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The Journal of the American Association of Woodturners
Winter 2003 Vol. 18, No. 4 www.woodturner.org

American Woodturner®

Dedicated to Providing Education, Information, and Organization to Those Interested in Woodturning

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The write stuff

Penturners have taken their creativity to new levels with innovative techniques, shapes, and an array of materials. Turn to page 36 for details on this soaring interest group.

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On this issue's Cover

Pens of all shapes and sizes continue to challenge woodturners' creativity.
See page 36 for more awesome examples.

Cover photo: Perry McFarlin

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What's going on at your lathe?

Anything interesting in your chapter of AAW?

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

Do you have a tip or technique **you'd like to share**?

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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.

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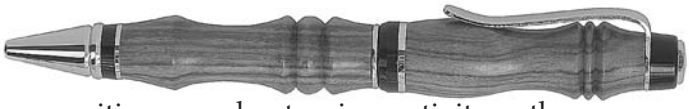
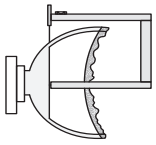
American Woodturner





President's Letter

With nearly 600 members participating in our first on-line survey, it certainly has been a worthy effort. This survey showed us that good turning tips, finishing expertise, and how-to articles are at the top of your list. For journal interest, it's also evident that good galleries of turning photos that inspire you from a technical and artistic viewpoint are here to stay.

Another result of the survey was your eagerness for a full-color journal. This is easier said than done! Going full color will require more top-quality photos from members. So fire up those cameras and think about getting some additional photo expertise. Photographing turned pieces would be a good chapter demo to consider.

For the upcoming national symposium, I'm going to request a rotation or two on photographing turned pieces. Since we last had a photography demo at a national symposium, there have been a lot of changes in digital photography. Additional photography knowledge may help many of you submit your work to galleries and exhibitions, or just share your work with family and friends.

There will be more of these AAW surveys in the future; it's a useful tool for our editor and the board. Our thanks to member Jeff Jilg of Austin, TX, for his computer-related help on getting this survey on the Internet.

Since the AAW is an organization that thrives on its volunteers, it's important for us to know who has knowledge and expertise to help accomplish our many goals. Like the example of Jeff Jilg's computer knowledge, we need to know whom we can draw upon for the expertise our association requires from time to time.

We want to develop a resource list, which could include everything from technical consulting to manpower for regional and national projects. Tasks that immediately come to mind include grant writing, marketing, exhibits and displays.

New AAW Board members

Steve Ainsworth

John Hill

Gary Lansinger

I'm asking you to submit a note about expertise, services, or goods you think the AAW might need. If you have a willingness to help, please respond. You can e-mail the home office at woodturner@qwest.net.

Here are highlights of other business the board is working on:

- Tired of our same old AAW web site? Within two months, plan to have revisions up and running. I'll leave it there for now!
- I've asked the board to explore regionalization of AAW chapters. The goal is a more consistent geographical representation on the AAW Board of Directors. This concept was brought to me during a meeting in San Diego this past summer, and I think it's worth more study.
- See page 11 for program details about an exciting youth turning exchange in Japan.

With three new board members--Steve Ainsworth, John Hill, and Gary Lansinger--coming on board in January, it will be exciting to work with them on new projects.

As for the three out-going board members, I offer the thanks of the board and the entire AAW membership for the enormous amount of time, energy, and wisdom they have given our association. Bob Rosand, Willard Baxter, and Lee Carter can now get back to a lot more turning.

Phil

Phil Brennion
philb@northlink.com

20 EOG Applicants Awarded $15,480

In August, the AAW Educational Opportunity Grants (EOG) Committee announced awards to summer group (July 2003) applicants. Among the winners were 11 chapters, six individuals, one school and two artisans training centers. Twenty of the 31 applicants won awards.

Winners and proposed EOG funding included:

- **Bay Area Woodturners Association, Moraga, CA**

To assist in developing Acalanes High School Turning Center.

- **Cascade Woodturners Assoc., Portland, OR**

Grant to assist in establishing a start-up woodturning program at Franklin High School in Portland.

- **Michael Estomo, Benson, AZ**

Grant will assist Benson High School in upgrading their woodturning lathes and purchase turning tools, books, and videos.

- **Greater Vancouver Woodturners Guild, Surrey, BC**

Underwrite professional demonstrators for the International Woodturning Symposium sponsored by the guild.

- **Kurt Hertzog, Henrietta, NY**

Grant to assist in tuition fees for a customized woodturning course at Chalet Woodcraft, Inc. in Ontario.

- **Lance Kanaby, Clarence, NY**

Grant to assist in tuition fees to attend the Ellsworth School of Woodturning.

- **Ken Keoughan, Friendship, ME**

The grant, with matching funds, will help underwrite the cost of setting up a turning station at the Round Top Center for the Arts.

- **North Carolina Woodturners and Triangle Woodturners of North Carolina, Raleigh, NC**

To support a symposium to be held in November 2003.

- **Northwestern Michigan Woodturners, Traverse City, MI**

Grant will provide seed money for woodturning equipment and accessories for the Traverse Bay Area-Intermediate School District in Traverse City.

- **Olympic Peninsula Chapter, Shelton, WA**

Grant will assist with offering mini-symposiums to chapter members involving woodturning skills and developing effective communications.

- **Richmond Woodturners Anonymous Chapter, Glen Allen, VA**

Grant to assist the chapter purchase woodturning equipment for the Chickahominy Middle School wood shop.

- **Jim Schober, Council Bluffs, IA**

Grant to assist in attending two woodturning classes at John C. Campbell Folk School.

- **Laurie Seskey, Altoona, PA**

Grant funds will assist in a research-based project to develop a directory of the educational opportunities available for woodturning in the United States.

- **Bert Smith, Waynesboro, VA**

To assist in purchasing equipment for the woodturning classes at the Artisans Center of Virginia.

EOG Applications

The AAW welcomes your Winter EOG application. Entries must be postmarked no later than January 15. Recipients will be notified by March 1 and you must acknowledge acceptance of the grant by July 20. For complete information, follow the links at woodturner.org or call 651-484-9094 to request a form.

Grants up to $1,000 cover expenses such as tuition, registration, demonstrator's fee, travel, lodging, and meals.

The EOG committee also will consider applicants ages 16 to 22 for a grant to study in Japan. This program is a first-time exchange with the Far East Woodturning Society, a Tokyo-based AAW chapter.

See page 11 for more details.

- **Inland Northwest Woodturners Club, Spokane, WA**

Grant will assist the chapter to purchase a lathe for the woodshop program at Ferris High School in Spokane.

- **Stateline Woodturners, Pineville, MO**

To assist the chapter in purchasing a lathe, tools, and accessories for their meeting room.

- **Utah Association of Woodturners, Salt Lake City, UT**

Grant to assist in the purchase of three mini-lathes for monthly meetings and special training sessions.

- **Mike Wallace, Fort Worth, TX**

To purchase two mini-lathes and tools for performing demonstrations at local schools.

- **West Bay Area Woodturners, San Carlos, CA**

To assist the chapter purchase a digital movie camera.

- **Kimberly Winkle, Smithville, TN**

Grant will assist in purchasing a mini-lathe, tools, and accessories for demonstrating at local outreach programs.

Tribute to Ed Moulthrop

With the passing of Ed Moulthrop on Sept. 23, we have not only lost one of the great artists in woodturning, we have also reached the end of an important era. Ed, along with Bob Stocksdale, Melvin Lindquist, Rude Osolnik, and James Prestini were the original pioneers of contemporary woodturning.

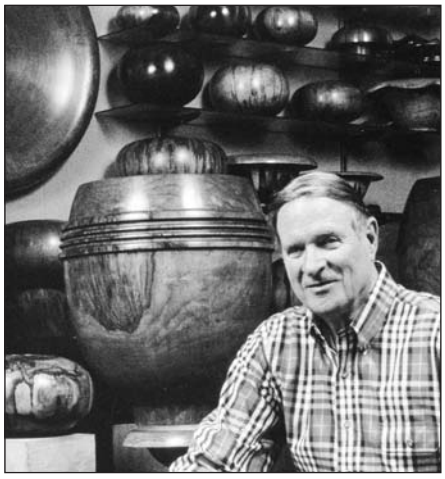
This "gang of five," who began their work in almost total isolation from one another, formed the foundation of everything from design styles to marketing techniques that helped woodturning to become a field within the studio craft movement, and ultimately to be considered a legitimate art form.

Ed Moulthrop was a very successful architect in Atlanta until the mid-1970s when he realized that his interest in bowl turning was equally lucrative and probably a lot more fun. His work paralleled the concept of pure design as seen in the work of Prestini, but nothing that we see in the work of other turners of this era even compared to the scale of these truly architectural-sized bowls.

A self-taught turner, Ed broke many of the established woodworking traditions in developing his work, which makes his career even more interesting. He forged his own hook tools, was the first to use polyethylene glycol (PEG) as a stabilizer to prevent his pieces from cracking, and, along with Harry Nohr, was the first to use epoxy finishes.

One reason Ed's work is so pivotal in our history is that he was the first turner to successfully take his work beyond the traditional craft gallery and into the commercial and corporate marketplace. In fact, there is an old story that may well be true, that every secretary in Atlanta has a Moulthrop bowl in her office.

On another level, Ed's bowls forced all of us to look at the turned object not as a personal



treasure—as one would consider in a Stocksdale bowl—but rather as a significant element within our personal environment.

Ed helped break enormous ground for the rest of us who have come into this field. For all that he has done, including always being the perfect gentleman, we express our gratitude and our thanks.

—David Ellsworth, Quakertown, PA

Ed Moulthrop, his son Philip, and grandson Matt were featured in the Summer 2003 issue of *American Woodturner*.

Return to the Community accolades

I volunteered to chair the "Learn to Turn" and "Return to the Community" programs at the Pasadena symposium. This responsibility became one of the symposium high points for me.

After the lathes were set up, we had a great time interacting with all visitors and novice turners. Seeing their responses was great after they started turning beads or just smoothing the wood with a skew. I think I got more pleasure out of the experience than the people who went away with ear-to-ear grins.

After the symposium ended, I packed up all the donated "Return to the Community" balls and tops that were brought to the symposium. They were all beautifully turned and finished, ranging from 1" to 8" in diameter. The tops and balls looked like a flower arrangement with all the different woods, colors, and sizes.

I took the donation to the Children's Hospital – Los Angeles. Children's Hospital will use the balls and tops in their rehabilitation program. Your turning gifts will help children recover from their illnesses and injuries.

Thanks for allowing me to participate and enjoy getting so much pleasure from this experience. A special thank you to the Channel Island Woodturners for their participation, Steve Mink and Bob DeVoe who provided lathes, and the encouragement from Bob Rosand.

—Al Geller, Ventura, CA

Woodturning series slated for cable network

Lights! Camera! Action! Those were the words Dave Hout, *right*, recently heard as filming began on a DIY (Do It Yourself) Network pilot series titled "Woodturning Basics."

Prior to the Pasadena symposium, DIY contacted the AAW and asked if they could film a segment on the AAW and the symposium. The AAW board agreed to welcome them and film some "staged demos." Dave, AAW's vice president, assisted with lining up the demonstrators and content, and he helped narrate the symposium segment.

Several weeks later, Dave received a phone call from the producer of Horizon Entertainment. That narration project led to DIY asking Dave to serve as the turning teacher in the pilot series of five turning segments.

The first projects filmed were a basic bowl, goblet, rolling pin, hollow vessel, and lidded box. The first segment aired October 20 on the DIY network.

One of the benefits to the AAW is a link from the DIY web site–DIYonline.com – to the AAW web site. For information about additional woodturning segments, navigate to the woodturning section of the DIY web site—you may even find a new project idea.

Washington state geography lessons

It was nice to see pictures of work from our Mid-Columbia Woodturners members in the Fall issue. However, in each case the listing for the home of the turner was incorrect. On page 37, the piece "Back in an Hour" listed Don Gangl and Ron Gerton of the Seattle, WA, area. This is not the case. Page 16 of the catalog for "Put a Lid On It" correctly lists Don for Kennewick and Ron for Richland. Both towns are in Eastern Washington and more than 200 miles from Seattle. I was pleased to see a picture of my work on page 33 (the connected walnut spheres), but I live in Kennewick, WA, and not in Florida.

—Jerry Johnson, Kennewick, WA

This isn't your grandfather's shoehorn

Harry Rosen turns colorful long-handled shoehorns from mesquite (shown), osage orange, ebony, pink ivory, and other hardwoods for crafts shows near his home in Lake Worth, FL. The contrasting color plugs are cut from scraps using 3⁄8", 1⁄2", and 5⁄8" plug cutters.

Craft Council honors LeCoff

Albert LeCoff, executive director of The Wood Turning Center in Philadelphia, was inducted as an Honorary Fellow at the American Crafts Council awards ceremony Oct. 17 in Chicago. The event was part of the International Exposition of Sculpture Objects & Functional Art: SOFA CHICAGO.

Insurance and the AAW Symposium

In June, I attended my first AAW annual symposium in Pasadena. What a great experience, I would highly recommend it to anyone who is considering the trip. My experience with the symposium was a little different from any others because one of my pieces was broken in the Instant Gallery. As I understand it this was one of the few pieces broken at any symposium. The following is a summary of my experience.

I arrived in Pasadena on Thursday. When I got to the motel, I was relieved to see that the pieces I shipped out for the Instant Gallery had arrived and had made the trip intact. That afternoon, I took the pieces to the Instant Gallery. When I was unpacking the pieces at the Instant Gallery, I was very intimidated that my pieces would be shown alongside pieces by J. Paul Fennell, John Jordan, David Ellsworth, Mike Schuler, Curt Theobald, and others.

On Saturday, I started my day with some more great presentations. At lunchtime, I went to the trade show and Instant Gallery area. When I looked over at my pieces, I noticed that one of them was missing. I meet up with Bobby Clemons and he explained to me that my piece entitled "Emerging World" had been broken by one of the people viewing the Instant Gallery. Bobby then introduced me to the person responsible for breaking the piece. She was very hurt by the fact that she had broken the piece but indicated that she could not pay for it. (She is an elderly lady who lives off of Social Security.)

We exchanged personal information and I asked her to file a claim with her homeowner's insurance. As the day progressed, I got this sinking feeling that the piece may be a total loss, although I did have insurance that may pay for it. Later that day I asked Curt Theobald to appraise the piece, thinking that my insurance may require some type of an appraisal.

The insurance dilemma

After returning home, I received a call from the woman's insurance carrier. They asked me several questions and indicated that they would have to prove that she was negligent in order to cover the claim. On July 10, I received a letter from her carrier stating that the damage was the result of an accident and since I did not have any "Do Not Touch" signs, it was not considered negligence. Negligence as defined in the dictionary is "the failure to exercise the degree of care considered reasonable under the circumstances, resulting in an unintended injury to another party." I do not feel that not having "Do Not Touch" signs precluded the woman from performing what I felt was a negligent act.

"Emerging World" by Jim McLain

The next day I filed a claim with my carrier, RLI Insurance Company. I got a call from the adjuster asking about the accident, value of the piece, appraised value, and availability of a picture of the piece. They, too, asked if I had any signage. I worried that the "Do Not Touch" sign would become an issue with my insurance company as well. Much to my surprise, RLI cut a check for the damages.

I cannot say enough about the professional people at RLI. They specialize in insuring artists and craft people and in the end, I was glad I had them on my side.

In closing, I would like to recommend that you attend the annual symposium--it is an experience you do not want to miss. If you do put some pieces in the Instant Gallery, post a "Do Not Touch" sign in the area. And first and foremost, carry good insurance.

—Jim McLain, Socorro, NM

AAW's senior members

Since publishing an item about Wally Dickerman's 67 years of woodturning (Fall 2003), we heard about four other long-time woodturners.

Walter P. Betley, Columbus, OH

"In 1935, I was a sophomore and age 14 at Mechanic Arts High School in Boston, MA. All students at this superb technical high school were required to take specified academic and technical courses. We took daily courses in the technical areas of wood and machine cabinetmaking, drafting, machine shop, sheet metal, forging and pattern-making (lathe classes).

"These were not introductory courses but very formal and active. In every program each student maintained his own set of tools and each had his own workbench and machines. In pattern-making, for instance, each student turned on his own cast iron four-pulley wood lathe. I can still hear the flapping sounds of the 24 leather belts driven by the over-head gang shaft. Changing speeds using the required stick to shift the belts was soon overtaken by the students using their forearms—but only when we thought that the teacher was not looking.

"Now at age 82 and in full-time retirement, I remain very active with woodturning, working my way through many styles of lathes. My latest lathe is a Oneway. I actually have been actively turning again since 1957, using the many great craft shops available at all the military bases. I attend as many seminars and workshops as I'm able and remain active with our local AAW chapter, Central Ohio Woodturners. I am an early AAW member with Number 307."

Ted Bartholomew, Tacoma, WA

"Wally and I belonged to the Seattle Woodturners at the same time and I learned a lot of good things from him. I started my turning in 1931 and will be 84 in November.

"I received my first lathe for my 11th birthday, and I've never been without one since then. My dad built that lathe and powered it with my mother's washing machine (gas) motor, as we didn't have electricity. On Mondays, the motor went back on the washing machine so Mother could do the weekly wash.

"Over the many years of turning our own things, Dad and I built 322 spinning wheels together. He was my woodturning buddy until his 90th birthday, when he gave up turning.

"I started going to crafts shows and now I can be selective about which ones I want to take part in. That led into teaching woodturning. Like Wally, I teach and am in good health and feel that I am in my prime of turning."

Lyle Foell, Seneca, NY

"In 1934, I was a junior in high school and was able to take manual training, as it was called then. Being intrigued watching the older boys operating the lathe, I talked to my father about buying one. He said we couldn't afford it, but said he would take

Lyle Foell of Seneca, NY, has turned for more than 60 years on a Craftsman lathe he bought for $16.

two bed rails into work and have the machinist weld them together to make a lathe bed. The headstock was an old washing machine motor bolted to the bed. I used this lathe until 1939 when I bought a new Sears Craftsman lathe for $16 and no tax.

"After getting tired of replacing the brass sleeves, I had a machinist bore out the headstock and put in roller bearings. That was about three years ago and I'm still using the same lathe. I'll be 84 in December."

Lloyd Colvin, Satellite Beach, FL

"I started turning in manual training in grade school in 1928 and took woodworking classes through graduation from high school in 1934. I joined the Navy in 1935 and retired in 1958. I repaired antiques, which required turning replacements until I fully retired in 1973.

"Now I do all sorts of things from pens to square bowls (I should write an article on the novel way I do this). I was 86 in March. I'm active in my shop but age is starting to take its toll."

President collects woodturned hats

The next time you see Chris Ramsey at a turning event, be sure to ask him about his visit to the Oval Office in July. Or his second visit in November.

Yes, President George W. Bush has taken a shining to Ramsey-turned hats. Bush's collection includes hats from English walnut and black gum burl. The wormy maple hat at *right* includes a Texas Rangers logo for the baseball franchise Bush owned. In addition, Bush also commissioned Ramsey to turn a natural-edged

While Chris Ramsey, center, proudly stands by, President Bush admires a wood-turned cowboy hat during a 30-minute Oval Office meeting in July. At left is Kentucky Congressman Harold Rogers.

Pen pals rendezvous in Utah

Has a penturner actually ever needed a refill cartridge? Write a letter—are you kidding? They only e-mail. Or so it may seem.

Some of the Yahoo Penturners Group had bumped into each other at scattered symposiums or at club meetings, but most of the group had only talked on-line. The Penturner's Rendezvous, held in conjunction with the Utah Woodturning Symposium in May, was the first face-to-face meeting for many. The gathering drew 54 participants. The Provo symposium also included two penturning demonstrations.

After a pizza dinner, the rendezvous quickly took shape. Penturning demonstrations were organized in one corner; turners hovered around new stabilized woods in another. Participants brought pens to show off (some of the pens shown on pages 36 and 37 were award winners), but most of the evening was spent in earnest discussion in meeting their pen pals in person.

Plans are underway for a second Penturners Rendezvous to be held in June 2004 in conjunction with the Utah Woodturning Symposium.

Penturning on the Internet

The Internet has fueled the exchange of information among penturners. Here are some popular Internet sites.

The Penturners Group on Yahoo (groups.yahoo.com/group/penturners/) is one of the most successful forums. Some recent discussions among the 1,200 members have centered on the use of polymer clays and polyester casting resins for new turning materials.

For the advanced penmakers, there's the Pen Makers' Guild (groups.yahoo.com/group/PenMakersGuild/). You have to submit a "masterpiece" for consideration to the Guild's elders, and cannot be admitted for membership until you achieve Guild approval.

You'll find a great deal of cross-pollenization of penturning topics into some of the mainstream turning and woodworking forums, including Wood Central (woodcentral.com), World of Woodturning (thewows.com), and Sawmill Creek (sawmillcreek.org).

Ellsworth advocates new teaching methods for turners to 'find their own voice'

Note: *The following remarks were excerpted fromDavid Ellsworth's SOFA Chicago paper sponsored by the Collectors of Wood Art.*

I would suggest that the most important thing we can do for the woodturning field today is to ensure the health in our future growth. In order to do this, I believe that we first need to expand our existing methods of teaching woodturning beyond the limits of technique. And in order to do this, I feel that we need to create a shift in the existing paradigm by establishing a learning environment that is "inclusive" rather than "exclusive" of the information and experiences we wish to pass forward.

