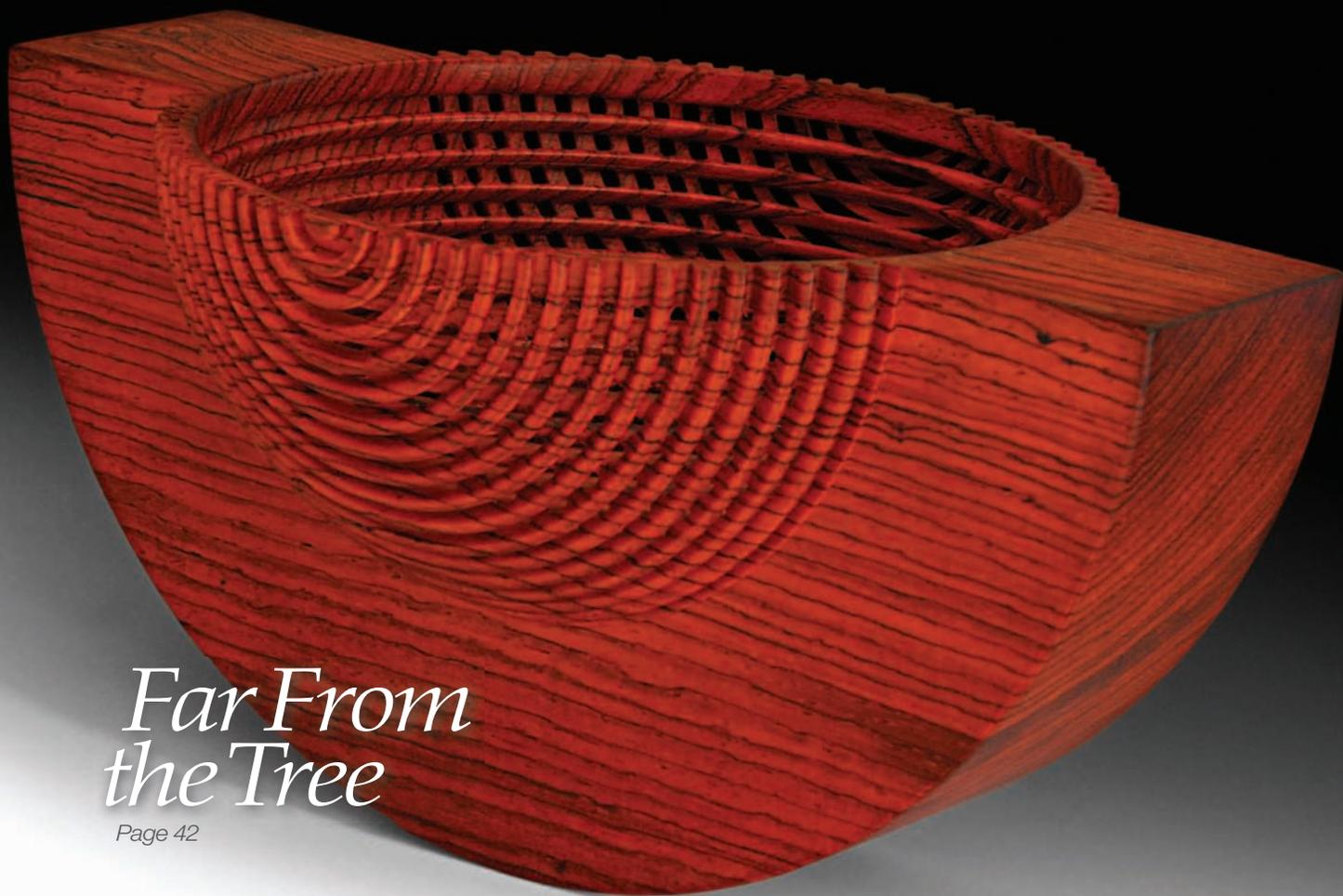


Richmond Symposium • Food-Safe Finishes • Pen Clip • Straka Chuck

Woodturner

The Journal of the American Association of Woodturners
Spring 2008 Vol. 23, No. 1 • woodturner.org



*Far From
the Tree*

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The Sphere Page 40



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Constructive Critique

of contemporary work

For woodturners attending the SOFA Chicago exhibition in early November, Charlotte Brown's lecture, "Constructive Critique of Contemporary Work" proved to be one of the highlights of the three-day event. Charlotte, director of the Gregg Museum of Art & Design at North Carolina State University, commented on 27 recently turned pieces provided by the AAW. In addition to the five pieces shown here, a portion of her lecture and photos of four additional pieces can be found on *pages 8–9*.



