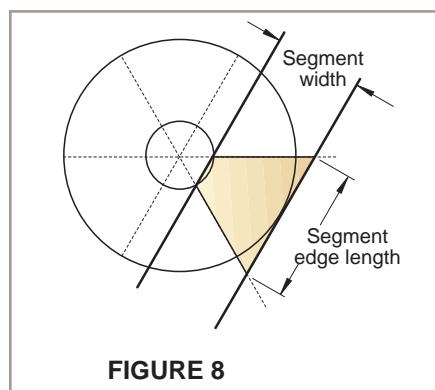


FIGURE 8

**8** Draw a line tangent with the OD circle and intersecting two adjacent extended segment lines. Measure the length of this line; *this is your segment edge length*. Construct another line parallel to this line but totally inside the ID circle. *The distance between the two lines is your segment width*.

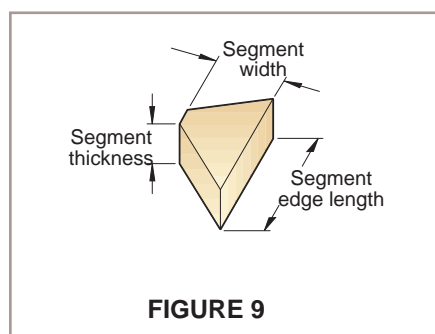


FIGURE 9

Illustrations: Roxanne LeMoine

**9** Transfer the measured data for each ring to a data table; just keep repeating these steps for each ring. Remember to record:

- Ring number
- Wood species for each ring
- Ring thickness (planed thickness of initial stock for that ring)
- Segment width (ripped width of stock before cutting segments)
- Segment edge length (crosscut outside width of ring segment)
- Estimated stock length required

For planning, use ring circumference plus  $\frac{1}{8}$ " for each crosscut. (For a 12-segment ring, 24 saw cuts or 3" of additional stock.)

Whether you use pencil and paper, tables and charts, or software, this is how segment widths and lengths are determined. Worried about spending too much figurin' time at the kitchen table and not enough time in the shop? Here are faster ways to proceed.

## Estimation method

Sometimes only a close estimation will suffice because extra segment width has been added that will be turned away later on the lathe. For example, this method also works if only one ring is desired to trim a bowl rim.

To estimate the segment edge length, you will still require a drawing, as in Figure 6. Here are simpler steps:

**1** Calculate the circumference of a ring by multiplying the OD times pi (pi or  $\pi = 3.14$ ).

**2** Determine the number of segments required. (Circumference  $\div$  number of segments = estimated segment edge length.)

As long as you use a larger number of segments in a ring, the error in this method is not large. (The error decreases as the number of segments increases.) With six segments in a ring, the error is approximately 10 percent; with 12 segments, approximately 2 percent.

Using this method with every ring in a vessel will give you the desired shape only somewhat smaller in diameter. However, the proportions may be off.

## Accurate calculation

Accurate calculation is not difficult and only requires knowing the tangent or the cut angle. Use the table below.

Number of segments	Segment cutting angle°	Tangent
6	30.00°	0.577
8	22.50°	0.414
10	18.00°	0.325
12	15.00°	0.268
16	11.25°	0.199
24	7.50°	0.132

**The formula is:**

Diameter of the ring  $\times$  tangent of cut angle = segment edge length.

**Here is an example:**

Vessel of 12 segments per ring; therefore, the cut angle is 15°.

The ring is 10 inches in diameter  $\text{TAN } 15^\circ = 0.268$ .

$10 \times 0.268 = 2.68$  inches segment edge length.

To eliminate all calculations, you can download a table from the AAW website (woodturner.org) that includes segment edge lengths for rings from 1 to 20 inches and for vessels with 6 to 24 sides.

## SEGMENTED TURNING GOOFS

Do you plan carefully, cut segments accurately, align rings properly, glue solidly, and still get gaps, voids, misalignments, and other errors? Well, you're not alone. In the Summer 2006 issue, find out the common causes of why joints don't look as good as you think they should. If you have problems you'd like addressed, send Jim an e-mail (Jim@JLRodgers.com). We'll publish answers in the next issue. Join us.