For example, our current learning system asks our students to repeat the techniques of their teachers, who, in fact, are also repeating the techniques of their teachers. I call it a *parallel learning track,* because it satisfies the immediacy of our needs by rewarding us with what we already know. No wonder we complain that our students too often copy the signature designs of the established artists in the field: We teach them to do it.

Secondly, the system we currently have in place is simply a repeat of the antiquated hierarchical system of learning that we all grew up with. That is, the teacher knows all, while the student is simply the cup waiting to be filled. The problem with this model is that it assumes that the student must always be the receiver, with the result that he or she learns to become dependent on the teacher from the moment the class begins.

> "If we want our students to learn to think more creatively, and to 'find their own voice' within their work, we cannot continue to seek this goal as a hypothetical phrase. Instead, we need to provide our students with a method of learning that will allow them to gain access to the meaning of this phrase."

The paradigm I'm advocating can best be described as a *horizontal exchange*. In this model, the teacher and the student become integral parts of the equation and, therefore, of equal value. The teacher remains the facilitator for the presentation of information, but also acts as a receiver of the student's needs as they evolve through the learning exchange. In effect, the teacher and the student shift roles in an effort to discover how the information is being received.

What I am concerned with is that while it's easy to measure the growth of our field in numbers, it is not so easy to evaluate the health of our field as this growth progresses. Thus if we want our students to learn to think more creatively, and to "find their own voice" within their work, we cannot continue to seek this goal as a hypothetical phase. Instead, we need to provide our students with a method of learning that will allow them to gain access to the meaning of this phrase.

The first step in creating this learning model is to recognize the need for this paradigm shift, and that we can begin to implement this model within our existing workshop and conference venues. The second step is to understand the need for bringing our current teachers back into the classroom so that they can learn to gain experience in how to function within this new learning environment.

And finally, we need to constantly recognize that the health of our field rests squarely in the hands of our students. It is they who are here to absorb the values from our past, and to expand the language of our craft through the objects they make. And it is they who will become the building blocks for each successive generation of turners.

Japanese turners initiate youth exchange with AAW

The AAW and the Far East Woodturning Society have reached agreement for an exchange in 2004 for young woodturners.

Under the Educational Opportunity Grants (EOG) structure, the AAW will accept applications until March 1 for the three- to four-week program in Japan. Applicants must be between 16 and 22 years of age.

The Far East Woodturning Society is the first AAW chapter in Asia. Naoto Suzuki, chapter president, will oversee the AAW-sponsored youth's exposure to Asian turning traditions and methods.

In the U.S., a Japanese youth will shuttle around the country for a variety of turning experiences at workshops and under the wing of studio artists, chapters, and professional turners. Please contact the AAW office at 651-484-9094 or woodturner@qwest.net if you'd like to participate in this exchange.

See the AAW web site (woodturner.org) for more details on the program and the application process.

One more holiday gift idea

Bob Heltman was thinking tops when he designed a Christmas tree ornament for the Carolina Mountain Woodturners holiday project. "I wondered how a top looking like a Christmas tree might hang on a tree, and yet also spin as a top should," Bob reported. After some experimenting, Bob came up with an upside down design that still spins on a #216 screweye. See Bob's designs *top* and *center*.

Bonnie Klein, who has instructed young and old around the world on turning tops, took Bob's idea in another direction. Although Bonnie's tree top at *right* isn't designed for spinning, it has plenty of eye appeal as an ornament.

Both ornaments include chatter work and color as mentioned in Bonnie's top project published in the Summer 2003 issue. Bob suggests keeping the tree ornaments light in weight to avoid sagging the tree branches.

Bob Heltman of Hendersonville, NC, came up with this ornament design.

Bonnie Klein of Renton, WA, altered her popular top form to create a handsome Christmas ornament.

Downunder turners charter first chapter outside North America

I would like to point out that in the Fall issue, you stated that the Far East Woodturning Society was the first chapter outside of North America. I would like to draw it to your attention to the Moorooduc Plains Woodturners Chapter, established in January 2003. We are only a small chapter at present (8 members), and we meet weekly at members' workshops. We are located in Mornington Peninsula area, Victoria Australia. We welcome any members to visit us.

—Ian Munro

Make a High-tech set of Micro Tools

By Wayne Fitch

Some of my friends have accused me of making life harder than it has to be. So when I took up small-scale vessels in the last year, they weren't surprised that I tackled making my own miniature tools, too.

Turning small scale is a rewarding form of turning, and I've found that the techniques carry over to larger turnings. In my opinion, the challenge of turning small emphasizes attention to details. I usually avoid a "miniature" label that would go into a doll house, although numerous people collect this size of turning.

Anyone who has turned small- scale objects has placed a lot of thought with the tools that are available—and more precisely, that aren't available. Returning to my premise that I make life more challenging, I began creating my own tools.

Top: Wayne Fitch machines all of his micro tools with a 1/4" shaft to fit into the same custom handle. Shown are 1/4", 1/8", and 1/16" micro tools. He machines the 1/4" tools with two ends.

Bottom: A full-sized gallery of Wayne's hollow vessels from lower left: maple burl and ebony, blackwood, curly koa, unknown Asian wood, and maple burl and blackwood.

I gathered design opinions from friends who primarily turn miniature-size vessels. From these ideas and the time-tested machinist cutter shapes, I have designed my own set of small-scale tools. Here's what I've learned about making small-scale turning tools.

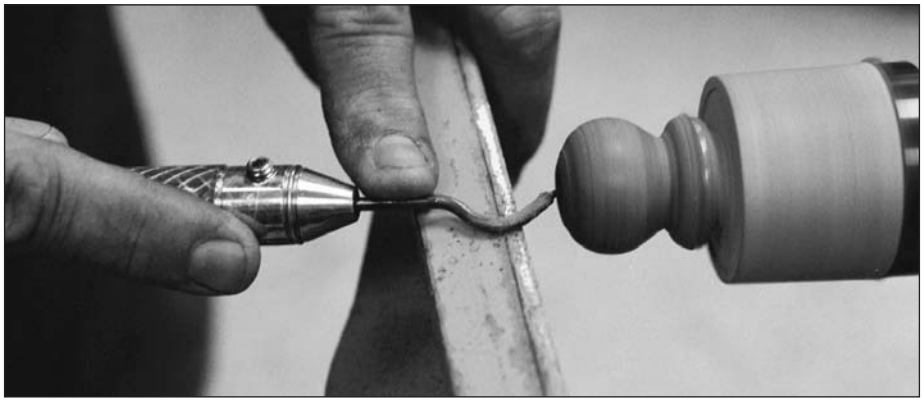
Although not necessary, it's helpful to drill and turn these tools at a metal lathe. I traded for an EMCO Compact 5 small precision lathe (retail cost: about $1,200). There are several less-expensive brands of small metal lathes on the market.

Begin with the handle

I first realized that a common handle would be more convenient than a separate one for each tool. I decided that the handle should be hollow so each tool shaft could be adjusted for length as needed when cutting and shaping wood.

With that as a starting point, I considered different materials. I found a material called drawn over mandrel (DOM) or what non-metal people call steel tubing. This type of tubing already has an accurate hole through the center and is available in various inside dimensions (ID) and outside dimensions (OD). The DOM that I selected is a 1/2" OD x .120W steel tube available at a local supplier of metals catering to the machinist or www.MetalMart.com.

This size leaves just a few one thousands ID over the 1/4" needed for the tool shafts to slip in—an ideal match.



Wayne undercuts the inside of a 1"-diameter hollow form with 1/8" curved tool.

I decided on 1/4" tool shafts, as this size would be the largest I planned for my turnings. I then studied turning supply catalogs for something comfortable to cover the handle. I settled on a clear vinyl hose that is reinforced with nylon cord. This is available in various ID and OD diameters at home improvement stores.

To build the handle, cut 3/4"-diameter solid brass rod at least 1 1/4" inch long and center bore a 1/4" hole. This fitting at the front of the tool will receive the 1/4" rod for the cutter. After boring the 1/4" hole, I reverse it in the chuck and face the end of the brass to give it an even cut, then center bore a 1/2" hole approximately 1/4" deep. This will be the end that will be epoxied and press-fit on the DOM tube. At this step, you may add decorative turning to the front end of the brass rod.

For the butt end of the handle, begin with a brass piece approximately 1 1/4" long. On one end, center drill a 1/2" hole approximately 1/4" deep. You can turn decoration at the opposite end. The length of the handle is personal preference; I usually ask a supplier to cut the DOM tubing in 6" lengths. After I glue and press one end on the DOM tube, I push the vinyl hose over the tubing. You'll need a straight cut on the end of the hose for a square fit up against the brass end. The fit is tight on this tubing; with a little effort the brass piece slides on. Next, cut the vinyl hose 1/4" short for the fitting of the other end of the brass end, which also is pressed and glued.

For the final handle step, drill and tap with a 1/4" x 20 tpi set screw on the end that receives the tool rod. The 1/4" rod will probably hit an obstruction because of burrs from drilling and tapping the set screw hole, so remove the burrs with a round file. I recommend using a bottoming tap (one with a flat end); this creates a better set of threads through the brass. For appearance, polish and lacquer the brass.

Continued

Now, make the rods

I next turn my attention to the rods that hold the cutters. After several trials, I settled on 1/4" drill rod for about $2.50 each (36" length). One mail-order source for this rod is Reid Tool Supply (800-253-0421 or www.reidtool.com). This drill rod is a good quality low-carbon content steel available in a variety of sizes and types, depending on which hardening method you intend to use.

The rods I have found are:

- O-1, which is an oil-hardening type. This is the rod I rely on because it's machinable when purchased and it is designed to be heat-treated in oil after final machining.
- W-1, which is a water-hardening type. It's hardened in water after machining. Because I've had good results with O-1, I haven't tried the W-1 rod.
- A-1, which is an air-hardening type. Ambient temperature of the air hardens the rod after heating and machining. This type is more difficult to machine before hardening, but bears your consideration.

To accomplish the hardening of O-1 rod, bring up the temperature of the piece with an acetylene-oxygen torch (mapp gas also would work) to a cherry red color, then quench the hot piece in peanut oil purchased from a grocery store. This oil has a high flash point and can tolerate high temperatures. I haven't had any surprise fires but I leave nothing to chance.

All machining must be done before hardening. For straight cutters, I center-drill 3/8" holes in each end. I usually make a double-ended rod to save material, (the other end slides out of the way into the handle). To drill a straight hole for the cutter, you'll first need to face the end of the rod square. I've found 1/4" rod fairly easy to drill straight, but starting the hole with a machinist center drill produces a nicer hole.

Before gluing the cutters, heat and cool the drill rod in peanut oil for 60 minutes in a 400-degree oven. After an hour, I cool the rods at ambient (room) temperature. This step accomplishes two important things. First, it brings the hardness down slightly, which is referred to as annealing. Secondly, the annealing gives my wife something to talk about as the peanut oil has an odor when heated. After I explain the multi-uses of a kitchen oven, the domestic situation improves.

For an undercutting tool, I drill and bend the rod to the desired shape when heat-treating. I use either medium or thick viscosity cyanoacrylate (CA) glue to hold the cutting tips. When I need to change a tip, I apply heat to the cutter and it pulls out easily.

Have fun making cutting tips. I've found the choice of cutting tips can be either inexpensive or expensive. HSS cutter stock is inexpensive and is readily available in the round and square stock I prefer.

When you drill the hole in the end of the rods, the 1/8" round HSS cutter will require a 1/8" hole and the square cutter will take a larger hole to allow for the square corners. When drilling, the hole is slightly larger due to a small amount of play as you drill the rod. Using the square HSS cutter creates a larger cavity for the CA glue to bond with.

Carbide is a more expensive choice for the cutters. The expense of carbide is a little more, but the expense really ramps up when grinding to shape and sharpening. Carbide requires a diamond wheel to cut; you can't use the same ordinary grinding wheel to sharpen HSS to shape or sharpen carbide. Carbide requires the expertise and expense of a machine shop with the proper tool grinders. Another carbide drawback is that it's brittle; if you

Wayne trues up 1 1/2" diameter Praduak burl with a micro tool ground similar to a 1/2" round nose scraper.

Bent-neck hollowing tools in 1/4", 1/8", and 1/16" sizes.

drop the tool on a hard surface, it may shatter. However, if you have a friendly machine shop or access to a diamond wheel, carbide cutters reduce trips to the grinder.

I made a few carbide cutters for special occasions and to continue my quest of complexity. I have had carbide ground in 1/8" inches and in 1/4" for cutters in larger tools. Yes, carbide does cut better in some woods. However, I don't think the added expense of carbide is worth the time and money. It's convenient to walk to the grinder and sharpen the HSS, and then walk back to the lathe and continue work.

After further consultation with turning friends, I realized that a smaller set of tools would be helpful. I purchased some 1/8" O-1 drill rod and some 1/16" HSS round material. While creating this set, I realized why machinists charge the rates they do. After quite a few missed drilling attempts trying to center this small of a hole, I made a trip to a local machine shop and paid the price to have the holes drilled properly. After a little more research, I discovered a smaller set of centering drills to start the hole and a short drill bit used in drilling machines. You can purchase these from any machinist supply or Reid Tool Company. A regular drill bit with the standard length has too much flex with the pressure that is needed to drill the hole. This shorter drill made life easier, so I purchased various sizes of shorter bits. (Because the center drills and bits occasionally break, keep a few spares on hand.)

These 1/8" cutting rods are cut shorter and I have made only two styles: a straight one and one curved for undercutting. I use only round HSS for the cutters in this size tool. To allow these to fit the same handle, I use 1/4"-diameter brass rod that I cut to approximately 1" in length and face the edges, then center-drill a 1/8" hole 3/4" deep. After heat-treating the drill rod, I glue the cutters in place, shape on the grinder and glue the 1/4" brass rod on to the drill rod.

To take these tools to another level, I came up with one final size. A professional turner who specializes in miniatures

With the undercut tool (middle tool shown above) Wayne hollows out a 2"-diameter Praduak vessel.

recommended 1/16" cutters fitted into a 1/4" brass rod. The material I use is 1/16" 0-1 drill rod, and so far I've only made a straight and a curved cutter.

Before gluing the cutter into the brass, I heat the drill rod to cherry red, which takes far less time than larger diameter drill rods. I again quench in the peanut oil. I made the first batch without annealing and found the metal too hard and broke easily. I then began annealing them, which improved the performance.

This is a synopsis of what I have learned through trial and error and welcome your ideas on improving the miniature tools.

Wayne Fitch (fitch@airmail.net) is a member of the AAW and works part-time at a Fort Worth, TX woodworking store. Wayne has a 34-year career in law enforcement and has found turning a beneficial method of stress relief.

Translucent pine bowls

From Arizona's High Desert

By Phil Brennion

Years ago while admiring translucent Norfolk pine turnings created by Hawaiian woodturner Ron Kent, I became intrigued with the idea of turning my own translucent pieces.

Coming away from that exhibition in Phoenix, I put my thoughts on hold for a decade—I didn't have access to Norfolk pine nor was I planning any trips to Hawaii.

You won't find Norfolk pine (*aruacaria exelsa*), which grows in tropical and subtropical areas, here in the Arizona high desert. Not knowing that Norfolk pine (it's native to South America and some Pacific Islands) has little similarities of our own pine, I looked to our local Ponderosa pine (*pinus Ponderosa var. scopulorum*) as a substitute. Oh, how bliss ignorance can be! I discovered Ponderosa to be every bit as spectacular for translucent turnings as Norfolk pine.

About Ponderosa pine

Ponderosa pines are native to much of the western United States, with Arizona containing the largest single forest of these trees. This forest stretches from Flagstaff to the New Mexico border and covers tens of thousands of acres.

When looking for a piece to turn, I didn't need to go far. Loggers and firewood cutters are removing pines by the thousands. And, there happens to be a huge firewood yard just down the road from my shop.

About 12 years ago, I noticed that beautiful blue streaks radiated from the center of some logs. Through further investigation with the local U.S. Forest Service timber manager, I learned these stains were the result of a fungus carried into the cambium by the Ips beetle.

In a healthy tree, the fungus rarely has enough impact to cause much damage to the tree. However, the West has been in one of the most severe droughts recorded, which has stressed many of the Ponderosa pines.

This drought—coupled with an inordinately high Ips beetle population—has wreaked havoc among Ponderosa pine forests throughout the West.

The good news: lots of blue-stained wood for turners and other craftsmen alike. The bad news: western forests will be forever changed. In the area where I live near the Prescott National Forest, the Forest Service predicts mortality of Ponderosa pine to be above 85 percent. Considering this is the predominant species in this area, our landscape will be altered for decades to come.

With so many dead pines being removed to reduce the fire danger, I can be picky in my choice of what I consider high-grade turning stock. I select pieces with good stain patterns or pieces with dark blue to black color rays

pointing toward the pith. I also want turning stock with minimal knots and perfectly centered pith. An absence of knots and a centered pith allows for a more even release of moisture in the turnings as they dry. This minimizes warping.

Prepare the wood for turning

When I'm readying a piece of pine for the lathe, I carefully inspect it for even the smallest of cracks. A small crack—even when filled with cyanoacrylate (CA) glue—becomes very visible and detracts from a translucent turning. Since all of my pine turnings are orientated end grain to preserve the striking fungus patterns, I initially need only crosscut logs or limbs cut to length. My conical shapes easily accommodate rough shaping of two bowls from a single piece of wood. If I'm turning small bowls 4" to 6" in diameter and approximately 3" tall, this requires a section of limb 7" to 8" long.

Once I've mounted my piece of wood between centers with a spur drive and live center, I rough-turn the two bowls and create a common spigot (Photo A). My lathe speed is about 1,000 rpm and I use my 1/2" bowl gouge for the rough turning and a 3/16" parting tool to cut into the middle of the common spigot (Photos B and C). To avoid tearing out the pith, I saw through the last portion of my parting cut. This final sawing also prevents launching the blank off the drive center end.

Creating two spigots allows me to easily chuck each bowl blank. Once a bowl is mounted in my scroll chuck, I remove substantial wood from the interior with a 3/8" bowl gouge (Photos D and E).

Because of grain structure, roughing the interior of an end grain vessel is more efficiently done with a pulling cut. This means cutting from the center out rather than from the rim to the center, as in side-grain bowls. But since Ponderosa pine is so soft, cutting either way works fine for removing the bulk of the interior.

Continued

Ponderosa pine logs like this example fit Phil Brennion's requirements--plenty of dark blue color rays (from Ips beetle damage) and a centered pith.

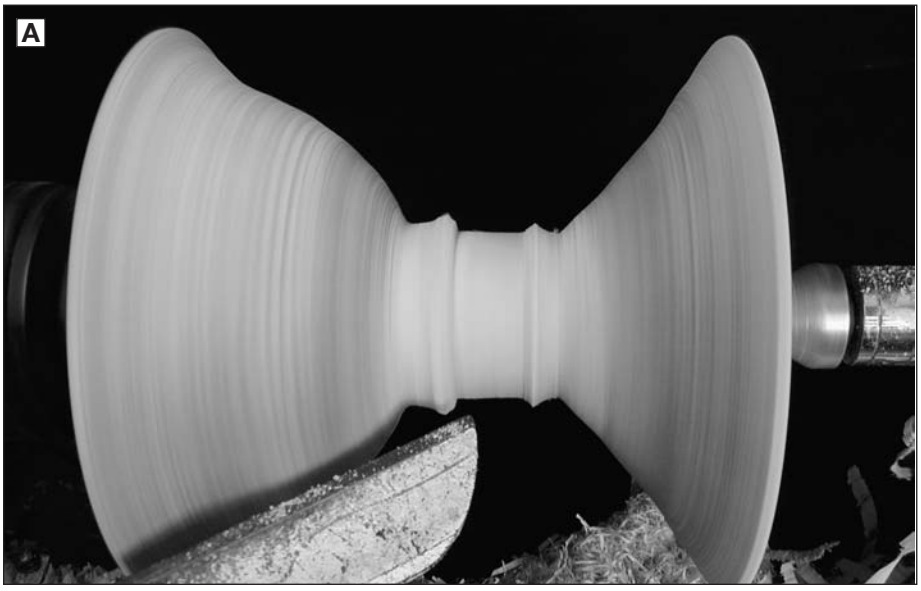
Soak in dish detergent

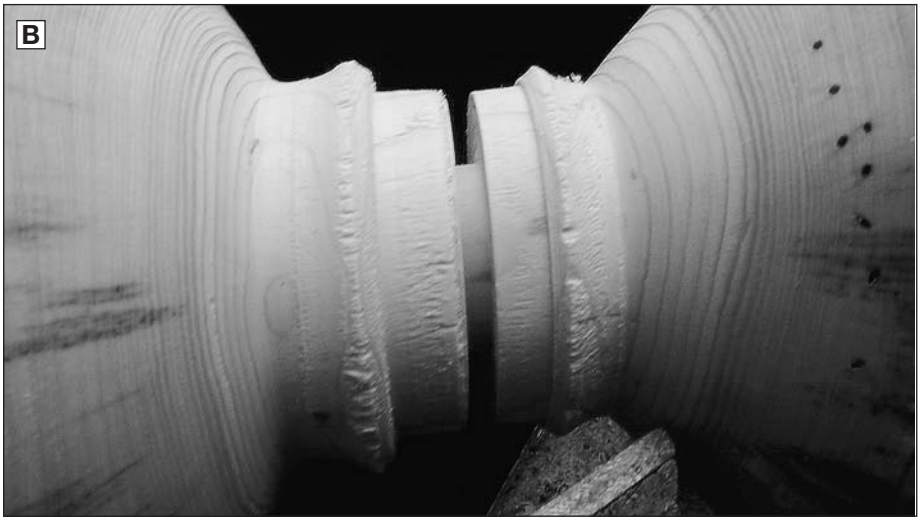
With my bowl blanks roughed out to a wall thickness equal to approximately 10 percent of the bowl's diameter (about 1/2"), I submerge the bowls in a solution of 60 percent water to 40 percent liquid dishwashing detergent. The rough stock soaks for 4 to 5 days in a 30-gallon plastic tub.