"Tahi, Rua"
by Graeme Priddle
of Northland, New
Zealand.
Matai; 15x8x4".



"Full Regalia"
by Marilyn Campbell of
Kincardine, Ontario, Canada.
Holly, cherry, and purpleheart;
9¾x9½x3".
Photo: Stephen Simeon



"Seven Wisemen Dancing"
by Alain Mailland of Uzes, France.
Hackberry; 25½x10x9".

"Square Bowl"
by Mark Gardner of Saluda, NC.
Mahogany and milk paint; 4½x13x13".



"Madrone Bowl"
by Dale Larson of Gresham, OR.
Pacific madrone; 5x10¼".



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

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Woodturner

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40 *The Sphere*

More than 50 AAW members have created interpretations of a sphere for a special Professional Outreach Program (POP) exhibit at the AAW symposium in Richmond.

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An exhibit now on display at the AAW Gallery traces the progress of woodturning from its roots to today.

44 Wood Through and Through

Richard Kleinhenz shares his technique for incorporating a flexible wooden clip into your next pen project.

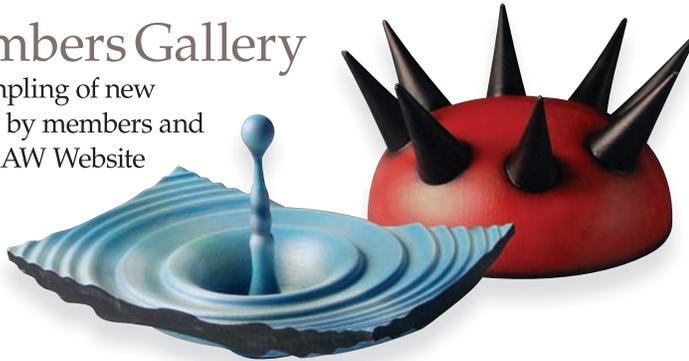
The Straka Chuck 50

When it's time to complete the bottom of a bowl or platter, Alan Lacer suggests you reach for a homemade reversing chuck developed by Hawaiian woodturner Jack Straka.



54 Members Gallery

Check out a sampling of new work submitted by members and posted on the AAW Website Gallery.



Reversing Bar Revisited 56

Franck Johannesen describes how an upgraded reversing bar has improved hollowing steps for his turning friends.

58 Return of the Squirts

Take a bit of inside-out turning, add a smidgen of bandsaw work, and you're on the way to creating your own sculptural pieces. Neil Scobie will help you get started on the path.

Featured on this issue's cover

Top: "Segmented Rocking Bowl" by Hans Weissflog. Part of the *Far From the Tree* exhibit (page 42). *Bottom:* "The Meaning of Life" by Michael Kehs. Part of *The Sphere* exhibit (page 40).

EDITORIAL

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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.

It doesn't seem possible that a year has gone by us! Yet here we are at the threshold of an AAW board meeting in Richmond to put the finishing touches on plans for the June 20-22 symposium. I am looking forward to this meeting with a bittersweet taste as it will be my last symposium as a member of one of the finest boards, I believe, to lead the organization.

There is a hardworking core of volunteer board members working diligently to make this year's symposium the best ever. Armand LaMontagne, a world-famous Rhode Island sculptor, when asked which of his sculptures was his favorite, his response was, "The last one." When asked which sculpture is his best, he responded, "The next one!" I think this is true for the upcoming Richmond symposium.

As you have heard, there have been a lot of changes in the AAW administrative offices in St. Paul. We have been making the change from a working board of directors to a board of governance in slow, deliberate steps. We completed that process at the end of 2007. We now have a new *Director's Handbook*, which describes the responsibilities and expectations of a board member. Soon we expect to have a new *Operations Manual* in place, which will outline many of the day-to-day tasks performed in St. Paul.