PWJ's miter-angle calculator  
pjjudkins@satx.rr.com  
Free

Provides data for one ring.

Table Saw Miter Angles  
turnedwood.com  
\$19.95

Allows data entry in fraction or decimal format, gives data for one ring only, and provides length and width of needed stock.

Seg-Calc 1.2  
William Biddle  
wbiddle@attbi.com  
\$20.00

Data for full vessel of one stock thickness on one screen.

Segmented Project Planner  
Verifiedsoftware.com/  
goodturns  
\$36.95

Complete project data, bowl sketching, and cost analysis.

Woodturner Pro  
Woodturnerpro.com  
\$40.00

Arrow keys give you a quick way to modify a drawing.

Woodturners Studio  
Woodturnerscatalog.com  
woodworker.com  
\$69.99

Can execute drawings with Bieser curves manipulation. Allows open segment design.

## Segmented software

If you follow the path of many segmented woodturners, you'll progress from manual calculation to software. Today, I own or have access to all the programs shown at *left*. To stay ahead of my student inquiries, I have tested and used most of the different programs currently on the market in different situations. I have analyzed the calculations of each program and can assure that each is accurate.

Inexpensive software provides the basic calculations from which you will build your own table and cut list. More advanced software provides a formatted cut list, material descriptions, ring, and segment templates. Some programs even include three-dimensional drawings. Some suppliers allow you to download trial copies and purchase later.

Here is a list of what is currently available. Specifications and capabilities change with new releases; check with the providers for the latest information and specifications. For an easy comparison, the screen shots shown are for the same "Quick-Start Project."

Regardless of whether you draw your vessel out or use software to execute the calculation, you should start with a full-scale drawing.

Jim Rodgers (JLRodgers.com), a studio turner and demonstrator, is president of the Bay Area Woodturners Association. He lives in Martinez, California.

# Tips

## 20 Top Shop

"ShopTips" has always been the most popular journal article for AAW members. What woodturner wouldn't want to know how to complete a project faster, more accurately, and for less money?

In celebration of the AAW's 20th anniversary, here are 20 shop tips that we've gleaned from more than 160 pages of shop tips over the association's history. Enjoy!

Next issue, we will return to our regular "Shop Tips" format. If your tip is published, you'll earn \$35. Send your tips along with relevant photos or illustrations and your name, city, and state to:

John Lucas, 529 1st Ave N., Baxter, TN 38544  
jlucas@ntech.edu

### Naptha uncovers scratches (1997)

I sometimes use naptha to check my finished sanding before I put on any oil. It dries in seconds and does not raise the grain. And, it lets you see any scratches on the finished surface.

—Mike Kornblum  
Mountain Home, Arkansas

### Eliminate bowl nubs (1995)

Often when I've finished turning the inside of a bowl, there is a small nub at the bottom. To remove the nub, use a 1½" roundnose scraper. Position the tool rest so the scraper is just below the center of the nub. As the piece turns, make fine cuts by lowering the handle and bringing the tip up to the center. As you remove wood in the center, slide the cuts toward the sides of the bowl to blend the surface.

—David Ellsworth  
Quakertown, Pennsylvania



### Hook-and-loop sanding discs (2002)

I cut my hook-and-loop (Velcro is a trademark name) sanding pads at my drill press using sharpened holesaws. Because only the first third of the edge is worn out on used pads, I also re-cut worn-out 3"-diameter pads into discs that are 1½" or smaller in size.

I grind off the teeth on the old holesaw, then sharpen the tool on my grinding wheel. I always cut my discs a little larger than the sanding pad I'm going to use so I can remove it easily.

—Pat Bookey  
North Pole, Alaska

### Shrink-wrap aids for vacuum chucking (1996)

Some time ago on a visit to Georgia, Nick Cook showed me his vacuum system, and I was hooked. Unfortunately, some of my pieces have areas of bark inclusion that don't allow for a good vacuum. For most turnings, the solution was incredibly simple. I wrap the piece in shrink-wrap, place it back in the chuck, and switch on the vacuum.

On most pieces, I have adequate vacuum suction to complete the piece. I purchase my shrink-wrap from my local building and supply.