I found this soaking method, made popular by Ron Kent, has multiple positive effects for my turning process. First, it reduces the amount of cracking I get in my end-grain turnings as they dry. Secondly, when I finish-turn the roughed-out bowls, they turn much easier and my cuts are cleaner than turning untreated wood. Finally, the pieces sand with much less dust.

There are many opinions as to how this soaking in dishwashing detergent actually affects wood. My best guess is that the dish soap provides some elasticity and reduction of surface tension as the pieces dry. Whatever theory winds up being closest to scientific fact, the relevance to me is that soaking of the vessels is a big plus in production.

Six or more rough-turned pine bowls soak 4 or 5 days in a 30-gallon plastic tub. This step reduces cracking.





Turn the exterior

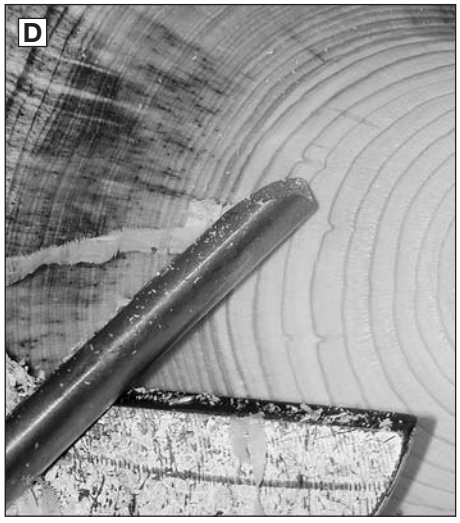
After soaking the bowls, I again mount them in the scroll chuck, and finish-turn the outside with my 3/8" bowl gouge. I pay close attention to cutting as smooth a surface as possible while keeping an even profile to the conical shape. The wide cone shape allows more light exposure to the interior surface area.

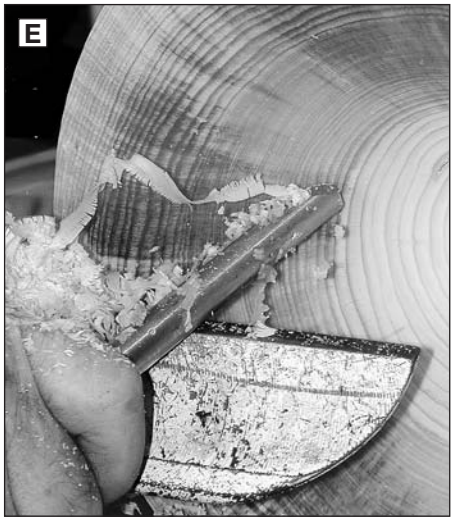
With the outside finished cut, I then sand the surface, going through the successive grits to remove any high spots or tooling marks. I usually start with 120 grit and end with 320.

Turn the interior

When cutting the final wall thickness of the bowl's interior walls, I aim for a thickness somewhere around 3/16". I could cut the walls thinner, but it's not necessary, since there's plenty of translucence at this thickness. Plus, there's no need to make the bowls too fragile.

To achieve this type of wall, I use a strong light shining on the





inside of the bowl. This light provides an amber glow on the outside of the bowl as it shines through the wall and gives me my first hint of the translucence ahead (Photo F). If I keep a consistency in the color of this glow as I cut, I know the wall thickness is consistent, too.

Using a pull cut with a gouge or ring-type tool such as a Termite, I cut my final wall thickness and smooth the wall. I follow with the appropriate sanding, usually starting with 150 grit and finishing with 320 grit. With a holding jig like a Jumbo or Mega Jaw, I reverse-chuck my bowl, finish-cut, sand, and add my signature carving to the bottom.

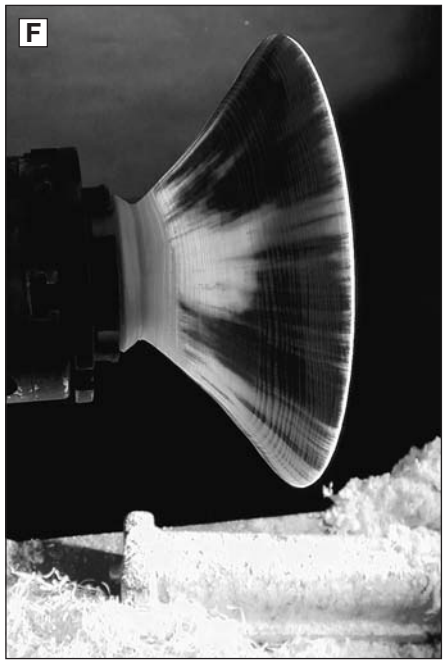
Now, apply the finish

With my bowls turned and sanded, I'm ready to add the real translucence. I do this by immersing the turnings in Danish oil and allowing the oil to absorb deep into the wood fibers and then cure. I usually put the bowls into a 5-gallon plastic tub of Danish oil and let the bowls soak for an hour or more. Then I wipe off any excessive oil and let them dry overnight. I repeat this process as many as 10 times over the next 14 days, sanding the oil into the surface with 320 wet-dry sandpaper after each soaking.

When my bowls have reached the desired translucence, I spray them with a light coat of water-based semi-gloss polyurethane. A coat of paste wax and a good buffing completes the process.

For display, halogen or bright lighting directed from above toward the inside surfaces seems to work best for conveying the translucent properties of this pine.

I'll never find Norfolk pine growing here in the high desert. But a windfall of Ponderosa pine provides me with all the stock for translucent bowls I'll ever need!



Phil Brennion (philb@northlink.com) lives in Chino Valley, AZ where he turns and co-owns a gallery in nearby Prescott. Phil is the current AAW president.

The future of Woodturning in 2010

We asked turning experts to predict the status of our craft six years into the future.

Design trends

"It will be interesting to see if woodturning changes in the next seven years as it has in the past six or seven years. I think you'll see more surface embellishments and more pieces not done wholly on the lathe. I think you'll see the lathe used more as a sculptural machine to do work."

—Kip Christensen, university professor
Provo, UT

"In brief, I can tell you that we feel the field of woodturning will grow in the coming years. However, those that are turning wood as an artistic expression will continue to incorporate other materials and techniques, making the strict definition of 'wood turning' irrelevant in the art world. Art is not defined by its media nor its techniques."

—Jan Peters, del Mano Gallery
Los Angeles

"I think turners will be more willing to think outside the box by 2010. In general, I think the majority of woodturners are wood purists at heart, and the thought of manipulating wood to change its natural characteristics is currently considered taboo by these individuals.

"However, as woodturning continues its march into fine art, craft and design, artists will become more willing to use wood as a medium for expression of ideas rather than as a means to displaying only the grain and figure of a tree. I expect to see more use of color, carving, and surface texturing and explorations of sculptural, multi-axis, and disassembly techniques.

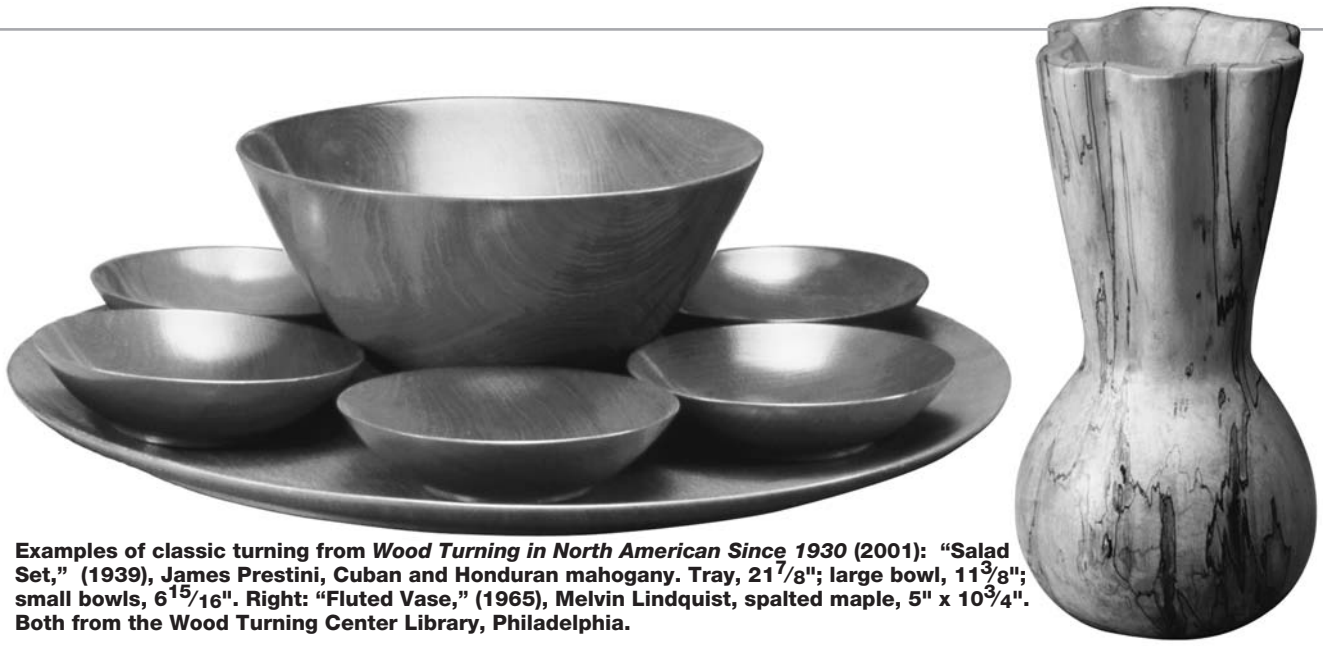
"Nature will continue to provide inspiration for design, but I also expect to see more cultural influences in woodturning design as well."

–Andi Wolfe, turner and botany professor
Columbus, OH

"I think it is both important and productive to project what we as individuals might like to see down the road, but we must be careful not to appear to 'predict the future,' especially in our own artwork, for surely we would then be setting a stage for misdirection or even disappointment.

"That said, if woodturners would look closely at their own history—especially over the past 25 years—they would see a progression of growth that is virtually parallel to that of the fields of ceramics, glass, fiber, and jewelry. In this respect, how we progress down the road, both as individual makers and as a legitimate field within the creative arts, will depend on how aware we can become that woodturning is but one family within a much larger tribe. Only through the vision of this tribe we will accurately see ourselves."

–David Ellsworth, past AAW president
Quakertown, PA



Examples of classic turning from *Wood Turning in North American Since 1930* (2001): "Salad Set," (1939), James Prestini, Cuban and Honduran mahogany. Tray, 21 7/8"; large bowl, 11 3/8"; small bowls, 6 15/16". Right: "Fluted Vase," (1965), Melvin Lindquist, spalted maple, 5" x 10 3/4". Both from the Wood Turning Center Library, Philadelphia.

"Woodturning in 2010 will not change. It has not changed much in the past hundred years and won't change in the near future."

—Gorst duPlessis, ornamental turner
New Orleans

"Design will continue to evolve along popular trends with the rest of art. Woodturning is unique, however, in that technical innovations are constantly discovered (often rediscovered) which allow technically unique pieces. An example of this would be Johannes Michelsen's turning of hats from green wood. His thorough understanding of wood technology—combined with his innovations in chucks—allow Johannes the thin turning necessary in a totally unique design. Another example of this would be the current trend of using lasers to turn very thin vessels through small openings."

—Ernie Conover, teacher
Parkman, OH

Woodturning education

"As far as woodturning education, I expect there will be more and more regional symposiums being offered. Turners won't have to travel very far to go to a significant event. My guess is that there will be more international symposiums."

—Kip Christensen

"While some may address the technical and artistic changes that 2010 will bring to woodturning, I am concerned with who will be turning in 2010. As our AAW membership gently ages, I am hopeful there will be an increased concern with cultivating the next generation. If we ignore the students in our elementary and secondary schools, we are effectively changing the future of woodturning through 2010 and beyond."

—Jack Grube, teacher,
Pinkerton Academy, Derry, NH

"I think 'shop' as most of our readership knew it is practically nonexistent in the U.S. secondary educational system."

—Ernie Conover

"I don't see a rosy future for woodturning in American schools without the direct intervention of individual woodturners with a passion for teaching. With state legislatures continuing their trajectories of deficit planning and the cuts to higher education trickling down into K-12 budgets, the 'luxury' courses are the first to go.

There is a rather large misperception that technology education is more important than learning a craft. I heartily disagree and believe that the training in how to think in 3-D, to see a project from start to finish with the end product to be something tangible and hand-crafted instills a value set that goes beyond future employability in the corporate world. It would be a good thing if we could inspire young students to work with their hands rather than pursue passive entertainments provided by television, computer games, and the Internet."

—Andi Wolfe

Continued

Equipment improvements & advancements

"The biggest change will be less expensive, heavy, good quality lathes and tools from China. The British toolmakers will probably take it on the chin as regards to tools. High-end tools of specialty metals (like Glaser tools) won't be impacted that much. With the Eastern lathes will also come electronic variable speed controls that are less in cost than today's systems. All and all, there will be a lot of value in tools and lathes therefore making it even more attractive for those entering woodturning, as well as making the turning itself more enjoyable."

—Alan Lacer, past AAW president
River Falls, WI

"I don't see a big evolution in woodturning lathes. There will be advances in the drives and motors, they will get cheaper, more reliable and better, but the heart of the lathe will stay the same. The appeal of woodturning is not only the created object but in the way it is created. Having a long ribbon of shavings peel off the piece you are turning is every bit as pleasurable as seeing and holding the finished piece. Manipulating the tool with nothing other than your own hands is where the satisfaction comes from. If you take that away through technology, you take the heart out of woodturning."

—Kevin Clay, Oneway Manufacturing
Stratford, ON

"Tools are often rediscoveries that can be found in books from the 18th and 19th centuries. Much of the improvement is evolution rather than outright discovery to be sure. A truly innovative design in lathes is the new Nova DVD. Although digital reluctance motors have been around for some time, they have been only found in high-tech applications such as fighter jets and nuclear reactors. Nova's digital variable reluctance motor allows very precise speed control with high power at the spindle. Since a reluctance motor holds still with the same power that it has moving, the future promises electronic indexing. The user could punch in any reasonable number of divisions and the machine would electronically step through them. Other neat things are in store as well. It does mean, however, that your lathe will have an upgrade path just like your home computer."

—Ernie Conover

"Tools and gadgets will still develop, making turning a little more user-friendlier. But, most new tools will continue to be slight twists on someone else's old design."

——Phil Brennion, current AAW president
Chino Valley, AZ

Status in the arts community

"Twenty years ago, you'd be hard pressed to see woodturning in a collection. I predict there will be more woodturning collectors and more significant individual and public collections. You'll see more significant turning collections in museums around the country."

–Kip Christensen

"I expect the crafts market to remain constant because of the nostalgic appeal of turned wood. People like simple bowls, candlesticks, and other wood utensils. I think the crafts market will maintain the 'pure' form of woodturning.

"I see the artistic turning to take its place as an equal to glass, ceramic, etc. Woodturned art is becoming more prominent in the overall picture but it is becoming compromised by or with other woodworking processes. It is becoming integrated into the field of wood sculpture. In the future, more sculptors will find the lathe as a useful tool just as turners have found carving tools helpful, but as a result turning will lose some of its unique identity. Is this bad? I don't necessarily think so; it is an evolution we can live with."

—Dave Barriger, past AAW president
Apoka, FL

"The art community—except New York—already recognizes woodturning as an art form."

—Gorst duPlessis

"I think the real trend will be blending woodturning with other mediums such as glass (a current interest of mine), fiber art, and so forth. Woodturning has always been an esteemed branch of the cabinetmaking tree and has enjoyed great largess amongst the architectural crowd."

—Ernie Conover

"I think woodturning will eventually hold its own against glass and ceramics. I doubt if we'll be there by 2010, but the past decade has certainly seen a growth in the field of woodturning as art and fine craft. Advancement will probably not take place at the level of local arts and crafts fairs, but through the strong efforts of galleries, collectors, and knowledgeable museum curators to promote woodturning as art."

–Andi Wolfe

"The studio turners will move toward creating more sculptural turnings, and this will be the needed push to increase the visibility of turning in the art realm."

—Phil Brennion, current AAW president
Chino Valley, AZ

An example of classic turning from *Wood Turning in North American Since 1930* (2001). "Fluted Birdmouth Bowl," (ca. 1965), Bob Stocksdale, Macassar ebony, $2\frac{3}{4}$" x $6\frac{3}{16}$" x $5\frac{11}{16}$". From the Wood Turning Center Library, Philadelphia.

Growth of AAW

"The popularity of turning will continue to grow. There are 20 million woodworkers in the U.S. Five percent own lathes or are interested in turning—that's one million people. And that's not counting other countries."

–Gorst duPlessis

"I think that the AAW—if not international (in name) by 2010—will be a pattern for international organizations."

–Kip Christensen

"My crystal ball indicates a bright future for the world of woodturning and the AAW. The membership in AAW will probably slow some from its exploding rate of growth that we have been seeing, but people will continue to realize its tremendous potential as a use of their time and as a therapeutic activity. Because of this, the schooling aspects will remain quite strong for a long time as will the AAW since we are about education.

"My one negative thought: I fear there is going to be a change in the attitude of some turners. As the field widens, artists will become more competitive and self-centered, thus eroding the close fraternal comradeship that we have enjoyed. I hope this does not happen and you're welcome to disagree if you like."

—Dave Barriger

"Turning awareness and education will be significantly greater than today, because of better exhibitions and a much larger AAW."

—Phil Brennion

11 months at Arrowmont

In 2001, Michael Mocho was named the first recipient of a woodturning residency at Arrowmont School of Arts & Crafts, believed to be the only woodturning program of its kind in North America. His report of 11 months at Arrowmont follows.

For many woodturners, there is a certain compelling quality to the craft that makes time fly. Going out to the shop after dinner to turn for "just a few hours" frequently results in me looking up from the lathe to discover it is almost 2 a.m.

Although I began turning at the age of 8 and have made my living as a woodworker and instructor since 1976, there never seems to be enough time to explore all the ideas that constantly bounce around my brain and fill my sketchbooks. I have often day dreamed about being in an environment where I could be free to turn the majority of the time—some place where there was abundant wood and a stimulating environment that encouraged creativity.

In the spring of 2001, an opportunity presented itself that was to come close to that dream. A chance conversation with John Jordan at his gallery opening in Santa Fe yielded an invitation to come to Arrowmont as his teaching assistant. I accepted John's invitation in a flash.

The Arrowmont experience

Arrowmont's reputation as one of the finest craft schools in the world is well deserved. This non-profit organization nestled in Gatlinburg, TN, has long been an important crossroad where technique, enthusiasm, and personal discoveries are shared. From March through November, a wide variety of one and two-week classes are offered in clay, metals, glass, basketry, painting, photography, fibers, stone, wood, and paper. The campus includes several galleries that feature the work of instructors, traveling exhibitions, and a rotating selection of works from the school's amazing collection.

Arrowmont also has a reputation as somewhat of a Mecca for turners because of the school's profound impact on the development of contemporary woodturning.

That week I spent wielding a chainsaw, turning gouge, and broom was a wonderful mix of technical challenges, interesting people, and a lot of hard work. The lathes ran from right after breakfast until almost midnight. The students kept me hopping by cutting blanks, sharpening, and hauling away the mountain of shavings they produced.

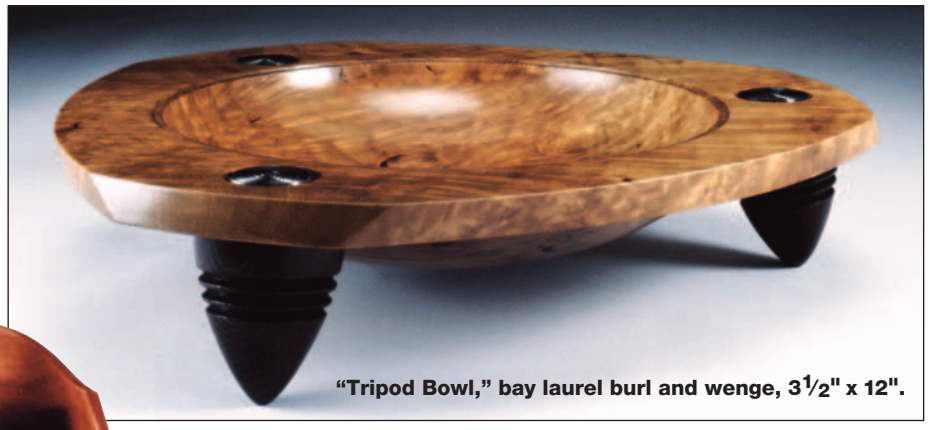
While I was there, I learned about the residency program, in which five people share a house on campus and devote a year of service to the school and surrounding community while developing their own work. Through the shared vision and generosity of Robyn and John Horn, Arrowmont had just received the needed support to include a woodturner in their residency program for the first time. In July, I learned that my application for the position had been accepted.