The growth of the AAW continues to surprise me. We started out 2008 with 283 chapters and more than 13,000 members. In 2007 alone, a record 25 new chapters were chartered (see details on page 10). Congratulations to all of those who have the vision and drive to bring chapters closer to members' homes.

Under the watchful eye of Larry Genender, you can expect to see new and innovative programs and services to involve chapters in furthering the mission of the AAW. Be sure to read about the AAW's Star Chapter program at right, which recognizes chapters with 100 percent AAW membership.

In other AAW activities by board members, Malcolm Tibbetts is working hard to expand the Educational Opportunity Grants (EOG) programs. The AAW Youth Committee, under the stewardship of Al Hockenbery, is off to a brilliant year with many new programs.

As always you can expect the Professional Outreach Program (POP) Committee to continue to provide each symposium with a series of engaging programs for our collectors, galleries, and museums.

So to all new and current members, on behalf of myself and the board of directors, we wish you a healthy and prosperous New Year.

Finally, we would like to congratulate you for your continued support in making the AAW the most successful crafts organization of its kind anywhere in the world.



Angelo Iafrate
President
iafrateturns@cox.net

AAW NEWS

Corey Anderson joins AAW board



Corey Anderson

The AAW board has appointed Corey Anderson, a longtime AAW member from East Hampton, CT, to fill the unexpired term of Sean Troy, who resigned due to personal and family health issues. The

woodturning community wishes Sean and his family a speedy recovery.

9 chapters receive Star designation for 100% membership

The AAW is pleased to recognize the first class of chapters with 100 percent AAW membership. Nine chapters have earned the designation of AAW Star Chapter. The chapters will receive a recognition plaque at the AAW symposium. In addition, the chapters will receive a five-video set of *Masters of Woodturning*, a listing on the AAW website, and recognition in the 2008 *AAW Resource Directory*.

The first nine chapters to earn the designation are:

- Central Florida Woodturners
- Central Illinois Woodturners
- Gold Country Turners (California)
- Michigan Association of Woodturners
- Northwest Michigan Woodturners
- Pacific Northwest Woodturning Guild
- Peace River Woodturners (Florida)
- San Diego Woodturners
- Southern Oregon Woodturners

If you believe your chapter qualifies for this recognition, contact Larry Genender, Chapters and Membership chair, at lgenender@aol.com.

New England turners fund wheelchairs

Members of the Central New England Woodturners (cnew.org) are giving back to the community by participating in the Free Wheelchair Mission, a nonprofit organization that sends wheelchairs to third-world countries. So far, the sale of turned pieces and other contributions have funded more than 200 wheelchairs at about \$50 apiece. Member Charlie Croteau, who uses a wheelchair, heads the chapter efforts. The Association of Revolutionary Turners has joined the effort, too. Both chapters are based in Massachusetts.

Foundations in Woodturning

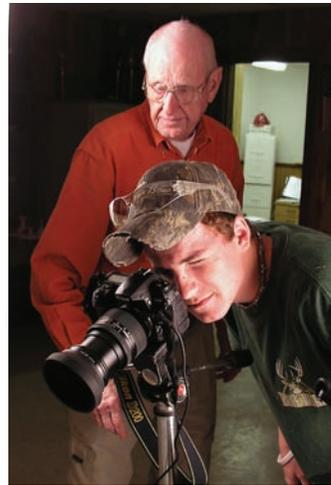
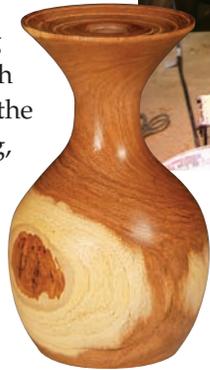
By Jim Clow

In a Southeastern Oklahoma town with a population of less than 4,000, fine arts have been injected into a high school carpentry program. The Forest Heritage Center and the Southeast Oklahoma Woodturners (SOW) partnered last school year to teach the fourth annual four-week woodturning program at Broken Bow High School.

Forest Heritage staffer Doug Zook created the program with the assistance of a grant from the Oklahoma Arts Council. Doug, who now serves as the SOW president, received the 2005 Governor's Arts Award for Excellence in Arts for creating the program that promotes exposure to art and for hands-on art instruction. Joe Millsap, who died last fall, was responsible for rounding up additional grant money and lathes.