—Bob Rosand  
Bloomsburg, Pennsylvania

### Fill hairline cracks (1996)

When I want to fill those hairline drying cracks in my nearly finished turning, I reach for 320-grit sandpaper and my bottle of cyanoacrylate (CA) glue. A light sanding across the crack fills it with wood dust. Now it's time to put a drop of CA on the crack.

I've found that the smallest hole in the nozzles on the plastic bottles gives me too much adhesive. Instead of applying the adhesive directly, I twist a small piece of paper towel between my fingers to make a toothpick-like tool. Apply a drop of adhesive to this (not over your work) and use it to carefully paint adhesive over the crack. One or two repeats of this procedure will fill small cracks. Larger voids may require pre-packing with tiny turning chips followed by adhesive. This system used very carefully avoids staining the wood surrounding the crack.

—Charles Brownold  
Davis, California



### Tear-out problems (2000)

When tear-out occurs close to the finishing stage of a turning project, try putting a little paste wax on the damaged area. Then lightly re-turn the area until it is cleaned up or the tear-out is minimal. If the tear-out is deep, sometimes it will take more than one application. This will save countless hours of sanding.

—Jerry Fant  
Wimberly, Texas

### Wood hardener rescues spalted wood (2000)

Because spalted wood is soft and tends to tear out on the lathe, try soaking the wood in a solution of 50 percent white glue and 50 percent water. Soak the turning stock for several hours or even overnight. Let dry, then turn as normal. The water helps the glue soak deeper than normal to stabilize the wood.

This also helps cure end grain cracks in some wood. Soaking them overnight or longer in the solution might be necessary. In many instances, the water swells the cracks closed and the glue keeps them from opening back up.

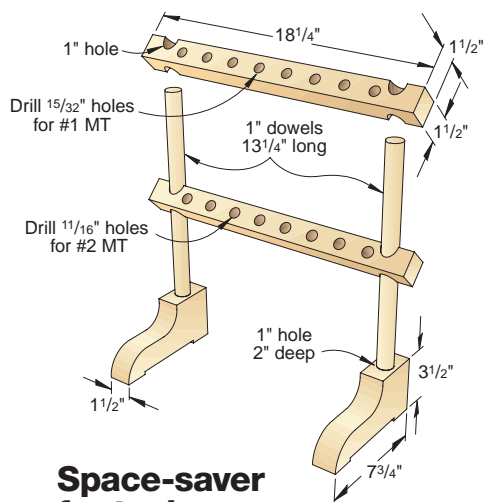
—S. Gary Roberts  
Austin, Texas



### Mark the bevel (1999)

For sharpening by hand at the grinder, a use wide felt-tip marker to color the bevel and grind. This removes the guesswork from where you have been and will help you attain a sharper edge.

—Abe Harper  
Berea, Kentucky



### Space-saver for tools (1998)

It is amazing how many widgets and gadgets we woodturners collect. The problem is that shelf space is at a premium.

This rack keeps my #2 Morse center visible and handy. Drill  $\frac{11}{16}$ " holes for #2 Morse tapers;  $\frac{15}{32}$ " for #1 Morse tapers. In addition, there is a lot of room underneath the rack for more turning supplies.

—Bob Vaughan  
Roanoke, Virginia



### Grind closer to your nose (1994)

If you are having trouble sharpening your tools, one thing you may want to try is raising your grinding wheel to the height of your lathe. The shaft of the lathe or grinding wheel should be about elbow height from the ground. I recently did this with my grinding wheel and was pleasantly surprised at how comfortable the change was. Now it's much easier to see and control the grind.

After all, you use the tools at one height, why sharpen a foot or so below that? John Jordan discusses this advice in one or more of his videos.

Bob's update: On many tools, I use a magnifying device (OptiVisor is one familiar brand name) for close examination of the tool edge.

—Bob Rosand  
Bloomsburg, Pennsylvania

### Get rid of sanding scratches (2000)

To avoid those stubborn cross-grain scratches that just seem to show up when you apply the finish, try this. With each grit up to 180, turn off the lathe and sand WITH the grain by hand until the scratches are gone.