From desert to mountains

When I got the news, I felt both elated and overwhelmed. I had to really scramble to make all the arrangements to have my classes covered, rent out my house in Albuquerque, and renegotiate delivery dates for several commissions. Somehow it all came together and I was on the road a month later with my truck jammed full of everything I thought I would need for the 11 months at Arrowmont.

The three-day drive from New Mexico to Tennessee gave me time to wonder what I had gotten myself into and to gather my determination to make the most of the opportunity.

I live in the high desert of New



"Tripod Bowl," bay laurel burl and wenge, 3½" x 12".

"Swerve Box," cherry, sycamore, and walnut, 5" x 12" x 4".

Mexico, where hardwood doesn't exactly "grow on trees," and most anything worth turning comes in the form of dimensional stock from commercial lumber stores. The contrast between New Mexico and the Great Smokey Mountain environments could hardly have been greater. Being in the middle of one of the most diverse hardwood forests on the planet yielded an amazing variety of wonderful woods. I soon had a good-sized pile outside my small workshop, which was equipped with a wonderful Stubby lathe, bandsaw, and grinder.

Fast-paced year

The responsibilities of being a resident include helping maintain and improve the studios, changing exhibitions in the galleries and assisting in the library and supply store. With the help of volunteers from the

Continued

Deadline approaches for 2003-04 Arrowmont Residency

The Horn Residency Fellowship for Woodturning provides housing, private studio, basic equipment, professional development, optional teaching opportunities, and some meals for an 11-month residency at Arrowmont in 2003/2004. The turning recipient will be one of five residents selected. To be considered for the fellowship, candidates must submit a letter of recommendation from an established woodturning artist, resume, 15 to 20 slides of current work, and a statement of goals to be achieved during the 11-month residency. All residents are required to work eight hours per week in a variety of assignments related to Arrowmont's mission and program. Applications are due February 1, 2004. To download an application, visit Arrowmont.org and navigate to the "Residencies" page.

Tennessee Woodworker's Guild, I also designed and coordinated the building of 16 jeweler's benches that became a useful addition to the metals studio.

We also participated in the community outreach program, in which residents travel to the local elementary and secondary schools to present short talks and demonstrations about their craft. The kids often squealed with delight as I sent a shower of shavings from my portable lathe into the air over their heads. Their appetite for spinning tops always exceeded the rate at which I could turn them.

Busloads of students

In the spring, we had busloads of enthusiastic students from the local schools come to spend the day on campus to work in the studios, which was exciting and exhausting. I will never forget the smiles as they completed their first turnings.

Sharing a house with four relative strangers took some getting used to, though we soon developed a camaraderie through living, working, and teaching together. The late night conversations on the porches and around the flames of the ceramic kilns created a shared sense of the risks involved in developing our work. The days were always long. It was rare when there weren't at least a few of us still working in the hillside studios after midnight—especially the weeks before our final exhibition.

"Double-Sided Box," a wedding present for friends. Maple burl and tulipwood, 4" diameter.

Benefits to teaching

From the opportunity to observe so many interesting instructors and students, I've learned how different motivations, intentions, and personal approaches affect the objects they make. This has benefited my own teaching.

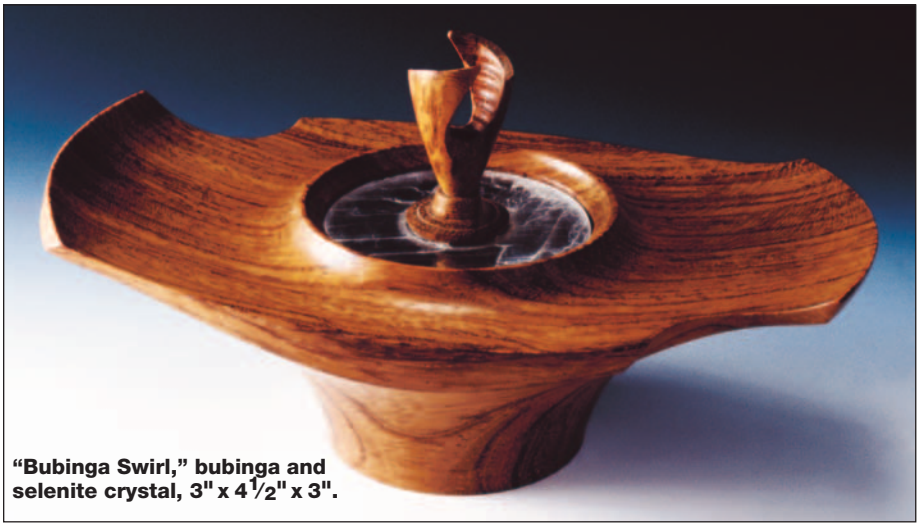
The exposure to the materials, tools and processes of other craftspeople has inspired a broader sense of possibility for my own work.

I feel fortunate to have gotten to know some of these talented people, and was moved by their generosity in sharing their stories, enthusiasm, technical knowledge, and encouragement. Although my residency was not without its struggles, I am grateful to the faculty, staff, and students, whose contributions made my time at Arrowmont the most exciting, challenging, educational, sleep-deprived year of my life.

The positive effects on my life continue to emerge…but I still can't find enough time to turn.

Satinwood hollow form, 4" x 3".

Michael Mocho (mmocho1@yahoo.com) is a full-time turner and woodworker living in Albuquerque. He teaches at the Santa Fe Community College.



"Bubinga Swirl," bubinga and selenite crystal, 3" x 4½" x 3".

David MacFarlane

Roseburg, Oregon
revolutionsartworks.com

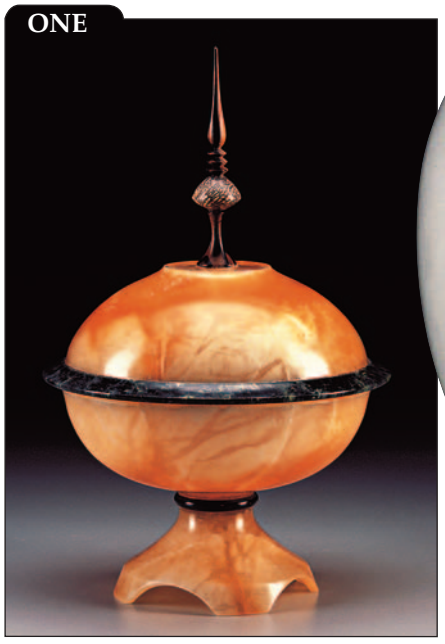
Exposing nature's inherent beauty

With a college degree in hand, David MacFarlane began his career turning wooden bowls. Eight years later, he discovered the beauty of alabaster.

"One of the most astonishing qualities of alabaster," David says of his favored media, "is its translucency. I shape my work in elegantly graceful lines to allow the beauty of the stone to shine through."

Continued

ONE



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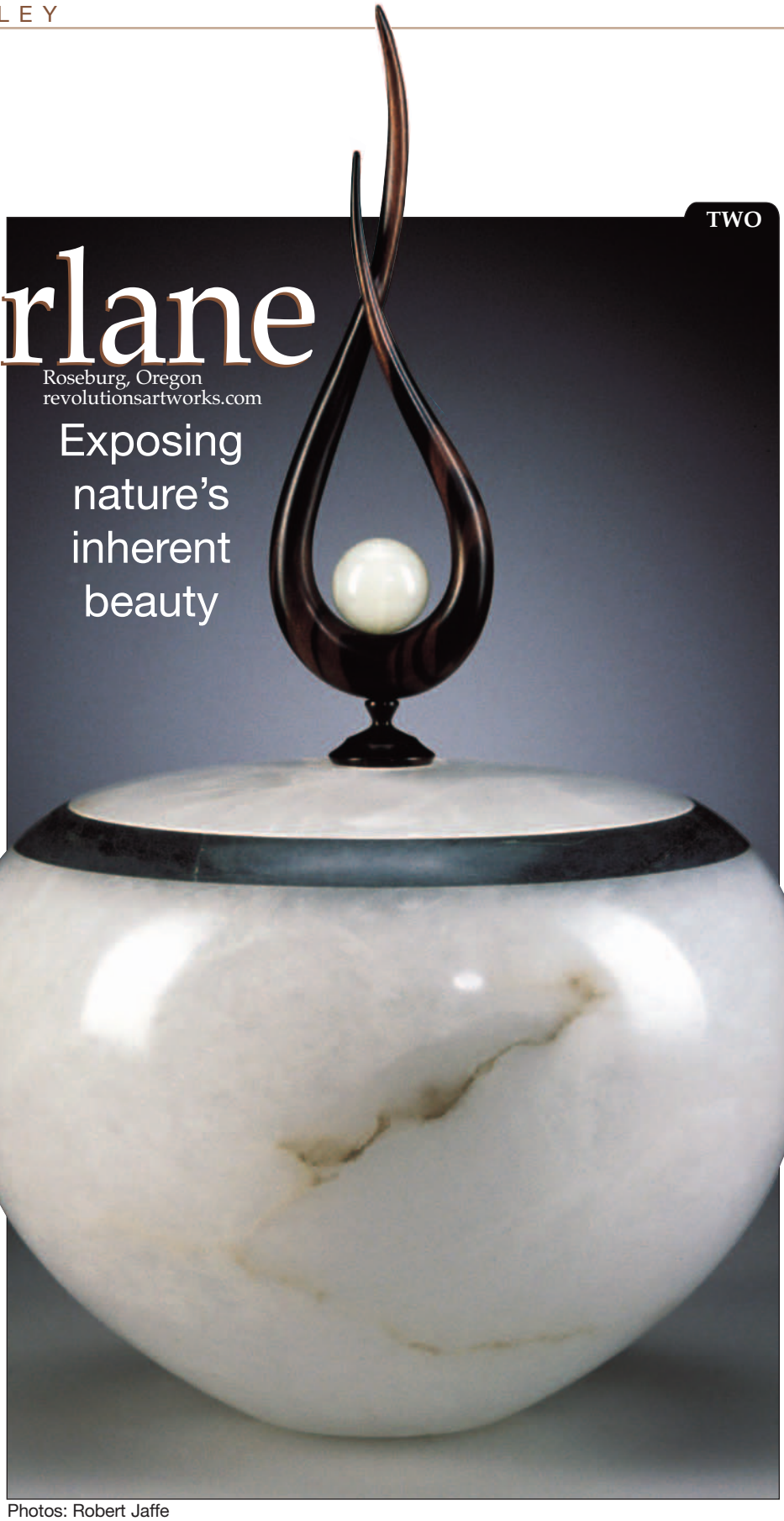
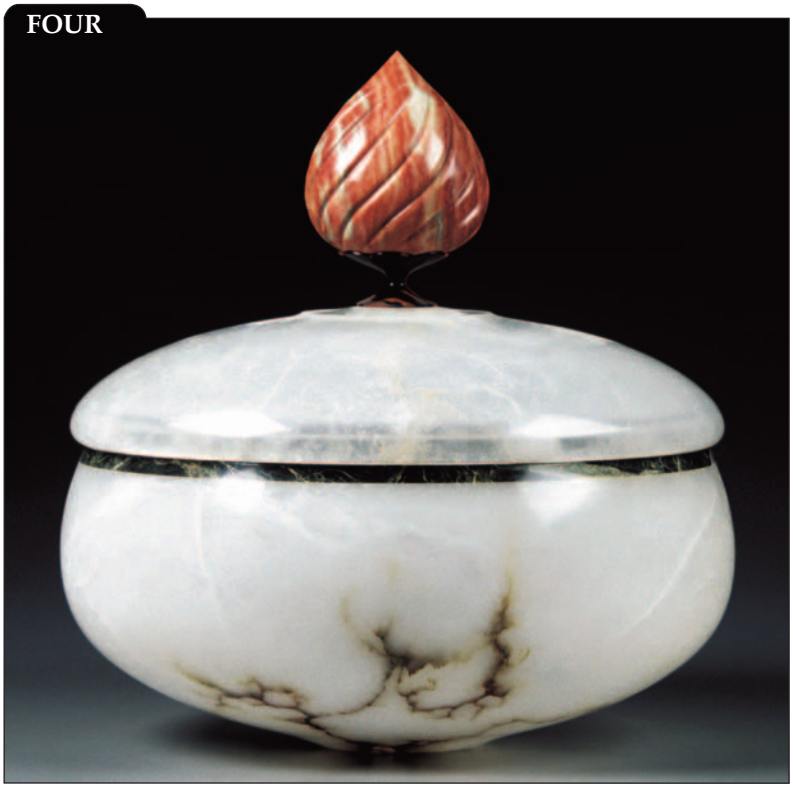


ONE: "Ming Jar," orange alabaster with chlorite band. Maccassar ebony, and betal nut finial; 12" x 8".
TWO: Italian alabaster jar with ebony finial; 12" x 19".

Photos: Robert Jaffe

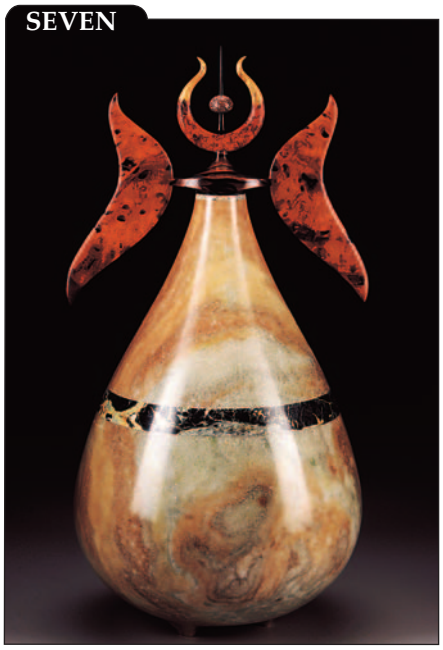
THREE

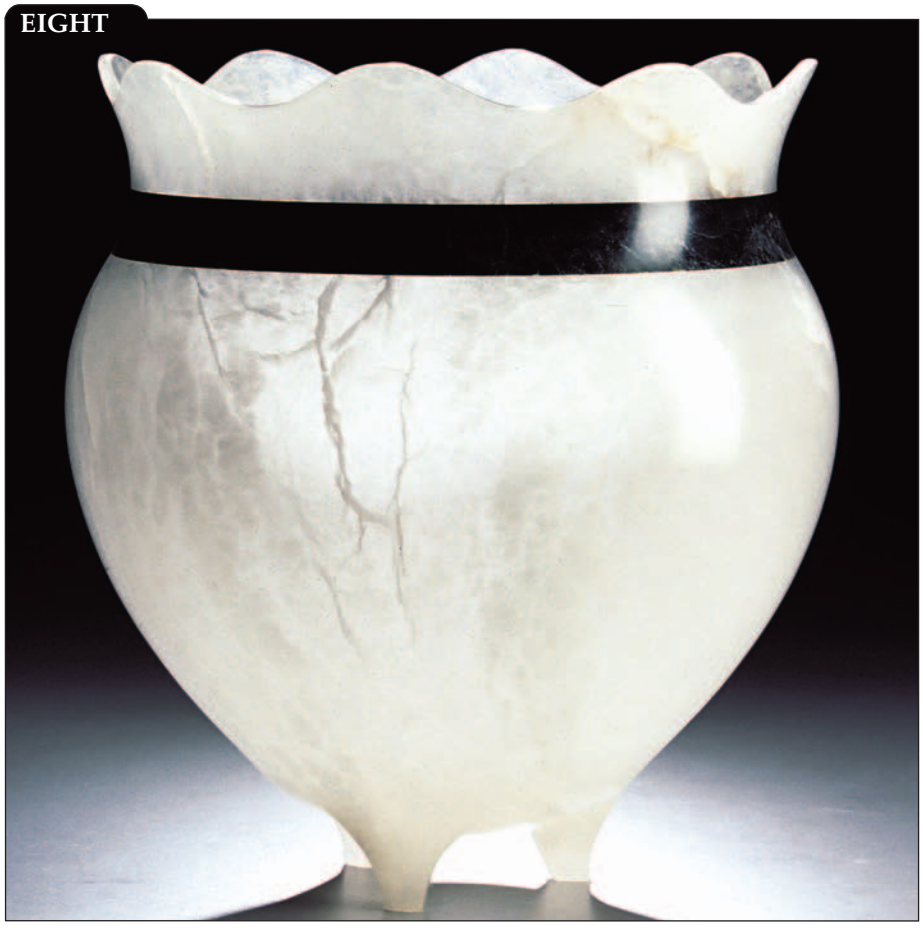
FOUR



FIVE


SIX


SEVEN


EIGHT

And shine it does. In December, David will participate in the prestigious bi-annual Internazionale dell'Arte Contemporanea di Firenze in Florence, Italy. The 800 artists participating from 74 countries are nominated by an international jury.

Because alabaster weight and balance is a primary concern, David steps through several procedures woodturners are unaccustomed to before turning on his lathe. Before mounting to his lathe, David roughs out the shape with a pointed chisel and hammer. If the piece weighs over a 100 pounds (often the case), he lifts the piece to his shortbed lathe with a chain hoist.

Once mounted on the lathe, David relies on a toothed chisel to further refine the shape. With the piece balanced, David turns on his lathe and cuts with carbon-tipped tools he made specifically for turning stone.

His finishing techniques include sanding to 800 grit, three coats of polyurethane finish and a hand-polished hard wax.

THREE: Orange alabaster bowl with chlorite rim; 13" x 7".

FOUR: Italian alabaster jar with a hollow raspberry alabaster finial; 16" x 17".

FIVE: "Hades," tigereye brown alabaster with soapstone band. Maccassar ebony and betal nut lid; 16" x 9".

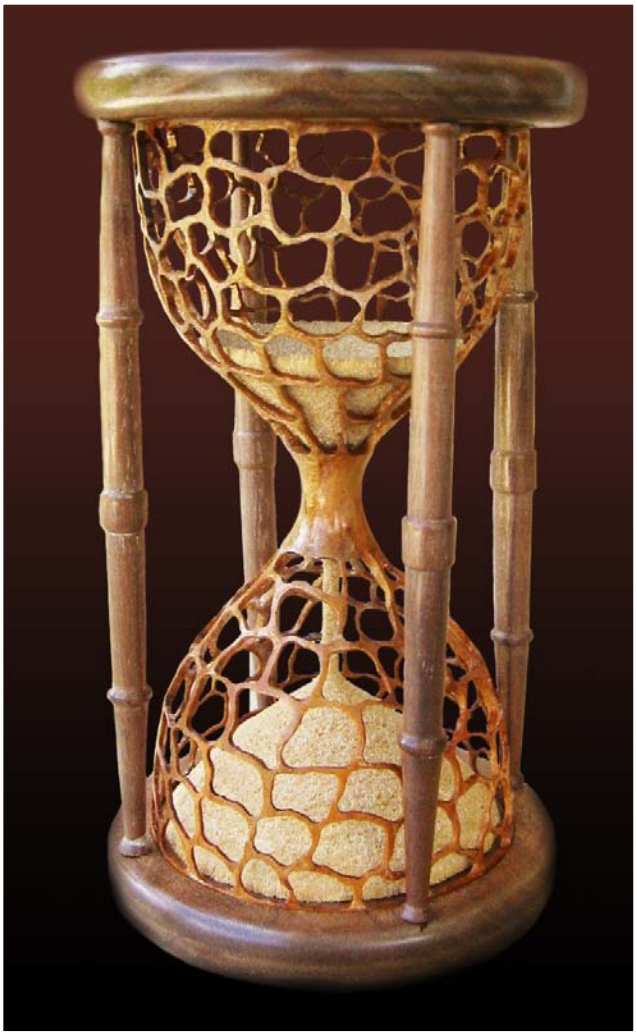
SIX: "Phoenix," Arizona alabaster with chlorite band. Fiddleback koa, ebony, rutile quartz, and alabaster lid. Chlorite base with halogen light; 15" x 26½".

SEVEN: "Zeus," green and brown alabaster with chlorite band. Madrone burl, ebony, amboyna burl, and betal nut lid; 25" x 13".

EIGHT: "Neptune," Italian alabaster with chlorite band; 13" x 16".

Member's Gallery

We're interested in what work is coming from your lathe! If you've recently completed a project worthy of sharing with others, see information posted at www.woodturner.org for submission details.



C. Tom Crosby

There's not a grain of sand in the hourglass turned by Tom Crosby of Canton, TX. Tom turned the maple to 3/32" and then pierced it for the glass effect. The "sand" is actually turned and textured boxwood. The top and bottom of the 7" tall hourglass are turned from walnut.

"Spiral, " *right*, is a pecan vase with a spiral insert of ebony and zebrawood. After turning and hollowing about 95 percent of the vase, Tom cut the slot and inserted two ebony segments and 10 pieces of zebrawood. The vase measures 10 1/4" x 4 1/4".

Tom is president of the East Texas Woodturner's Club in Tyler, TX, and belongs to the Dallas AAW chapter.

Wes Jones

Wes is an officer in three Atlanta-area AAW chapters, but he still finds plenty of time to turn in his studio in Lawrenceville, GA. This 16¼"-diameter camphor bowl has 120 hand-turned 5/16"-diameter beads in a ring around the rim. West strung the beads on monofilament line and glued them into a groove cut in the rim. He reported a good bit of trial and error was required to get the fit of the beads.