The primary goal of this course is to teach and mold each student's individual artistic turning style. In addition to learning woodturning techniques, the students are also introduced to form, balance, design, and exhibit setup. Some of the region's most talented master woodturners were invited to assist in teaching the classes.

Nine volunteer instructors led the weekday classes. Each instructor was selected based on his area of expertise and distinctive turning style, as well as on his ability to interact with the students and to serve as a mentor. (Several have



From left: Senior Chance Parker's mesquite vase, part of the Turning to the Future youth exhibit at the AAW Gallery in St. Paul; Chance turning a vessel at his high school; freshman Cody Bean photographs a bowl he turned with Tulsa woodturner Bob Hawks, background; junior Keeton "Biscuit" Satchel turns a maple vase.

taught each of the four years.) The beauty of having such qualified instructors is that they work one-on-one with each student to get to know that individual and gain an understanding of the student's current skill level.

Volunteers from four area chapters are the backbone of the Broken Bow program. In addition to the local chapter helpers, AAW members from Northeast Oklahoma (Tulsa), Central Oklahoma (Norman and Oklahoma City) or Dallas Area chapters assisted in every class.

Since the woodturning course started four years ago, the SOW chapter was formed and now has 25 active members who help and sponsor the turning classes, as well as many other events in Broken Bow.

According to the Broken Bow carpentry instructor Kent Nix, "Not

all of our students are college-bound. The students that enroll in carpentry are typically hands-on learners who often struggle in the traditional classroom setting. Woodturning instruction offers them an alternative for this learning style and gives them additional artistic skills to help them become a contributing member of society."

As a testament to the program's success, 10 student pieces were selected for the juried AAW youth exhibit, *Turning to the Future*, at the AAW Gallery in St. Paul.

Success story

One of the program's success stories involves a student with a troubled past and school attendance problems. This student was assigned to the carpentry class about the time that the woodturning program

began. This assignment was sort of a last resort before more drastic measures were to taken.

This particular student developed a very enthusiastic interest for woodturning, and by the end of the program was one of the most advanced students. His sense of pride and self-confidence was evident. He now attends regular school classes and is scheduled for graduation. He plans to attend college next year.

Adult classes, too

New to Broken Bow last spring were adult beginning turning classes held in conjunction with the four-week student program. The adult community education classes, held on two evenings each week, mirrored the student curriculum.

The adult classes began with a demonstration by the visiting woodturner. After the demo, SOW members assisted the adult community participants, many experiencing turning for the first time.

The SOW chapter has strengthened its membership with several outstanding and talented woodturners who participated in the adult workshops.

Small town, big accomplishments

The success of the Broken Bow program is evidence that a small town and a small AAW chapter can launch a successful beginning woodturning program for students and adults. Size does not matter as much as the drive, desire, dedication, and vision of a few individuals.

Jim Clow (jhcloy@sbcglobal.net) is vice president of the Central Oklahoma Woodturners Association.

BAY AREA YOUTH PROGRAMS CONTINUE TO GROW

By Jim Rodgers

If we could all do so well on our investments. Seed money from a \$1,000 Educational Opportunity Grants (EOG) program and volunteer support from the Bay Area Woodturners Association have been so well received that parents have raised an additional \$8,000 to support and expand the school's turning program. The Bay Area members have started their third year of coaching woodturning at Las Lomas High School, in Walnut Creek, California.

The initial EOG funds purchased new tools, smocks, and grinders. With the additional help of parents and others, four new Jet 1642 EVS lathes and four Jet mini-lathes greeted the students.

According to principal Pat Lickiss, "Las Lomas High School is very fortunate to have a successful partnership with the Bay Area Woodturners Association, which has allowed our students to have a wonderful opportunity to learn a skill that allows them to turn out great products.

"Besides the assistance from these experts, the program is possible because the Walnut Creek Education Foundation, made up of parents and friends of education, purchased eight lathes because they saw the importance of providing our students with the very best.

"These organizations working with our school are just an example of what can happen when people step forward to partner with schools. The students profit, we can provide a better education, and society gets better prepared graduates for the community."

This school year, chapter volunteers are also coaching advanced

turning students at Las Lomas.