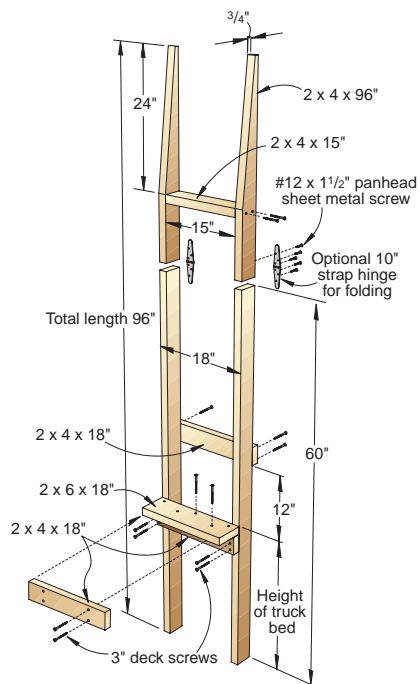
Clean the dust off of the piece with a lint-free cloth, use good lighting, and look for the rings. If you can still see the scratches at that point, you will really see them when the finish is applied, so never hesitate to drop back a grit size to clean them up. It only takes a few moments to take them out, and your end product will have a much better finish.

—S. Gary Roberts  
Austin, Texas

## One-person log loader (2002)

Lifting logs into the back of a pickup truck can be quite a chore. I designed a log loader that enables one person to load heavy logs with much less effort. To position the log loader, stand it upright and tilt it slightly forward so it's leaning against the truck bed. Now lay it flat on the ground. A log can then be rolled on from the tapered end or placed on the loader above the ledge. A cross member on the bottom 12" above the ledge causes the loader to tip forward to help prevent the log from rolling back. Lifting the loader from the tapered end raises the log, which then rolls onto the truck bed. There is a lot of stress on the parts, so use long screws for assembly. I also used heavy-duty strap hinges so my loader would fold to fit in the back of my truck.

—Carl Schneider  
Boca Raton, Florida



## Stop tailstock creep (1994)

When mounting large pieces of wood between centers on the General 260 lathe, the tailstock will creep backwards under the pressure needed to secure the wood. That's because the plate that connects the tailstock to the bed was designed for spindle turning and is only 1 1/2" long. Remove this plate and have your machinist make you another that's 4 1/2" long. Works great and costs about \$14.

—David Ellsworth  
Quakertown, Pennsylvania

## Mark depth with tape flag (2001)

A bright piece of tape on the shank of a tool can help keep the tool from going too deep into a turning. After you measure the maximum depth of the piece, transfer that measurement onto your turning tool. Mark this depth with bright tape (similar to the technique you may use for drilling holes). When the tape edge gets to the rim, you know you are at maximum depth with the tool.

—Phil Brennion  
Chino Valley, Arizona



## Divvy tape (1994)

Dividing a round piece on the lathe into equal parts can be easy if you have a dividing (indexing) head. Some of us don't, so here's a way to do it simply.

Wrap a strip of masking tape around the piece. Mark where the tape ends meet, then gently remove the tape to avoid stretching it. Adhere the tape to a metal surface and divide the space into the number of parts you desire by measuring the distance point to point and calculating the divisions. Or use a pair of dividers. Mark the tape, reapply to the turning, and mark off the points on the turning. I use the tool rest as a straightedge.

—Palmer Sharpless  
Newtown, Pennsylvania

## Boost your vacuum power (2003)

Green-wood bowls often warp out of round, which causes problems with the vacuum-chuck seal. If the seal on the chuck doesn't have enough give, there is a loss of vacuum. Here's how I solve this problem.

I cut a 1" hole in the center of a square sheet of white closed-cell material used to wrap electronics and computers.

Then I place the material between the bowl and chuck. The material seals nicely and eliminates the low vacuum reading. I don't trim off the corners on the material so that I can adjust the sheet if it slips while centering the bowl.