Craig Kassan

Craig, who lives in Franklinton, NC, titles this 6"-diameter piece "Middle Earth." It is a maple sphere on pink ivory base which penetrates the sphere. Craig built a special chuck to turn this piece. By day, Craig works full-time in a cabinet shop.

John Magnussen

John Magnussen has had a lot of fun learning how to accent small turnings with chrysocolla. John was lucky enough to find a large chrysocolla specimen near Quartzite, AZ, that was rich with this blue-green mineral. Back home in Buffalo, MN, John crushed the chrysocolla into a fine powder (no small task). The two turnings *above* show how he has filled the voids of his pieces with a thick mixture of the mineral powder and epoxy. Up to five layers of chrysocolla and epoxy were required before he was pleased with the appearance. The aromatic cedar turning, *above right*, also incorporates a southwest-style lizard on the top. John's birdhouse ornaments at *right* are approximately 2 ¼" x 4", and turned from ¼"-thick strips of satinwood and redheart.

Pens

Penturners are turning heads with new materials and inspired designs.

Angelo Iafrate, Johnston, RI. Green stabilized maple burl with Gabon ebony.

Ed Davidson, Colorado Springs, CO. Tulipwood.

Jay Pickens, Ft. Worth, TX. Blue-dyed box elder with black Corian.

Angelo Iafrate, Johnston, RI. Ivory scraps in resin with Macassar ebony.

Patricia Lawson, Laguna Beach, CA. Red, white and blue pearly acrylic.

Jay Pickens, Ft. Worth, TX. Steelwood with epoxy inlay of leaves and vine.

Wally Dickerman, Green Valley, AZ. Kingwood.

Angelo Iafrate, Johnston, RI. Violet stabilized maple and Sandra Brady's scrimshaw.

Scott Greaves, Blackfoot, ID. Steelwood with Colorwood band.

Patricia Lawson. White acrylic and malachite.

Right before our eyes, penturners have taken their work to new heights. Once considered no more than basic drilling and sanding, you'll now find collectible pens like the examples on these pages fetching prices in the $300 range. On the following pages, read what is fueling the continued interest in turning pens. On page 9, you'll also find a report on a Penturners Rendezvous at Provo plus a list of Internet sites where turners exchange information. *Continued*

Angelo Iafrate, Johnston, RI.
Blue stabilized maple and Gabon ebony.

Why pen turning?

By Scott Greaves

It wasn't until after a couple of years of turning bowls that I became interested in pens. I can't even really remember what it was that attracted me to pens. I was doing just fine with bowls, and I "just knew" that pens were a bit amateurish compared with bowls. Whatever it was, I bought a mini-lathe and started turning pens in my basement during the long, cold Idaho winter.

Now I turn pens every chance I get. I think of penturning as being quite a bit like dancing–it's something you can learn in a short time, but can take you a lifetime to master. I still turn bowls, and I enjoy them, but pens are a great way to fulfill the "need to turn."

There are new woodturners and experienced turners alike that are coming to penturning with a new appreciation and dedication. A good part of the reason is that penturning is no longer considered to be just an introduction to turning, or "Woodturning 101" as some say.

I don't believe that you have to be *just* a bowlturner, or *just* a spindle turner, or even *just* a penturner. Turning wood on a lathe gives me a satisfaction for making things by hand that I don't get anywhere else. I still enjoy the challenge of turning a thin-walled bowl, and I also enjoy producing a fine writing instrument out of beautiful wood. For me, pens are a valid branch of woodturning all their own.

A couple of things that have fueled the resurgence in penturning are the increased quality and selection of pen kits and the increased availability of equipment intended for penturning (see sidebar *below*) that allow you to make a pen that

Emory Mclaughlin, Jacksonville, FL.
Afzilia xylay fountain pen.

Today's pen market

What's hot today in the penturning arena?
Here are comments from four industry leaders

Bill Baumbeck

owner of Arizona Silhouette
arizonasilhouette.com

"In my opinion, penturning has really taken a turn on an upswing. And it's evolving.The biggest thing in my estimation is that there are more people turning pens and they want better quality kits. And they want more eye candy. With a pen, you gotta have something there to catch someone's eye—figure or color or stabilized color.

"What's popular right now is curly poplar with a color stabilization. It really highlights the chatoyance—character markings like fiddleback or curly maple. Stabilization really changes the personality of the wood. We offer it in nine different colors.

"For imports, afzilia xylay from Laos is popular; It has a crocodile pattern. Also selling well is spalted tamarind from Laos. It looks a lot like spalted hackberry. Tiger pradauk and any of the Australian woods seems to get interest."

Ed Levy

partner of Penn State Industries
pennstateind.com

"Dedicated penturners go for the more elegant styles—Monte Blanc and Parker styles are very popular. Satin-type finishes and titanium nitrate finish are growing.

"What's most attractive about pens are the beautifully burled woods—they look fantastic. Those into hunting love deer antler and buffalo horn for pens. Also selling well are pearlized plastics.

"The favorite of the high-end pen for us is the Cigar pen and pencil set that has lots of gold and black enamel. It's a 'Man's Man' pen. In fact, it doesn't even fit into some of our pen boxes. It uses a Parker style refill.

"Our most popular newer style is our Slimline Pro style. It's a wider variety of Slimline with a Parker style refill or a gel refill. The pen and pencil both have a click mechanism. "

Jim Heufinger

The Berea Hard Woods Co., Inc.
bereahardwoods.com

"The writing instrument kit market is following the general demand in today's writing instrument market. There is growing interest in better pens as well as a surprising interest in fountain pens. We're seeing a growing demand for very high end and sophisticated kits such as solid sterling silver kits, 18K Swiss rose gold plating, real platinum plating, and black titanium.

"There still seem to be turners who consider making these kits to be a non-creative, mind-numbing activity. There is, however, the potential for great creativity in making writing instruments. The design and engineering of writing instruments continues to be a significant challenge. Historically many famous designers have been involved in this field. The MOMA in New York has writing instruments in its permanent collection."

rivals the $500 designer pens.

But many ask, "Why penturning?" I could entice you with the challenge of working fine details into small turnings, or using wood that is so rare that you can't afford to turn a bowl from it.

But the real reason is that pens are fun. Most of us got into this activity because we enjoy the simple activity of turning wood on a lathe. Penturning still embodies that fun. And the results are nothing less than spectacular.

Rex Burningham
Crafts Supplies USA.
woodturnerscatalog.com
"The high-end pens are strong. Platinum series pens are popular—just like what you see in jewelry.

"Some of the lower end pen market has flattened out. I don't see as many penturners at crafts shows with a whole table of lower-end pens. But the pens for the collectors seem to be doing well. And some turners are doing more volume with corporate sales.

"What I'm seeing is more laser work and other unique and creative things. I've seen a castle pen and a nut-and-bolt pen. These aren't clunky—very creative.

"For materials, dyed box elder remains popular for us. Penturners like stabilized woods because they don't dull and fade.

"The bigger diameter pen kits are getting popular. There's a little more wood on it, which opens up more shapes for turners. Our Gentleman's Junior is a smaller roller ball fountain pen that is new and doing well. Also new is the Patriot pen with a single wood tube. It's a 9/16" diameter twist pen with metal fittings on the end and top. It shows off the wood really well."

Revisit the Slimline pen

By Scott Greaves

If you have done any penturning, then you probably already know about the venerable Slimline pen. Everyone makes a Slimline kit, which is a basic twist kit based on a popular Cross pen. Slim, light, sturdy and dependable—it's what most penturners learn first.

The problem with the Slimline kit is that after you've made a couple of dozen of them, you have pretty much run out of interesting things to do with them. You've made straight pens, and pens curved like an hourglass. At this point many penturners leave the Slimline pen behind in search of fancier pens that challenge their growing abilities. But the Slimline deserves a closer look because it's probably the most versatile of all the pen kits available to turners.

One of the first things you can do to expand the capabilities of the Slimline pen is to think beyond the confines of the centerband. The metal centerband supplied with a Slimline kit is nothing more than decoration – it has no useful purpose. If you take an assembled Slimline pen and remove the centerband, the pen will still function as before. Once you know that the centerband is optional, it opens up a whole new set of possibilities.

The loose centerband

Penturners call this design a loose centerband because it is not attached to either the upper or lower barrel of the pen. This decorative centerband rides between the two pen barrels. The only real restriction involved in the loose

Continued

centerband is the size of the hole you need to drill in it.
The Slimline is called a 7mm kit because you drill a 7mm hole to accommodate the parts of the kit. With room for glue to hold it, this hole is big enough to accommodate the brass tubes that make up the foundation of the kit. The brass tube serves to support the material—wood, plastic, or whatever that the pen is turned from. The tube also provides a stable, consistent interior diameter that you can press-fit the pen parts.

The loose centerband will not have a brass tube glued into it, so a 7mm hole is too big. The hole needs to be small enough that it will provide a snug fit over the mechanism pressed into the top of the lower barrel of the pen. A 1/4" hole seems to be about the right size for this.

You can make a loose centerband from any material that can be turned. Shown on these pages are examples of Colorwood and Corian centerbands. The body is Steelwood, a dyed and stabilized poplar, which I believe outperforms ebony for pens.

Contrasting colors and materials are ideal for these pens. For example, the cutoffs from trimming pen blanks to length are great for this purpose, as are odd bits of plastic, antler, and Corian scraps you may have lying about.

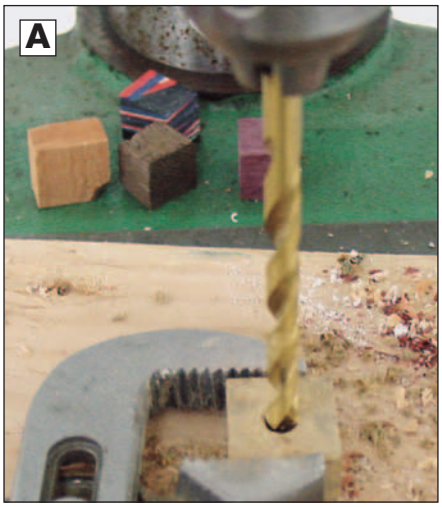
I recommend you stick with pieces that are between 1/8" and 3/4" thick. If the centerband is more than 3/4", the top barrel of the pen doesn't attach securely because it slides over the pen mechanism.

Preparation

To prepare the loose centerband, flatten and square the two faces. Since I usually use scrap pieces I trim from pen blanks, I do this by first making a cut with the saw to remove just the very end of the blank. This leaves me a clean flat surface for the centerband. Then when I cut the blank to length for the pen, the leftover piece should be pretty close to flat and square on both faces. If there is any doubt, use a pen mill (available from most pen suppliers) to flatten the faces after drilling the hole.

Then using a waste board, drill the 1/4" hole through the piece as shown *below* in Photo A. Using the waste block on the back should eliminate any blowout as the drill bit exits; make sure that the waste board hasn't been drilled into at that spot.

I will often cut and drill a number of pieces for loose centerbands, then rough them out at the same time as shown in Photo B. This way I have eliminated a couple of steps, and can quickly select one I like and put it on the lathe with the pen blanks. You can put the centerband piece on the mandrel without roughing first, but I find that roughing a bunch of them at once provides me a truer picture of size and appearance when I make my final selection.



Clamp the centerband material, then drill a 1/4" hole into a waste board.

Turning the loose centerband

I prefer to turn the loose centerband on the mandrel at the same time I turn the pen barrels as shown in Photo C. I simply replace the center bushing with the piece for the loose centerband. (The center bushing helps you turn the blanks down to the proper diameter for the metal centerband.) Since you won't use the supplied centerband, you don't need that bushing. At this point, you should realize you can make the center section of your pen any size you want. I have seen pens as much as 1" across at the center!

I begin turning the pen by roughing the blanks down to about 5/8" round and getting them close to the diameter of the loose centerband. This allows me to see how the colors and textures of the pen and centerband are going to go together. I prefer to turn a centerband that contrasts with the rest of the pen. You may want to set apart the centerband with decoration such as beads or coves. Whatever you want to do with your centerband, you need to decide the general shape of

your pen and what role the centerband will play in the shape of the pen.

I like fluid lines without much ornamentation, but I'm willing to be adventuresome if it suits my purpose. I like the look of the dark burl pen covered with beads, with a light colored centerband consisting of a graceful cove.

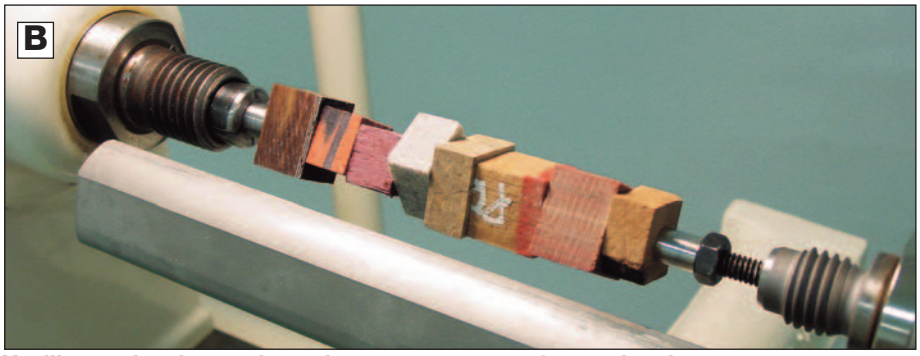
I also like the graceful lines of a contoured pen set off by a couple of beads done in a complimentary color of Corian. Whatever the choice, I turn the whole pen together on the mandrel so I can see how the shape is evolving.

If you want to have some fun with loose centerbands, choose a couple of different options, and turn them to fit your pen. This way you or the person who buys your pen can change its personality to fit his or her whim.

I usually finish the pen by sanding through the grits to 600, and then I switch to Micro Mesh and continue through to 12000. I friction-polish with HUT Crystal Coat or Shellawax, unless the material is a plastic. For plastics, I polish the pen with a polishing compound such as Hut Ultra Polish or Novus.

The challenge

Explore the possibilities of the humble Slimline pen. It can be the basis of any number of advanced pen designs. There are only a few constants required in this kit, such as the diameter of the brass tube and the length from the end of the mechanism to the tip of the pen. Beyond that, your imagination is the limitation of this kit.



You'll save time by rough-turning an assortment of centerbands at once.

To assure pleasing proportions, turn the centerband at the same time as the barrels.

Steelwood body with Corian and Colorwood centerbands.

Scott Greaves (swedg1@cableone.net) lives in Blackfoot, ID. He is active in several Internet pen groups and demonstrated penturning at the 2003 Utah Symposium.

Guy Marsden

Woolwich, Maine
guy@arttec.net

ONE

TWO

Although Guy Marsden has worked in wood most of his adult life, a visit to the Wood Turning Center in Philadelphia two years ago jump-started his interest in turned objects.

With encouragement from Albert LeCoff of the Wood Turning Center and Jacques Vesery (who lives nearby), Guy bought a lathe and fine-tuned his turning skills.

"My designs all make use of the same construction technique--that of cutting slots into turned forms, then inserting carved legs that complete the form," Guy explains. "I find the sense of levitation that the legs imbue to the form to be compelling, and I am constantly seeking new ways to express ideas with this theme."

In previous careers, Guy has worked on motion picture special effects (including "Star Trek, the Motion Picture," "Ghostbusters," and others), created complex blown glass kinetic neon artworks, and engineered electronic controls for artists.

ONE: "Beech Craft," red beech and ebony, 8¼" x 5" (two views). "This is a word play on my wooden spaceship."

TWO: "Chalice," lacewood and walnut, 12" x 14½". "The challenge was cutting the dadoes inside the ring. I had to pre-cut dadoes in each segment of the ring before gluing."

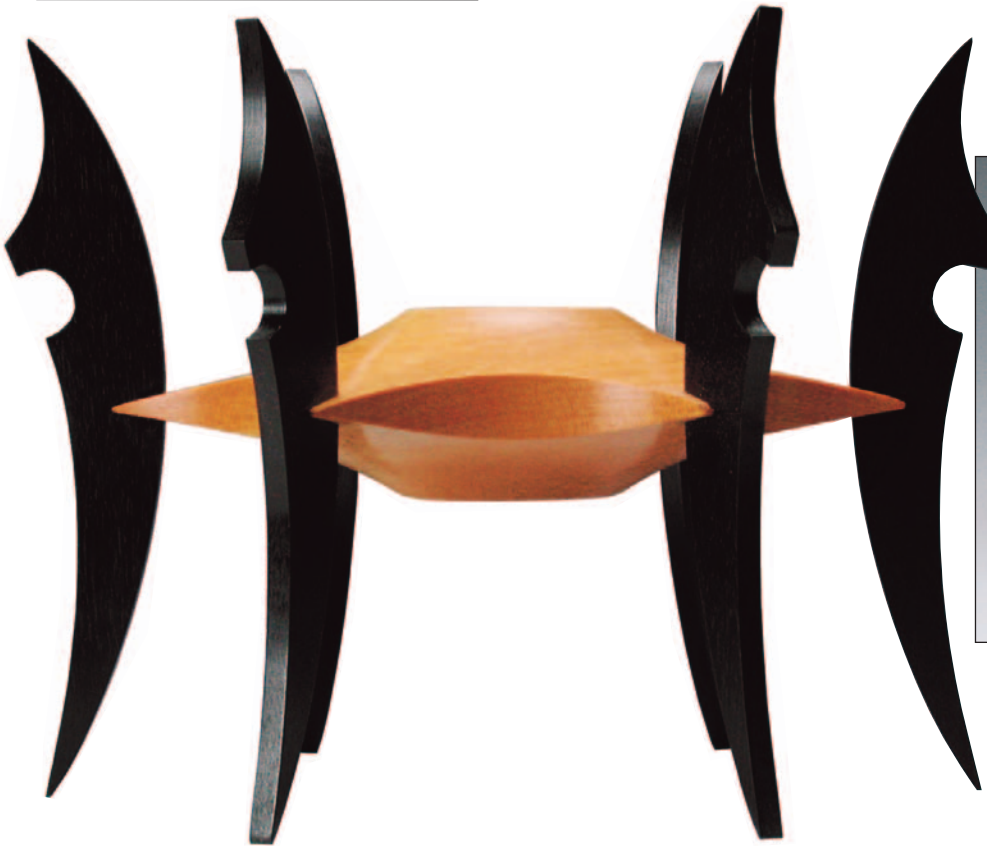
THREE: "Ground Effect," bird's eye maple and ebony, 10½" x 8". "I wanted to capture the force of a spaceship flying low to the ground."

FOUR: "Haycorn," catalpa and wenge, 9¼" x 4¼". "The vessel form refers to the pronunciation of 'acorn' from *Winnie-the-Pooh."*

FIVE: "Three Point Turn," maple and wenge, 8" x 6". "I really enjoy word plays when titling my work.This is a perfect example."

SIX: "Double Cheese," yellowheart and ebony 8" x 7¼". "Double cheese–with no buns or burger."

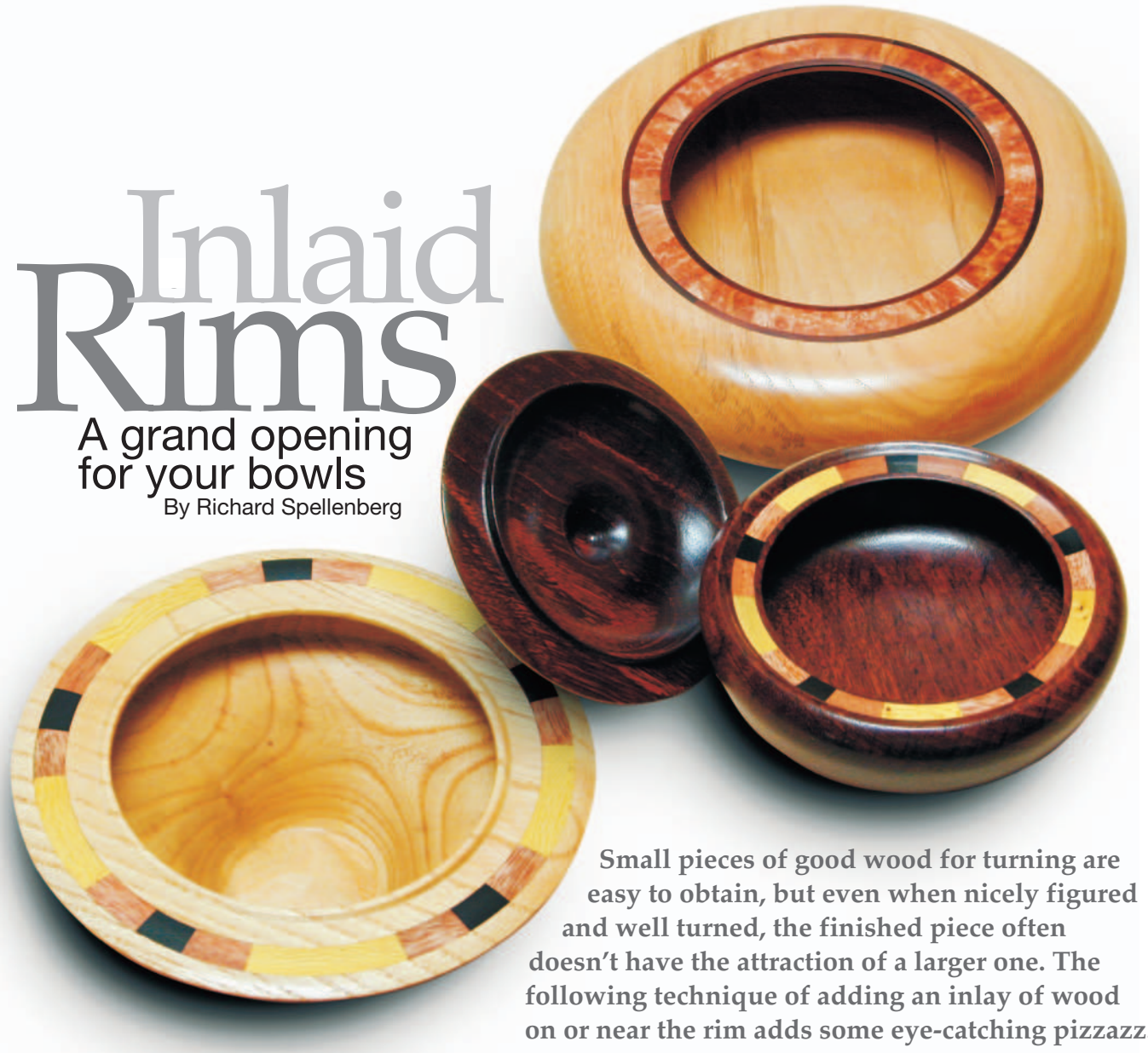
SEVEN: "Seventh Samurai," yellowheart and ebony, 9¾" x 7½" (two views). "The kicker here is six legs–count them–but the title makes people think."