Several Bay Area members also keep busy at nearby Campolindo High School, where members are in their fifth year of similar coaching duties. (Bay Area Woodturners received its first \$1,000 EOG award

for the Campolindo program.) The State of California provided an industrial arts grant to all school districts within the state, which funded purchase of eight lathes similar to those at Las Lomas.

Coaching and assisting at Las Lomas this school year are Brad Adams, Jacques Blumer, Dennis Rivers, and Jim Rodgers. Working with the students at Campolindo are Jim Adreu, George Lucido, and Don White.

Jim Rodgers (jlrogers@aol.com) is a member of the Bay Area Woodturners and volunteers weekly at Las Lomas High School.



During a spring open house at Las Lomas High School, a woodturning student shows completed projects to his family.

Constructive Critique

At SOFA Chicago, the AAW sponsored a lecture, "Woodturning: Constructive Critique of Contemporary Work" by Charlotte Brown, director of the Gregg Museum of Art & Design at North Carolina State University.

The AAW provided Brown with 27 images of turned pieces. Although Brown was familiar with some signature styles, the artist names were withheld. Here is an edited portion of her presentation. For a complete transcript, see the AAW website (woodturner.org). See additional photos on page 1.

As I introduce my lecture/critique, you will see a group of objects that I am not going to talk about today—not because they are not wonderful but because I want to suggest another avenue of discussion about turned and carved work that I don't typically find in the literature about contemporary woodwork.

As I looked at the work again and again, certain objects pushed me to consider them with the attention that is called for by the meaning that is embedded in the individual objects.

How, you ask, is that meaning embedded, and who am I to say what it is?

One of the strong themes I discerned in the work that was sent to me was the sense of the ceremonial, the sacred, the commemorative, and I want to talk about those pieces that best represent these ideas. "Full Regalia" (Marilyn Campbell, *page 1*) is one of those upright, totemic forms articulated as a winged symmetrical vessel on a foot of modest size,

implied transparency and its front and back views behave as a finial might, or a standard on a pole to complete the full regal for a ceremony.

"Seven Wisemen Dancing," also modest in scale, is greater than the sum of its parts (Alain Mailland, *page 1*). These almost transparent, virtually identical vessels are united, literally, in a dance, lightly moving. While the shape itself alludes to antiquity, to the vessels that could be hung to provide lamp-light, so this piece with dancing forms may bring ritual and conceptual light.

The role of light in ceremonies is also associated with bowls of light (Dale Larson and Mark Gardner, *page 1*). Both bowls, by their deceptive simplicity of design and the elegance and attention to execution, are not simply useful objects, but very fine useful objects.

The painted bowl is especially powerful. Its square form contrasts with the concentric circles of the paint just as the horizontal lines of the basin itself introduce considerable energy and attraction.

The painted bowl also takes advantage of its allusions to a retro shape—the sexy ritual oversized ashtray of the moderne 50s, and the contradictions between rituals, smoking, libations, and bowls make the form

resonate with a host of ideas, suggested and recalled meanings.

"Tahi, Rua (One, Two)": In contrast to the sophisticated simplicity of the other pieces, this 15"-tall open form (Graeme Priddle, *page 1*) excavated with symmetrical openings is a riveting piece, if for no other reason than one wants to try to imagine the infill pattern in the openings. But



"Pear Wood Box" by Matthew Hill of Oklahoma City, OK. Dyed and lacquered pear wood; 4x8½".

the tattooed surface and the intense color contrast suggests a ritual or ceremonial use, just as the name "One, Two" suggests a rhythmic beat and a sound that could also come from the totem itself.

Containers

What is a container, after all? "Citadel Boxes" (Richard Raffan's grouping *far right*), the tallest 10", hold court. Like flat-bottomed markers or sculptures, they sit as a group, a study in collected contrasts.

The careful control and degrees of manipulation played against the

of Contemporary Work



“The Promise” by Curt Theobald of Pine Bluffs, WY. Wenge and holly segmented containers; 3½" to 6¼" tall.

arbitrary marks—gouges, dints, dings, the concavities, the convexities, the lids, lips, nipples—could these stand in for ceramic, canopic jars or ceremonial urns? Or antique greenware? Or the red forts of India?