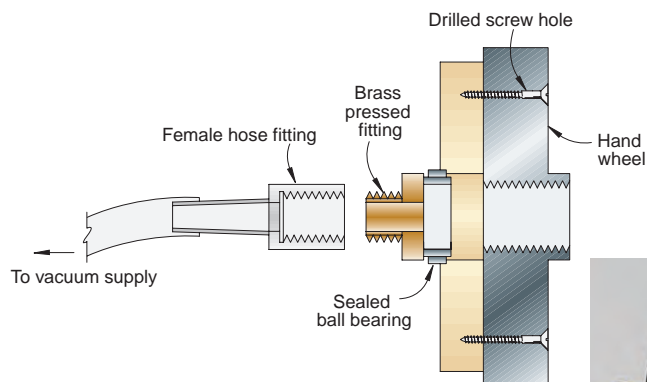
—Richard Preston  
Richmond, Virginia



## Homemade collet chuck (2003)

Because I need to turn several small items without scarring them with the chuck jaws, I make a collet chuck to fit each item. I make these out of hardwood scraps. I fit a scrap piece in my Vicmarc chuck and mark the #1 spit so I can re-chuck it in the same orientation in the future. Then I turn a hollow about 1¾" deep to snugly fit the item I'm making. I then turn the outside so that it's about ⅜" thick and back at least 2". This leaves a ¾" recess on the outside edge about ⅛" deep for the hose clamp. I then cut equally distant slots perpendicular to the hole using the bandsaw. (Eight slots at 22.5 degrees work fine for me.) Place a hose clamp around the outer edge to hold the item in the chuck, and you are in business.

—Dale Beckman  
Klamath Falls, Oregon



## Shopmade vacuum chuck (2001)

The diagram *above* shows a variation of the sealed bearing vacuum chuck. This has two advantages: The handwheel stays on the lathe at all times, and you can use the knockout bar with all but the hose intact. The set-up time for this vacuum chuck is very fast. The pressed brass fitting was turned to the diameter of the bearing and pressed into place. The bearing was epoxied into the wooden insert (don't get epoxy in the bearing).

For the wooden insert, use a stable material such as MDF, plywood, or acrylic. Otherwise, the bearing will only fit properly a few times a year.

—Jerry Kroehn  
Portage, Michigan

## Freeing frozen drive spurs (2003)

Here are four simple solutions to free a drive center from the headstock:

1. A good way to protect the spindle threads is to put a nut in the spindle before inserting the drive center. If the center gets stuck, you have a nut already in place.
2. Make a split nut by sawing in half a nut with the appropriate thread. Use an open-end wrench on the split nut to hold it together and back out the drive center, as shown *above*. An adjustable wrench has too much play to hold the nut well but may work in a pinch.
3. If the drive center doesn't come loose from the pressure of the nut, try using the knockout bar again with the pressure still on.
4. Be careful when removing a stuck drive center, as the drive center can come out with considerable force. Under pressure, observe proper safety precautions. Simply place a towel over the drive center to keep it from flying across the room.

—Scott Hogsten  
West Jefferson, Ohio



## Avoid a spinning spur drive (2004)

For extra safety, I drill a hole about ¼" deep and the diameter of my spur drive. That locks the spur drive in position. To keep the spur drive from spinning in green wood, I put a few drops of cyanoacrylate glue in the hole, which hardens the wood.

Since following this practice, I haven't had a spur drive spin out of the stock. If I need to shift the bowl to realign the grain, I move the tailstock.

—Ric Erke  
Davidson, North Carolina

# Brian McEvoy

onegoodturn.ca



"East Meets West," 22x43"; Japanese pagoda turned and then pierced with dentist's tools. Finished with sheets of copper and gold leaf.

The timber is Alaskan yellow cedar, but the remainder of Brian McEvoy's latest creation radiates Far East influence. Brian, who lives in Edmonton, Alberta, put more than 170 hours into creating this 43"-tall traditional pagoda turned in 12 segments. He turned the five individual floors to a whisper-thin  $\frac{1}{16}$ " thickness, then delicately pierced the walls before sanding and finishing his piece with gold leaf. The top room features Japanese script that could translate as a fine woodturner's creed: "Patience, Determination, Honour, Faith, and Friendship."

Brian will demonstrate this June at the Utah Woodturning Symposium in Provo.

Photos: Linda Finstad



Turning and piercing the thin rings of the finial provided Brian with a particularly delicate challenge. This piece is 5x12".