Inlaid Rims

A grand opening for your bowls

By Richard Spellenberg



Small pieces of good wood for turning are easy to obtain, but even when nicely figured and well turned, the finished piece often doesn't have the attraction of a larger one. The following technique of adding an inlay of wood on or near the rim adds some eye-catching pizzazz.

About 15 years ago, I turned a small ebony bowl for my wife-to-be and adorned the rim with big leaf maple and ebony inlaid between two thin lines of big manzanita. Now that I've made several other bowls with the same technique, I would like to share this inlay method.

This inlay adornment is not difficult, and produces striking results. Furthermore, it incorporates all those precious little scraps that we all hesitate to discard. For instance, the photo *above* shows inlays comprised of wood found in roadside or rangeland clearing activities or are pieces from other projects. A red gum burl—about the size of a large walnut and fully included in a chunk of limb found in a scrap pile—was a perfect inlay candidate. On some of the bowls, I like to turn a lid for the bowl that hides the inlaid rim, making this a true "surprise" bowl when opened.

Getting started

This article primarily illustrates a one-step inlay, but also describes and illustrates the critical

differences in a two-step inlay.

To begin, turn a bowl with a rim that is oriented approximately perpendicular to the axis of the bowl. Press the inlay into a shallow rabbet on the rim. I use a narrow ($3/32$") parting tool for cutting the rabbet. I leave the bowl in my 4-jaw adjustable chuck so that centering the bowl later does not become a problem. This requires two chucks, one for the bowl, and one for the inlay.

Lay out and glue inlay pieces to a waste wood disk (Photo A). I first bandsaw a disk from $3/8$" to $1/2$" plywood and glue a bandsawed spigot on the back. I screw the disk on a faceplate, shape and true the spigot and the disk, then reverse the disk. Hold it by the spigot to mark the center.

If I plan to clamp small pieces of inlay (10 amp battery clips work well), I also relieve the back of the disk to accommodate the small clamps. To do this, work from the edge of the disk to about the position of the inner edge of the planned inlay. To reduce flexing and vibration, remove only as much wood as is needed for the small clamps to close properly. I also mark the position of the disk in the chuck so that I can remove it, make the inlay pattern, and return the disk to my chuck in the same position.

On paper, I lay out concentric circles slightly larger and smaller in diameter than the outer and inner edges of the planned inlay (Photo A), the size determined by the rabbet cut in the bowl. I then divide the circles into a number of segments that will mark the joint positions of the inlaid pieces and draw radial lines from the segments to the center. I transfer this pattern to the plywood disk.

Next, drill some $1/2$" view holes that will be used later to help fit the inner edge of the inlay. These holes are in the center of the inner arc of a few of the largest inlaid pieces so that plenty of gluing surface remains. I also drill a small hole in the center of the disk so that it can be screwed to my work stand where I can easily turn it. The clamps must clear the work surface.

For the inlay wedges, I create cardboard templates to draw outlines on selected $1/8$"-thick flitches. Precision is not necessary; your wedges should be slightly larger along the circumference than the final segment. The wedges should be even larger along the radius, which allows plenty of length to slide the wedge into a tight fit and still completely cover the proposed area of the inlaid piece. I cut a few extra blanks for good measure. The wedges only need to be of approximately equal thickness because you will true them on the lathe to equal thickness.

Align the inlay wedges with the lines of the pre-drawn pattern (Photo A). The small pieces are fitted by eye, being sure that abutting joints in each wedge are as tight as can be. The inner and outer edges of the wedge should fully cover the intended inlay area marked in concentric circles on the disk. Place the most attractive side of the wedge face down, because the face glued to the disk will be exposed on the bowl.

I first place the wedge on my paper pattern. With a straight

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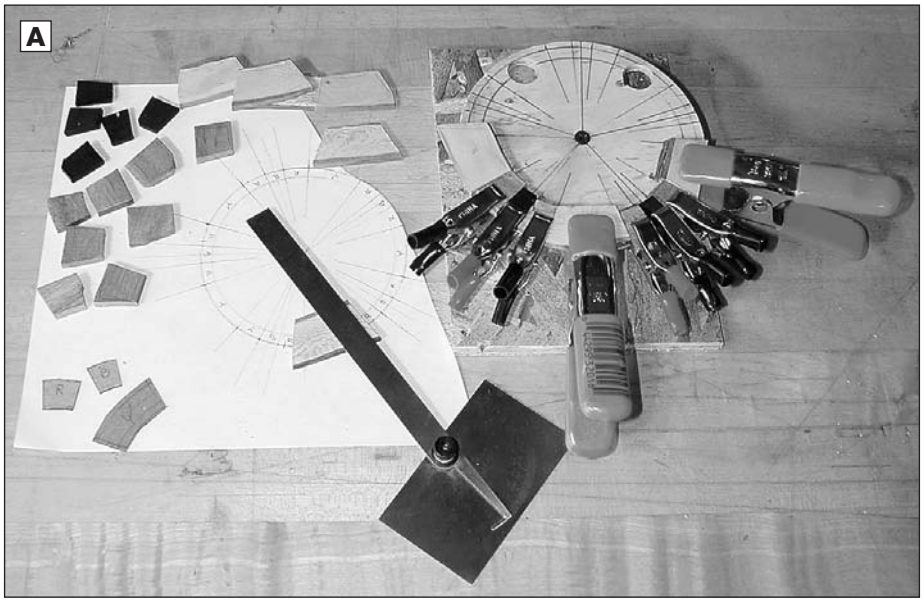


edge aligned with one of the radial lines, I mark the edge of the wedge, being sure the wedge covers the planned inlay area. I use a disk sander with an adjustable table and a fine-grit disk to sand up to the line, being careful not to twist the wedge from side to side (Photo B).

Once the edge is sanded, align the sanded edge on a radial line of the plywood disk (if this is the first wedge on the disk) or the edge of a previously finished and positioned wedge. Then mark the opposite edge on the wedge by aligning the straight edge with the next radial line. Before I glue a completed wedge, I sand and fit the next wedge (Photo A).

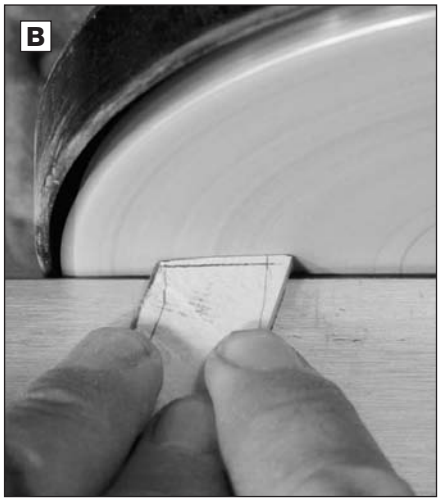
Fine-tune the fit

Occasionally I will have to go back and adjust the edge of the preceding wedge to make a good fit with the newly placed wedge. Because there is plenty of extra wood in the radial direction, you can repeatedly sand the wedge and slip it toward the center for a good fit. Once the fit is good between the two wedges, glue down the earlier-prepared one and move on to the next wedge.

In completing the circle, I don't glue down the last three wedges until each fits its mate well. The inlay circles illustrated here each took 60 to 90 minutes to assemble after the pieces were cut from the flitches. I use Titebond®II glue for this assembly.

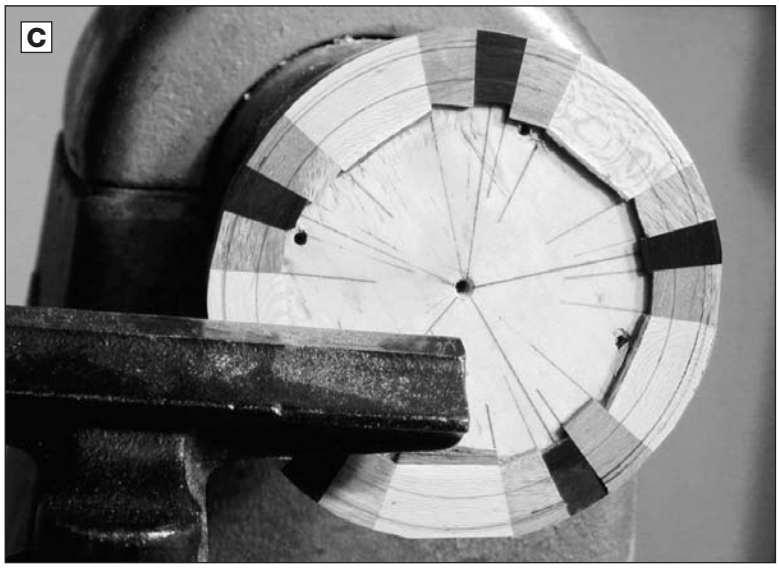
In fitting the disks, the most common problem is not getting closed joints. The table on my disk sander has leverage on its attachment point, and pressure on the table can cause it to tilt slightly toward or away from the disk. I use light pressure, and apply slight downward pressure with my thumbs on the back edge of the wedge as I hold it against the sanding disk. As long as there is extra wood in the radial direction, you may repeatedly return the wedge to the sander to true the joint.

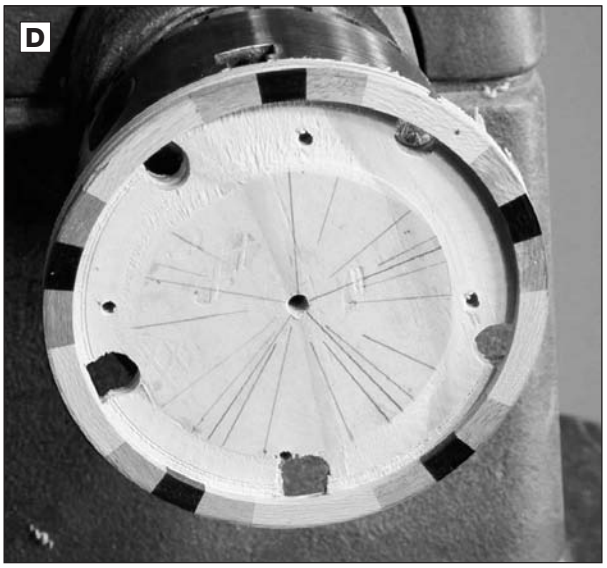
After the glue has cured, trim wedges that overhang the edge of the disk with a bandsaw, then chuck the disk. I level the face of the inlay with a bowl gouge, and then mark two circles that equal the inside and outside edges of the rabbet in the bowl (Photo C). I use vernier calipers to transfer



Tips to ensure inlay success

- Lay out an odd number of segments in the circle of inlay so one cannot look across the bowl to see if opposite joints are perfectly aligned.
- Wedges that have ample wood on the radius allow repeated sanding to make a good fit. As long as the planned inlay area on the plywood disk stays covered, you can slip the wedge toward the center for a tight fit.
- Apply a line to the wedge to help keep the proper orientation as you sand the edge.
- If the wedges come from rough-sawn wood, forming the joints is easier if you first flatten the back of the flitch on a belt sander.
- Separating light pieces of wood in the inlay with dark pieces of wood reduces the conspicuousness of the joint. Try a small pale strip about 3/32" thick oriented on the radius (across the inlay) to separate wedges of darker wood or vice versa.
- The sides of the strip need not be perfectly aligned along the radii because the strip is short and narrow. Lack of alignment will not be detected. Also, you can adjust the angle of the sanded larger wedges.
- The fitting process is self-correcting as you form the inlay wedges around the bowl.
- Taper the rabbet edges slightly and make a mirror-image taper on the rims of the inlay to produce a snug fit and nearly invisible joint in a single inlay.
- It is much easier to place the inlay in a rabbet on the edge of the rim, rather than to place it in a rabbet back from the edge. Fitting the inner edge is more difficult.





the measurements. I am as precise as can be, but I err on the thick side, for it is easier to cut away a bit more on the circle of wedges than it is to start again if too much is removed.

With a narrow parting tool, cut shallow grooves on the outside of the pencil line of the outer circle and the inside of the inner circle. I then check the respective diameters with the calipers.

When the match is close, press the parting tool through the wedges and into the plywood, angling the cuts slightly so the inlay is slightly wider on the plywood side. I remove the remainder of the waste to the inside and outside of the inlay circle (Photo D).

Taper the plywood at the edge of the disk away from the edge of the inlay so that you have a good view of how the fit is going as you check the inlay against the rabbet in the bowl. On the inside, I check through the view holes. On the edges of the inlay, I use a sharp skew as a scraper to gradually cut toward proper fit. Once you are ready to insert the inlay into the rabbet, shave off the corner of the inlay slightly and attempt a press fit. This process of fine adjusting continues until the fit is snug.

If I have trimmed too much from the inlay and the joint with the bowl is distracting, I start another glue-up and save the inlay circle for another bowl. Once the inlay is the right size, I apply glue to the inlay and press it into the bowl (Photo E). As a precaution, place a paper towel inside the bowl to catch any glue drips. Do not clamp too tightly for sometimes it is easy to break the rim of the bowl.

Back to the lathe

After the glue has cured, return the bowl—still in its chuck—to the lathe and turn off the plywood with a bowl gouge. I recommend a light touch. Avoid a catch, which can destroy an inlay on a thin rim. Stand to the side of the plane of rotation and protect yourself because plywood chunks may fly.

I remove the center of the disk with a very soft entry, and then remove the part remaining glued to the inlay. This reduces the mass of the parted plywood and reduces the plywood's tendency to zing off the lathe.

Continue turning until the inlay is flush with the surface of the bowl. From this point, finishing proceeds as usual. If I add a lid, I hide the inlay with its rim.

The process is not time-consuming. From start to finish,

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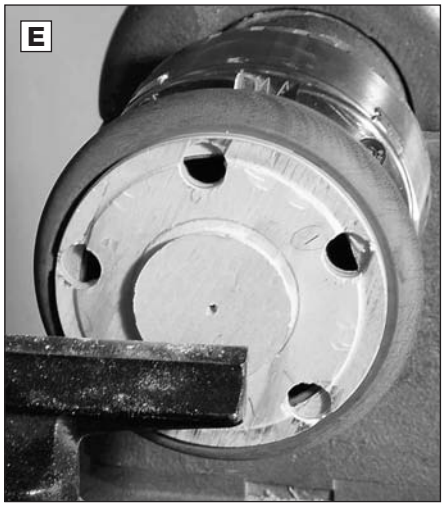


the lidded jarrah bowl (page 44) required about 10 hours; the bowls without lids 6 to 8 hours.

Two inlays double the fun

My first bowl had a double inlay. For the double inlay, follow the process for a single inlay except cut a rabbet in the first inlay (Photo F) before placing it in the bowl. Then press the second inlay into the first (Photo G).

After the glue cures, one of the two plywood disks is turned off, and the final finishing and fitting of the combined inlays to the rabbet in the bowl is as in the single inlay process. I recommend that the sides of the second inlay and its receiving rabbet be at 90 degrees. If they are tapered, carefully plan which disk to remove first so that you don't end up with a gap between the interior and exterior inlays in the finished bowl.

I do not attempt to align joints of the interior and exterior inlays, but alternate them so that small differences in position are not readily evident. Place registration marks on the periphery of the plywood disks to assist in positioning the inlays one within the other (Photo G).

Scientific names of the woods pictured or mentioned in this article

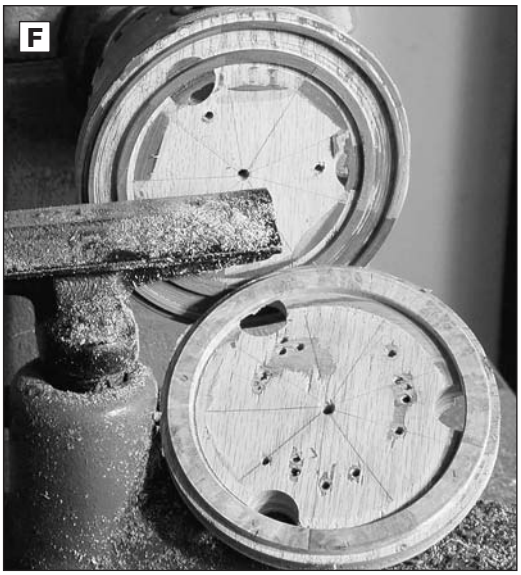
- **Arizona cypress** (*Cupressus arizonica*)
- **Big leaf maple** (*Acer macrophyllum*)
- **Big manzanita** (*Arctostaphylos manzanita*)
- **Ebony** (*Diosporos ebenum*)
- **Jarrah** (*Eucalyptus marginata*)
- **Oregon ash** (*Fraxinus latifolia*)
- **Red barberry** (*Berberis haematocarpa*)
- **Red gum** (*Eucalyptus camaldulensis*)

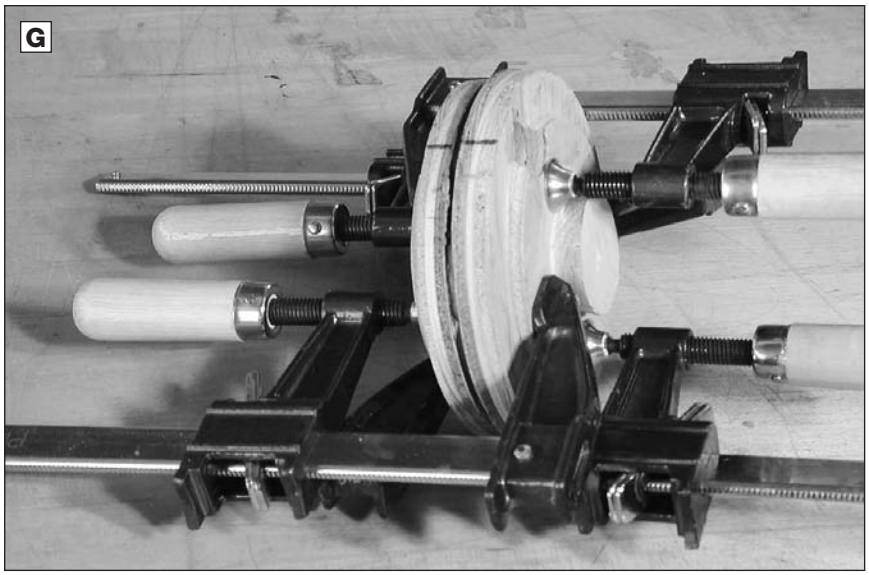
Final thoughts

I encourage you to try other patterns and colors. Because pieces are individually fitted, you aren't restricted to radial lines. Or use conspicuous grain to produce a zigzag pattern by alternating the orientation of adjacent pieces.

Several people have asked how the inlays hold up over the years because of wood movement with humidity changes. The first bowl I made in 1985 is very much intact; the arid Southwest helps stability. A second bowl, which I sent to family in northwestern California, shows no change after two cycles of wet winters and dry summers. The pieces of inlay are small and well glued and the bowls are small and thoroughly finished. I would imagine that they maintain their integrity as well as built-up segmented bowls. Anyway, so far, no problems.

Richard Spellenberg (spelly@zianet.com), a retired botany professor and woodturner hobbyist, is a member of The Borderline Turners of El Paso, TX and Las Cruces, NM.





Ring in the Holiday Season with a Teacher's Bell

By Bob Rosand

I'm convinced that I could make a very good living turning nothing but Christmas tree ornaments. That is if I could *stand* making nothing but Christmas tree ornaments year-round.

Christmas ornaments are relatively easy to make and profitable. But you do have to keep coming up with variations each year in order to keep your customers happy. This point hit home one year when some loyal customers returned to my booth at a local crafts show and asked what I had that was new. When I was unable to show them "this year's new improved model," they went away disappointed—and I left the show with less money in my pocket.

This bell ornament is partially the result of being married to a teacher and partly attributed to an ornament that turner Fritz Spokas brought to a Mid Penn Turners Christmas party a few years ago.

Turning the bell

This teacher's bell is relatively easy to turn and requires no special tools except perhaps a set of spigot jaws to help you grip the turning stock.