How would each fare alone—would abandonment take over and each box continue to hold its status in nature as a forgotten reliquary?

The meaning and use of these forms is laden with possibilities.

Whereas the “Citadel Boxes” reference, as I have suggested, ceramics or very old greenware, “Pear Wood Box,” *opposite*, has a texture and form usually associated with metal or textiles.

Creating a sense that the material literally can lie down denies the pearness. On the other hand, the ovoid shape and the opening in the top are organic, but formal and

serene at the same time. Once more the idea of container is pushed into a new experience.

“Quercus Rubra,” *below*, takes us further into a conceptual realm. Oak leaves turned from African sumac, an enclosed open space for dancing, an absence of solidity, order. It is a windfall—a narrative that is a *tour de force*. The purpose of this work is to delight and to entertain. This use is ancient and found everywhere—garlands, laurel crowns, swags on walls, vases, the aprons of tables, the panels and entablatures of walls.



“Quercus Rubra” by Andi Wolfe of Upper Arlington, OH. African sumac, 9" diameter. Collection of David and Ruth Waterbury.

Both the fern basket (a Ron Fleming piece also shown during the critique) and these dancing leaves reference the valuable *trompe l'oeil*—fool the eye—tradition in woodworking, a tradition that asserts the primacy of the maker’s skill and his or her observation of the visual world.

In “The Promise” (*left*), these three forms are also ambiguous. They demand the presence of each other for completion, in contrast to “Citadel Boxes,” which sit with acceptance, the edgy, textilelike surface moves and turns, the openings looking in



“Citadel Boxes” by Richard Raffan, Holder, Australia. Red gum burl; 4¾" to 10" tall.

different directions. And they cry out in soprano, alto, and tenor. And if they sing, what do they promise?

How complete or successful this boundary crossing is has yet to be revealed. Nevertheless, when our language recognizes the capacity for ritual, commemoration, the ceremonial, or sacred, our position shifts in relation to the objects—and hopefully we never see exactly the same way again.

Conclusion

What I have tried to demonstrate is that whether the artist intends to attach meaning knowingly or by accident to his or her work, many works can be read, in fact demand to be read, literally, figuratively, sometimes only emotionally.

Reading a piece, however, suggests that there is more to know about all the work that is produced. My interpretations may seem pedantic or precious, but some meaning lies at the heart of all our experiences.

Making is always about meaning and in this medium—one that is so complex and filled with such possibilities—it is hard to imagine that it would be otherwise.

RECORD 25 NEW CHAPTERS CHARTERED IN 2007

The AAW chartered a record-breaking 25 new chapters in 2007, bringing the total to 283 AAW chapters. The previous record number of new chapters was 22 in 2005.

Wiregrass Woodturners

Dothan, AL

Tongas Turners

Juneau, AK

Gold Country Woodturners

Grass Valley, CA

Treasure Coast Woodturners Guild

Fort Pierce, FL

Peace River Woodturners

Punta Gorda, FL

Atlanta Woodturning Guild

Dunwoody, GA

Middle Georgia Woodturners

Gray, GA

Southeast Georgia Woodworkers Guild

St. Mary's, GA

West Hawaii Woodturners

Kailua Kona, HI

Lincoln Land Woodturners

Springfield, IL

Corridor Woodturners

Cedar Rapids, IA

Montgomery County Woodturners

Bethesda, MD

Superiorland Woodturners Inc.

Marquette, MI

Hiawatha Woodturners Club

Newberry, MI

Minnesota Lakes Woodturners

Detroit Lakes, MN

Carson Valley Woodturners

Gardnerville, NV

Jersey Cape Woodturners Guild

Cape May Court House, NJ

Kaatskill Woodturners Association

Poughkeepsie, NY

Oregon Coast Woodturners

South Beach, OR

Dickson Woodturners

Dickson, TN

West Virginia Woodturners

Lewisburg, WV

Milwaukee Area Woodturners

East Troy, WI

Kingston Woodturners

Sharbot Lake, Ontario, Canada

Simcoe Woodturners Guild

Minesing, New Brunswick, Canada

Island Woodturners Guild

Victoria, British Columbia, Canada

AAW Board of Directors

Call for Nominees

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

The AAW elects a volunteer nine-member board to represent the membership for moving this organization forward. If you have been a member in good standing for the past three years, you are eligible to run. The nominating committee will select the six best candidates. From these six, members will elect three candidates to serve three-year terms beginning in January 2009.