The finished dimensions of the bell are about 1 7/8" wide at the base and 1 1/2" long. The narrow diameter is about 1" and the decorative ring around the narrow diameter is about 1 1/8" above the base.

To turn this bell, you will need bell stock about 2" square by about 3" or 4" long. You can turn the bell

Continued

stock from oak, maple, cherry, walnut, or whatever you happen to have on hand. For the handle, I like to use scraps of leftover ebony about 3" long and 5/8" square.

For tools, you will need a roughing gouge, spindle gouge, small skew, 1/2" round- nosed scraper, and a parting tool.

I begin this project by placing the bell stock in my chuck and turning it to a cylinder. If you don't have a chuck with spigot jaws, no problem. All you need is a faceplate with a waste block (preferably oak or another hardwood) attached to it.

You will then need to turn a tenon on the turning stock and glue that into a hole that you have turned on the waste block. The trumpet portion of the bell is shaped using a roughing gouge (a 1/2" roughing gouge works great) and spindle gouge. I position the long point of a skew down to define the decorative ring and finish shaping it with a small spindle gouge (Photo A). Leave enough material at the top of the bell to allow you to hollow it without getting a lot of chatter.

To hollow the trumpet portion, use a spindle gouge to remove some of the interior (Photo B) followed by a 3/8" drill bit to determine how deep you should hollow (Photo C). Then use the 1/2" round-nosed scraper to finish the interior of the bell (Photo D). Then, sand the bell inside and out. Refine the top of the bell with a spindle gouge (Photo E). After sanding the bell portion, part it from the lathe.

Rough-shape the bell and refine the decorative ring around the bell.

Begin hollowing the bell with the spindle gouge.

With a 3/8" drill bit, drill the final depth of the bell.

Use a round-nosed scraper to remove the rest of the material from the interior.

Refine the top of the bell before parting it from the lathe.

To attach the handle to the teacher's bell, you will need to drill a 1/8" hole in the top of the bell. The easiest way to do this is to reverse the bell, friction-fit it into a waste block, and drill the 1/8" hole (Photo F). This will ensure a perfectly centered handle.

The handle

Mount the handle stock in your chuck. Use a roughing gouge to turn the stock to a cylinder. With either a parting tool or a small skew laid flat, turn a tenon to fit the 1/8" hole in the top of the bell. Check the fit of the handle tenon with the bell (Photo G).

Then drill a 1/16" or smaller hole in that tenon. (Later you'll mount the bell clapper wire to that hole.) Turn the handle using the roughing gouge and spindle gouge (Photo H). Part the handle from the lathe and glue to the bell with either five-minute epoxy or cyanoacrylate (CA) glue. The finished length of the handle is about 1 3/4" long by about 1/2" in diameter.

Drill a 1/8" hole for the bell handle to accept the handle.

The clapper

When I first started making these bells, I didn't bother to make a clapper. The bells still sold well, but I felt as though I was cheating. Now, all the bells I turn have clappers, and they are really easy to make.

I use 2" pieces of 1/8" or smaller dowel and glue a small turned "ball" on the end to act as the clapper. After cutting the clapper to length, I drill a 1/16" hole in the other end and glue a short piece of copper wire stripped from an old electrical cord. I "age" the clapper with a bronze paint and patina, then glue the clapper into the bell. The wire allows the clapper to move a bit.

Although they don't ring, the bells now appear more realistic.

Bob Rosand (rrosand@ptdprolog.net) is a turner and demonstrator who lives in Bloomsburg, PA. He is finishing his second term on the AAW board.

After rough-turning the handle, check the fit of the handle tenon into the bell.

Refine the shape of the ebony handle with a spindle or roughing gouge.

With five-minute epoxy or cyanoacrylate (CA) glue, glue the handle into the bell.

Building & Growing an AAW chapter

Four years ago, Carolina Mountain Woodturners (CMW) began with eight people in a garage. In four short years, we've been successful in growing a healthy, vibrant chapter of more than 325 members from North Carolina, South Carolina, Tennessee, Georgia, and five other states.

From the start, we had a vision of how to build an active and involved chapter. Perhaps your chapter can implement some of the tactics that helped us grow.

Have a vision

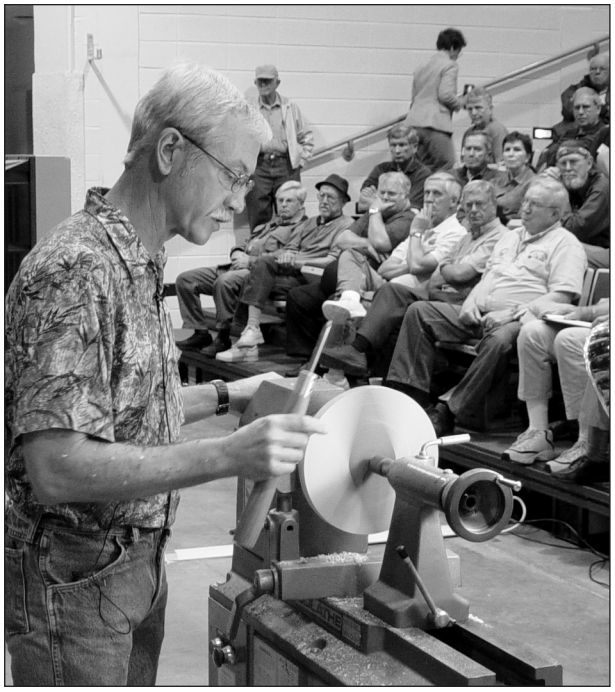
Dale Carnegie said, "If you act enthusiastic, you will be enthusiastic." But if you think of your chapter as eight people in a garage, you will be eight people in a garage. If, on the other hand, you have a vision of your chapter becoming the best chapter and biggest in the country, you have a much better chance of that becoming a reality. All that you need to do is think and lead. If your ideas are sound, others will follow.

The importance of becoming non-profit

The key to growth is being first-class in all that you do. That requires money—and tax-deductible donations are a key source. I believe that it is important to become incorporated in your state as soon as possible, and then recognized by the federal government as an educational non-profit 501(c)3 corporation. Until you get your 501(c)3 status, your chapter can affiliate within existing non-profit (a college or vocational school or an art council) that has similar goals in its mission statement.

While waiting for your 501(c)3 status, your AAW chapter can solicit donations with checks made out to the affiliate and held in a special account. The affiliate organization can legitimately spend this money to provide the necessary educational experience (paying demonstrators, purchasing equipment). As soon as your chapter receives its 501(c)3 status, the affiliate organization can transfer the money remaining in the special account to your chapter, and you are in business.

The 501(c)3 process was a $1,100 investment for our club, which included attorney, accountant, and state fees along with the $500 Internal Revenue Service filing fee. Please contact me if you'd like to use our incorporation by-laws.



Gary Sanders demonstrates at a monthly meeting of the Carolina Mountain Woodturners (CMW) in Asheville, NC. All the CMW meetings are free.

Dues structure

Carolina Mountain Woodturners has $25 general membership annual dues and $35 family membership. We believe it's important to provide an opportunity for members with discretionary income to contribute at higher levels than the general membership. We created three higher levels: Supporter at $100, Sponsor at $500 and Patron at $1,000. This year, CMW has 25 members at $100, five at $500, and two at $1,000. We believe the annual tax-deductible contributions strengthen the chapter more than a one-time Life Membership.

Meeting place

If you have a vision of 150 to 200 people at each meeting, you need a facility that fits them comfortably. Carolina Mountain Woodturners meets in the 270-seat auditorium of the Folk Art

CMW members Joe Ruminski, foreground, Warren Carpenter, left, and Jim McPhail demonstrate at a Grovewood Art Gallery crafts fair in Asheville, NC.

Center operated by the Southern Highland Craft Guild in Asheville, NC. Public auditoriums, churches, colleges, and vocational and high schools are examples of meeting places. If the host organization has the education of arts and crafts as its mission, it will welcome your chapter to utilize the facility.

Ways to attract new members

We believe that chapters should demonstrate regularly in malls, at craft fairs, festivals, tool shows—anywhere you're welcome. Always have plenty of current chapter brochures available to hand out to the interested public.

Two weeks before our next event, CMW faxes a public service announcement to 28 newspapers within a two-hour drive of Asheville. Some are big papers and some are small weekly papers.

We promote and constantly update our web site, which helps sell potential members on our organization. Paul Vonk and Bill Davin, two CMW members, do a great job in keeping our site fresh.

Equipment

Get the best equipment so that you can attract the best demonstrators. Have special fund-raisers, ask for grants, ask suppliers to help by selling a piece of equipment or tools to your chapter at its cost (they will be getting tremendous advertising exposure), ask members for donations to purchase good equipment.

Storage of equipment can be a problem. CMW purchased a 16' enclosed utility trailer for storage and transportation of its smaller equipment and tools. We store our lathe and two monitors at the Folk Art Center.

Meetings

We found we raised more money through dues and donations if we made every meeting free. All-day Saturday meetings allow more people to come longer distances than night meetings. Have drinks and light refreshments available with a "Donation Bowl." Ask members and attendees to bring a sack lunch, which reduces your loss exposure for provided meals.

CMW contracts out at least one year in advance for our demonstrators. The first months of 2004 include Mark Sfirri, J. Paul Fennell, Lyle Jamieson, Jacques Vesery, and Chris Stott. It's been our experience that donations will pay the expenses of top-notch demonstrators.

Why bigger?

In any organization, about 10 percent of the people do all of the work and the other 90 percent think that things are just great. If you only have 20 members, there are only two of you pulling the load. If you have 200 members, that is 20 people getting the job done. Out of that pool of 200, there is a huge amount of talent for your volunteer tasks.

John Hill (Johnrhill@charter.net) is a founding member and president of the Carolina Mountain Woodturners. John first became interested in woodturning by watching a demonstrator at a crafts fair. For more about the Carolina Mountain Woodturners, see www.carolinamountainwoodturners.org.

Cut Bowl Bottoms with Confidence

By Bill Small

With These Three Easy-to-Make Depth Gauges

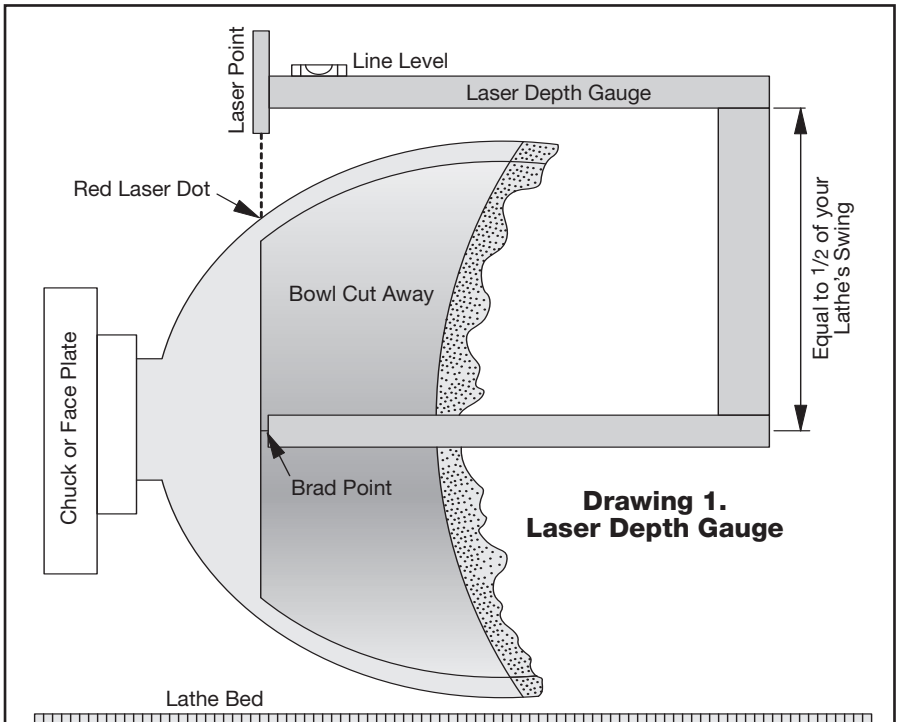
All of us have blown through the bottom of a bowl or left a chunky bottom for fear of cutting any deeper. Determining the exact thickness of a bowl bottom is particularly difficult with a natural edge bowl or one with a foot that has a recess cut into its underside. The three depth gauges described here take the guesswork out of these challenges. And the bonus: Each is easy and inexpensive to make.

Ruler Depth Gauge

If your bowl has a foot with a recess, you need another way to determine the depth of the recess (on or off the lathe). Drawing 2 shows a simple gauge made using a 6" steel ruler, two wood strips, a 10-24 x ½" thumbscrew and matching machine nut. Cut a channel in one wood strip to hold the ruler. In the other strip, drill a hole and epoxy the nut in place. Then glue together the two wood strips. Make wooden cross members of varying lengths to accommodate bowl feet of varying diameters.

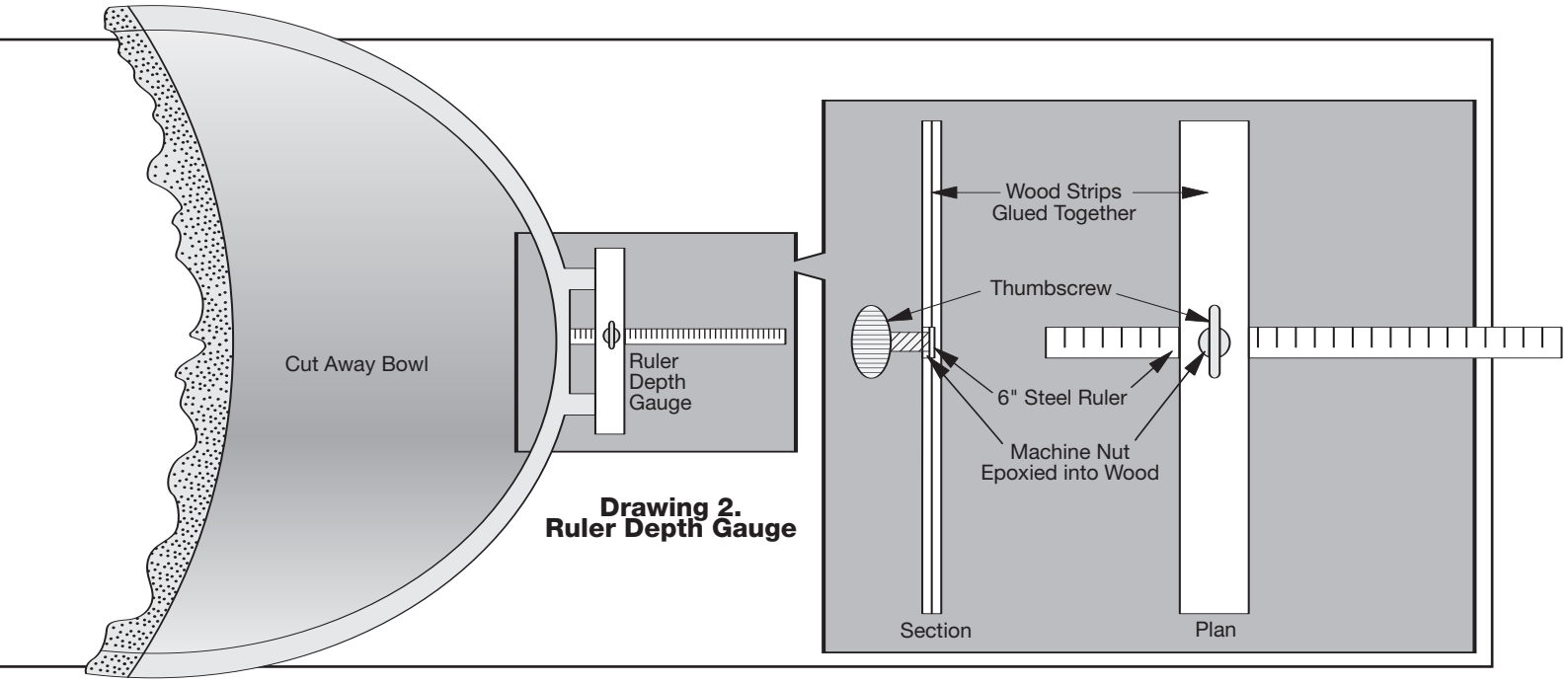
Laser Depth Gauge

Grab this C-shaped gauge to locate the inside bottom while the bowl is mounted on the lathe. You can use it when initially cutting a green wood bowl blank or when re-turning a dry blank into final form. A laser pointer (see author's note at *right*) is mounted on the frame so that the laser dot hits the outside of the bowl at the same depth as the inside cut. The key is to have the laser beam perpendicular to the lathe bed to get an accurate reading. You can achieve this alignment with a plastic line level glued to the top of the frame. A brad point helps keep the frame aligned to the bowl bottom while in use. As long as the frame is lightweight and resilient, you can build it from wood, metal, or plastic.



Drawing 1. Laser Depth Gauge

Author's note: Laser pointers vary dramatically in price. Check prices at your local office-supply store or on the Internet.

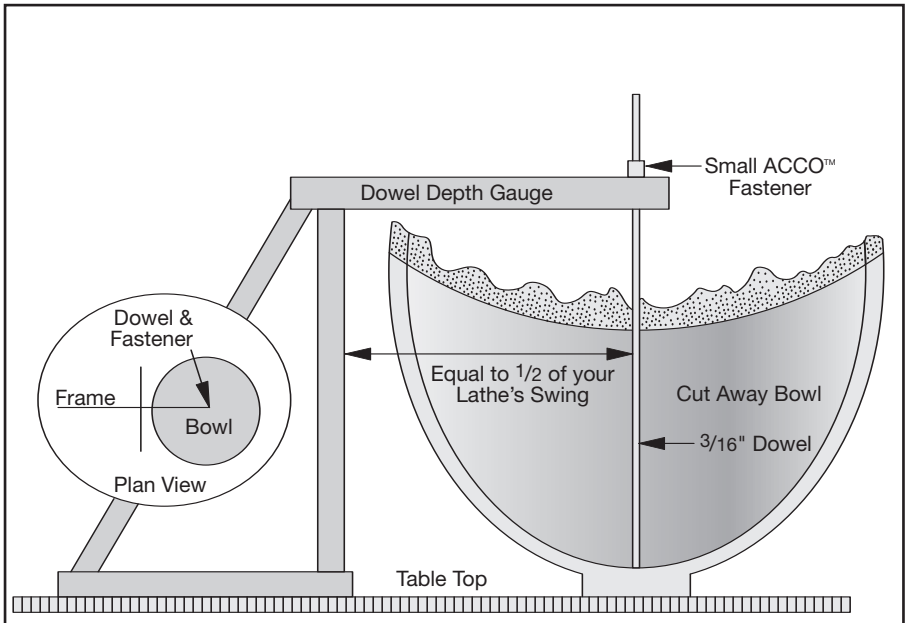


Drawing 2.
Ruler Depth Gauge

Dowel Depth Gauge

Use this gauge to locate the inside bottom when the bowl is off the lathe. Set the bowl on a tabletop with the gauge's frame extending over the bowl as shown *at right* in Drawing 3. Note that you'll need to construct the frame (made from wood, metal, or plastic) with at least three feet on the tabletop for stability.

Pass a 3⁄16" dowel through a hole in the frame and lower it until it hits the bowl bottom. Slip a small ACCO ™ fastener (available at office supply stores) over the dowel and resting on the frame. Lift up the dowel and remove the bowl. Lower the dowel until the fastener again rests on the frame. The distance between the end of the dowel and the tabletop indicates the thickness of the bowl bottom.



Drawing 3. Dowel Depth Gauge

Bill Small (williamsmall@comcast.net) lives in Danville, CA and is president-elect of the Bay Area Woodturners Association.

Learn to Sharpen Progressively

By Alan Lacer

Part 2

This is the second of a two-part article on grinding. The first part—sharpening scrapers—appeared in the Fall 2003 issue.

Sharpening the spindle roughing gouge

The spindle roughing gouge is perhaps the friendliest gouge to use and one of the easiest to sharpen. It differs from all the previous tools (Fall 2003 issue) as we are now into curved edges. Traditionally, the tool is a deep U-shape with a straight across cutting edge.

Profiling is fairly straight forward. Make sure the tool is straight across when viewed from the top and viewed from the side. You can have the top corners canted back a few degrees, but not canted forward (a forward cant will make a more aggressive tool). The bevel angle should be approximately 45 degrees.

Sharpening begins at one corner, with the heel of the bevel touching the wheel and the cutting edge parallel to the face of the wheel. Rotate the tool in the same curved plane until you reach the other corner, then return to the point where you began by rotating backwards (but still grinding) to your original motion. I tend to repeat these motions until I have lapped all the way to the cutting edge. Stop when the sparks just trail over the top of the edge.

On the larger roughing gouges, some turners like to work about one third of the edge at a time until that section is fully sharpened. They make one final pass along the entire length of the bevel to blend it all together. The biggest problem turners seem to

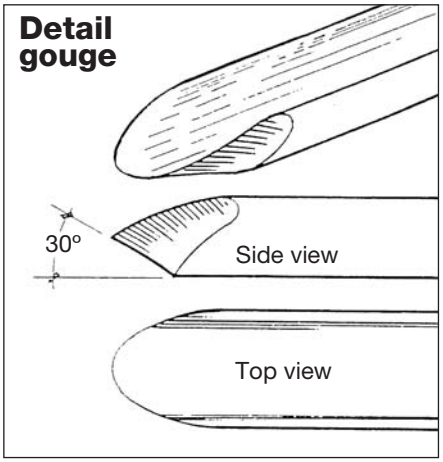
have is moving the tool edge in and out when trying to rotate the tool through that large curved plane. Use your fingers to create an artificial plane to lock the tool in. If you have trouble staying in that 45 degree bevel zone, set the angle of the tool rest and maintain downward pressure to keep the tool flat and thereby in the correct orientation.

If by chance you have a large shallow gouge (¾" or larger) that was packaged in your tool set as a roughing gouge, here are my suggestions. Odds are pretty good it has a domed edge (maybe almost looks like your thumbnail). You might consider simply grinding it straight across and sharpening as suggested for the deep-fluted roughing gouge.

If you decide to leave it with that "fingernail" look—in order to do some detailing work such as large coves or beads— then approach it the way you would the detail gouge.

The detail gouge

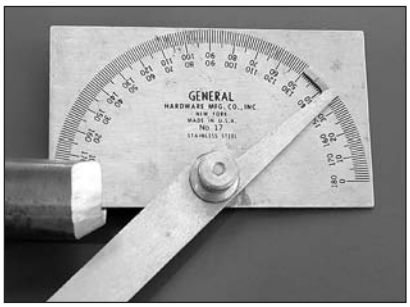
What's in a name? A shallow fluted gouge with a fingernail shape--primarily designed for spindle work and used for detailing work--will be the same



tool no matter what we call it. I wish we could some day standardize a few names for turning tools, but that's a lot to ask for. This tool goes by at least four names: detail gouge, spindle gouge, shallow gouge, and fingernail gouge. All of these names point to some truth about it, but still leads to much confusion. For this article, it's a detail gouge.

This detail gouge is probably the first tool to get your goat. (It was the first tool I'm aware of that a grinding jig was developed to do the sharpening.) No tricks of setting the tool rest at the right angle will help, nor will simply rotating the tool back and forth. Nope, we now have a tool that is

A sharp tool at the right cutting angle is virtually effortless.

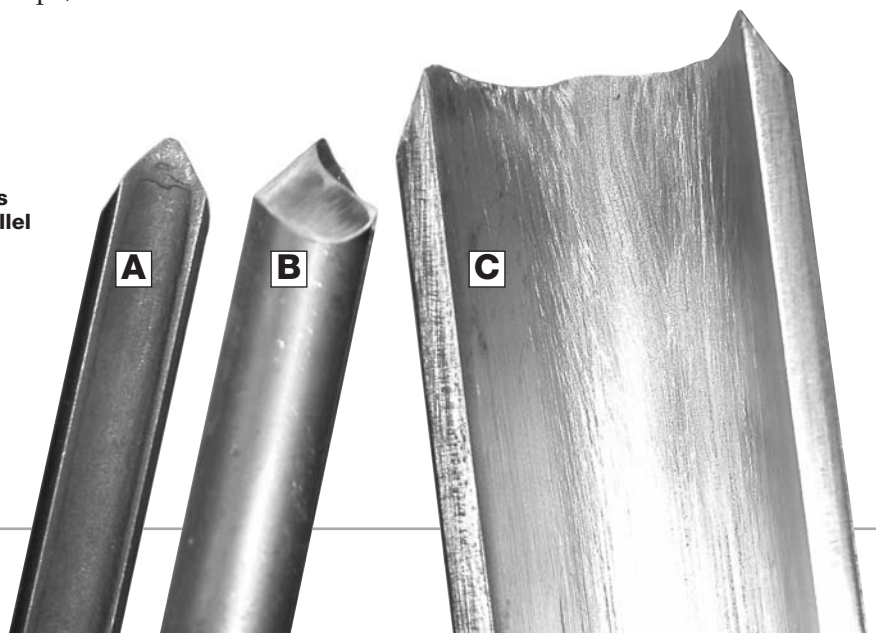


Give a protractor a try.
We got a few letters after last issue's grinding article about grinding the correct angle. This metal protractor–available for about $12–is one inexpensive and reliable solution.

in an oval plane with the steel below the edge in varying thicknesses.

Let me explain. If I shape the tool into a fingernail shape, orient the tool with the flute facing the

Continued



At right are improperly ground gouges:
A: A detail gouge ground too pointy. This is caused by either rotating the entire tool parallel to the face of the grinding wheel (as with a roughing gouge), or over grinding the sides.
B: A bowl gouge ground on the side with a concave profile. This makes an aggressive tool and one that does a poor job of leveling if used to shear scrape.
C: A roughing gouge overground along the edge. This most often shows up as a jagged or saw-toothed edge.

grinding wheel, and rotate it along a circular path that is parallel to the face of the wheel, I will probably produce a pointy or "spear-pointed" cutting edge that is not very versatile nor friendly to the user (see page 57).

Profiling is essential to the detail tool. It performs astutely in forming concave and convex forms in between center work or details on feet, bases and rims of bowl and vessel work. The shallow draft of its flute (a low "sweep" if we are talking to carvers) allows the tool to sneak in between details, often on its side and do its fine work.

The deep fluted roughing gouges and bowl gouges have trouble detailing elements that are close together. So, the detail profile should reflect its intended activities. Establish a fingernail shape to the cutting edge—thus making the detail gouge more of a side-cutting tool, especially when rotated on its side.

Just as your fingernail would not grow to a point, so must the end of the tool not be too pointy. The analogy with the fingernail is a good one: the smaller the gouge the more it is like a little fingernail; the larger the gouge the more it is domed like a thumbnail. I like to profile by holding the tool nearly flat on a tool rest set to about 90 degrees to the wheel. Gauge your progress by the view from above—striving to get a balanced radius on both sides of the tool (see illustration on page 57). Next, rough in an approximate bevel angle of 30 degrees. This flatter angle reflects the need of the tool to fit between details while in use.

There are several strategies for matching the edge to the profile, but I will give you the easiest one for me. Treat the bevel of the tool as having three parts: a middle section, and a right and left side. Start by holding the tool with the flute pointed up, contacting the bevel heel in the middle section. This will be the basis for all detail grinding, and the reference point for grinding of the bevel middle area or sides.

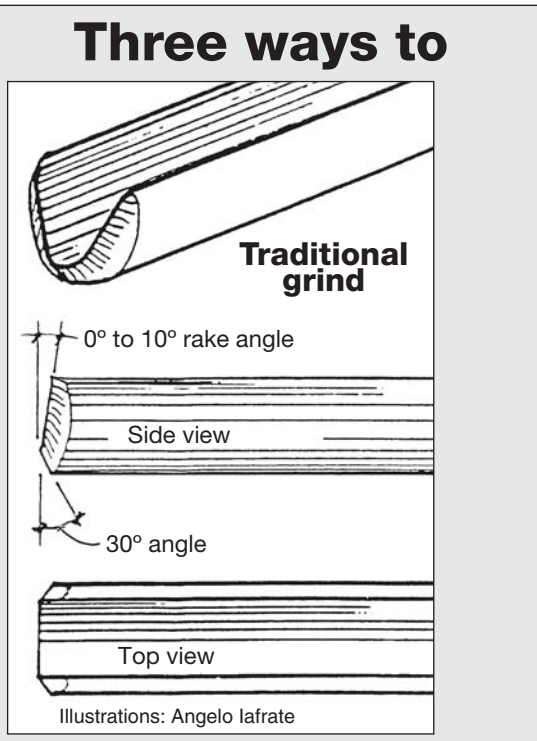
With a push up and rotation to the right, move the tool to the left side of the wheel. Grind as you reverse this action and return to the original starting point. When both sides show sharpness from the spark trail, blend the center section into each side.

Bowl gouges

I recommend tackling bowl gouges last, but not because they're extraordinarily difficult. In major reshaping, you'll remove considerable amounts of steel. Plus, bowl gouges have at least one tricky grind that causes some problems.

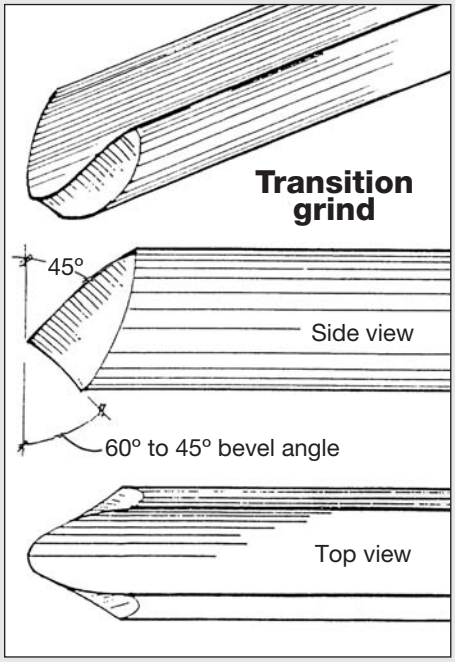
The preferred profile is one of personal choice. Most turners use one of three common grinds. What I term "traditional" is shaped exactly like a roughing gouge—and the sharpening is attended to in the same manner, only easier because of the reduced size. The "transitional" is one favored by many bowl turners, and may be the only profile you require on a bowl gouge. Careful study of the diagram shows it to be close to the fingernail shape we put on the detailing gouge. The side profile should be straight or a bit convex—just avoid concave. Once profiled, I sharpen in the same manner as the detail gouge.

The bowl grind that has launched more than a few commercial and shop-made jigs is the Irish grind. Although it looks formidable with such a long edge, it is in truth quite tame—if you have a strategy. Get the profile correct from above, the side, and rough in the steep bevel angle on the nose. Then divide the tool into three sections: the two long sides and the front nose. Grind the

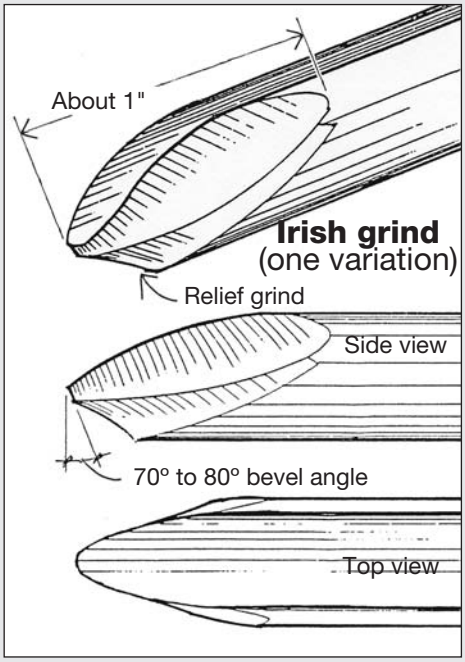


A traditional (fingernail) grind has some sound applications: the outside of a face grain bowl when mounted backwards (base is at tailstock side) or for opening the interior of a bowl (opening is now facing tailstock side).

sharpen a bowl gouge



I recommend the transition grind for new bowl turners. You work the outside of a face grain bowl regardless of the orientation. The ground sides provide the opportunity to do a little shear scraping.



Experienced turners may prefer the more-complicated Irish grind. It's a good roughing tool for bowls, a detailing tool with the elliptical front, a shear-scraping tool, and a tool to make a smoother transition from sides to bottom.

sides nearly parallel to the face of the stone. Finally, grind the small front section with the same technique for the detail gouge. I finish with a little blending of the nose into the sides.

Tests for sharpness of cutting tools

•If you can see the edge there is no edge. Short of actually turning, this is the best test I know. Use an incandescent light to check for any reflection along the edge. A sharp edge disappears into a black line; dull spots reflect light.

•What comes off the tool--dust or curls? Even in dry material, a sharp tool forms a longer chip or ribbon while dull tools produce dust or short chips.

•How much effort does it require to remove the material? Unless you are roughing out a large piece, a sharp tool presented at the right angle is almost effortless; a dull tool requires more force.

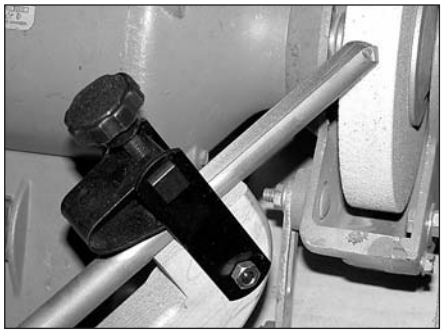
•How does the cutting action sound? A sharp tool makes a sound reminiscent of a sharp hand plane; the dull tool sounds flat or makes a scraping sound.

•How clean is the surface when you stop the lathe for inspection? Generally a sharp tool gives far superior results to the surface of the wood.

Grinding jigs

This is perhaps sacrilegious, but I am not a big fan of the grinding jigs. I still find most individuals learn sharpening with no other "jig" than their tool rest and hands—at least for most tools.

But is there a place for the grinding jigs? Yes! For those folks who cannot seem to learn freehand grinding, those with physical limitations, those who need a crutch to get started (like training wheels on your first bike), those sharpening a large number of tools for others (some classroom or manufacturing situations), or those one or two difficult tools you just can't seem to get at all or consistently. If you



A jig may be helpful in some situations of learning to grind.

fall into one of these camps, get a jig—but at least learn to resharpen your tools by hand when all that is needed is a light refreshing. The information in this article applies to most aspects of sharpening whether you do it freehand or with a grinding jig. Be forewarned though, jigs still require considerable judgment and they can also "shorten" your tools.

Alan Lacer (www.alanlacer.com), an *American Woodturner* contributing editor, is a turner, writer, and instructor living near River Falls, WI.

Tips

Got a Great Idea?

Share your turning ideas! If your tip wins our Best Tip Award, you also receive a free AAW ball cap and turned ornament contributed by Bob Rosand. Send your tips with relevant photos or illustrations along with your name, city, and state to:

John Lucas
PO Box 1292,
Cookeville, TN 38503
jlucas@tntech.edu

For safety, modify tool rest

The Woodcraft tool rest is popular with turners, but there is a safety issue that can easily be resolved. If you run the tool off the end of the tool rest, the tool is pushed down onto the square ledge with considerable force. This can damage your finger by mashing it between the tool and the lower corner of the rest.

If you have one of these Woodcraft rests, consider modifying it by sawing the ledge portion of the rest back at a 45-degree angle and filing the edges so they are no longer sharp.

Older models of these rests are machined from a solid piece of bar stock while the newer ones are two pieces held together with machine screws. If you have one of the newer ones, be careful to avoid any modification that may affect the strength of the screws.

Steve Sinner, Bettendorf, IA

Non-index lock for sanding

I was delighted to see Dennis Laidler's tip on a spindle brake for lathes lacking indexing devices in the Summer 2003 issue. I turn on a Oneway 2436 and I can index with it. My problem was a bit different, and Dennis provided the solution. After I finish turning a bowl, I shut off the lathe and power-sand. I want to rotate the bowl by hand, sand, move the bowl, sand, and so forth—I don't want the bowl spinning freely while I sand. Up to this point, my "not so good" solution was to wedge a block of soft wood against the belt in the headstock to keep it from rotating. After reading Dennis's solution, I purchased a rapid-action band clamp (about $10) and fastened it around the bed of the lathe and the chuck or faceplate. I tensioned it so that power-sanding rotates the bowl easily. It works perfectly and only took a guy from South Africa to show me the way. Thanks, Dennis.

Bob Rosand, Bloomsburg, PA

Mineral spirits help sanding process

Have you had problems with scratches under your finish—even though you sanded carefully? Try wiping your turning with mineral spirits. The mineral spirits pull the fine sanding dust out of the scratches that you couldn't see when they were full of dust.

Paul Korbach, Kerryville, TX

Hotmelt jam chuck

A jam chuck is a good method of holding a bowl to turn the bottom. This isn't always as secure as possible. Some turners use blue painter's masking tape to hold the bowl and others use hotmelt adhesive. I found a combination of both makes for a secure hold with quick clean up.

Turn a recess to accept the bowl. Drill two holes near the edge to help release the bowl if the fit is too tight. Place 10 to 12 short strips of the blue tape around the bowl to hold it in the recess. Then lay a continuous bead of hotmelt adhesive down the center of the tape. This method holds the bowl securely.

Frank Stanko, Williamsville, NY

Custom tool rest helps freehand tool grinders

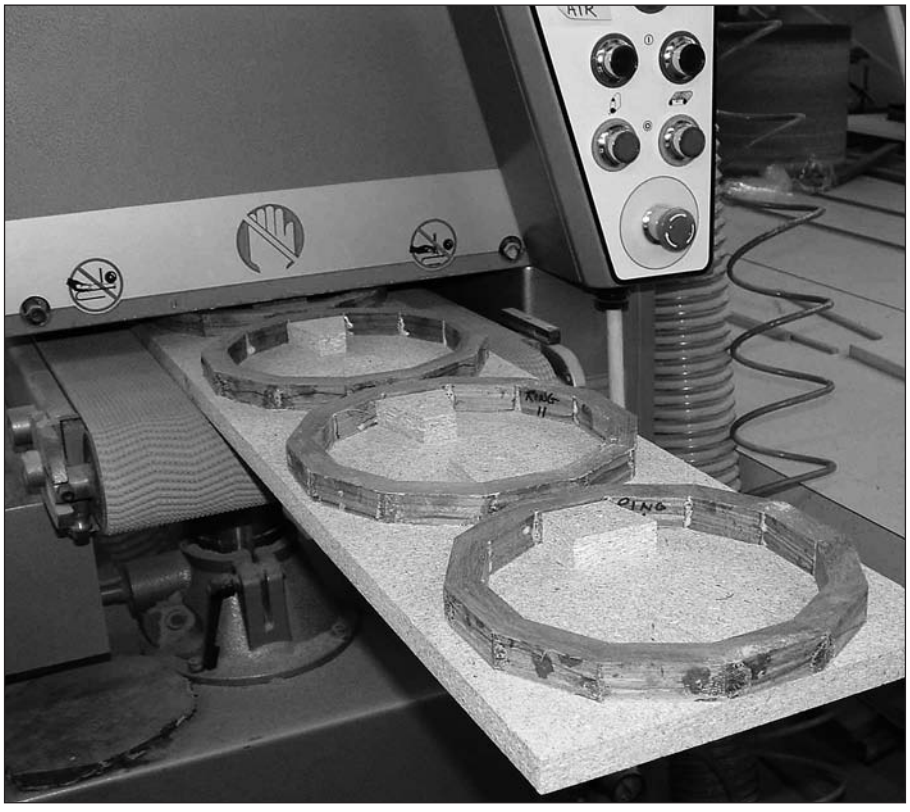
I sharpen freehand, and I like my customized grinder tool rest very much. I built it to give me solid support and to let me move the tool with the same sensitivity and fluidity that I experience at the lathe. I use it for gouges, scrapers, and chisels.

I don't think that too much is critical about how you build this, and the details may vary with your grinder. I used 3/8" x 1" mild steel bar for the upright, and 5/8" round cold-rolled steel rod for the tool rest. The main challenge involved attaching the rest to the post. You need to cut off the round rod cleanly and squarely; I did this step on a machine lathe. You could cut it by hand and then true up the cut end on a disc sander. I drilled and tapped the round rod 1/4 -20, and it is bolted to the upright. This should be done on the lathe (not running while you tap).

The lathe serves as a fixture to keep everything square. Notice that the tool rest is fairly long and that I ground away the corners of the 3/8" x 1" support strut. This is because when I sharpen the wings of a fingernail gouge, the point where the tool rests is quite a distance from the side of the grinding wheel.

Bruce Cohen, Boulder, CO

For winning Best Turning Tip of the issue, Bruce will receive an AAW ball cap and turned ornament contributed by Bob Rosand.



Sanding segmented rings

Segmented turning is so labor intensive I welcome any procedure that will get me on the lathe sooner. I generally use a small sanding disk in the drill press to level all the segments, but my forearms felt like I worked out with Popeye. I then realized that with access to an overhead sander, I could do a great job in a fraction of the time. I used a scrap of particleboard and placed several segmented rings on it, and fastened two scraps inside to keep the rings in place. The rest is easy—I just watch the sander pull the rings through. Using this method, I noticed that the glue line between rings is almost invisible. Several manufacturers make overhead sanders, or you could hire your cabinet shop to do it for you.

Danny Fantoni, Puyallup, WA

Unzipped Creativity

Wouldn't it be nice if we could all unzip a block of wood to see what was inside? That thought became the germ of Paul Stafford's design concept. Since unzipping his thoughts, this AAW member from Littleton, CO, hasn't exhausted the flow of variations of his protected design.

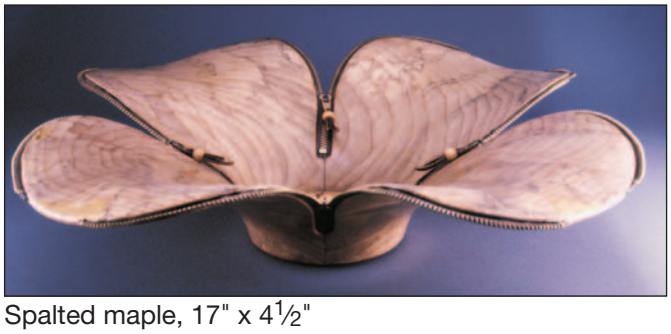
Honey locust, 6¼" x 5¼"

Spalted maple, 4¾" x 7"

Sycamore, 7½" x 2¾"

Paul Stafford
woodturner-gallery.com

Butternut, 6½" x 5"



Spalted maple, 17" x 4½"