This year's nominating committee includes Larry Genender, chair; John Hill; and Don Derry. Information on duties is available in the *AAW Resource Directory*. Or call any current board member for details.

If you are interested in serving on the board, please send the following to the executive director, postmarked no later than May 15:

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

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

'SEGgy' STARS IN \$5,500 EBAY AUCTION

When Malcolm Tibbetts signed up for a video-editing class offered last fall through a local community college, little did he know that his final class project would become a popular YouTube feature that would lead to a \$5,500 American Cancer Society benefit through an eBay auction.

Along the way, Malcolm created an animated pink-ivory figure named Seggy whose life-long dream was to earn a place in a segmented vessel. And of course, Seggy finally measured up to his creator's needs.

To promote the eBay auction, Malcolm mailed DVD copies of his video to a number of collectors just as the auction was scheduled to start.

"I took the class with the goal of gaining the skills and confidence to produce a series of how-to segmented turning videos," Malcolm said. "I don't know if or when I might do this again, but I sure had fun doing it this first time."

The 8-minute video has already experienced more than 7,000 viewers (see woodturner.org/Spring08journal).



In Malcolm Tibbetts' animated YouTube feature, Seggy, a pink ivory segment earns a starring role in a tulipwood segmented vessel.

Summer Woodturning Vacations & Workshops

Colorado

The Anderson Ranch near Aspen has announced its summer woodturning calendar. Instructors for 2008 include Dan Bailey, Trent Bosch, Christian Burchard, David Ellsworth, Stephen Hogbin, Beth Ireland, Binh Pho, Merryll Saylan, Betty Scarpino, Jason Schneider, and Malcolm Tibbetts. Information: 970-923-3181 or andersonranch.org.

Connecticut

The Brookfield Craft Center, a not-for-profit school for fine craftsmanship in northwest Connecticut, offers year-round short-term (one- to five-day) workshops. Instructors for 2008 include Jim Degen, Michael Hosaluk, Buster Shaw, Keith Tompkins, and Terry Tynan. Information: 203-775-4526 or brookfieldcraftcenter.org.

Maine

The Center for Furniture Craftsmanship in Rockport offers 6 one-week and 2 two-week woodturning workshops for 2008. Instructors include Nick Cook, Stephen Gleasner, Matthew Hill, Todd Hoyer, Beth Ireland, John Jordan, Bonnie Klein, Hayley Smith, and Al Stirt. Information: 207-594-5611 or woodschooll.org.

The Woodturning School in Damariscotta offers 3 five-day "Turn to Success" classes and numerous two-day weekend workshops in its 2008 curriculum. Classes begin in March. Information: 207-563-2345 or woodturningschool.org.

North Carolina

The John C. Campbell Folk School in Brasstown offers weeklong and weekend woodturning instruction for all skill levels year-round. Among the instructors for 2008 are Dave Barriger, Nick Cook, Frank Penta, and Dick Sing. Class registration and information: 800-365-5724 or folkschool.org.

Tennessee

The Arrowmont School of Arts and Crafts in Gatlinburg announces its spring and summer woodturning workshops. Spring one-week workshops, beginning March 9, include instructors John Jordan, Ray Key, Mike Mahoney, and Chris Ramsey. Summer one- and two-week workshops, beginning June 1, include instructors Rex Burningham, Jimmy Clewes, David Ellsworth, Michael Lee with visiting artist Stoney Lamar, Graeme Priddle, Michael Werner, and Andi Wolfe. Information: 865-436-5860 or arrowmont.org.

The Appalachian Center for Craft in Smithville announces its summer 2008 schedule of woodturning classes. This summer's instructors include Judy Ditmer, Ray Key, Graeme Priddle, and Betty Scarpino. Information: Gail Gentry at 615-597-6801 or tntech.edu/craftcenter.

Virginia

22nd Annual AAW National Symposium, June 20–22 at the Greater Richmond Convention Center in Richmond. See *pages 16–21* for additional details. Information: woodturner.org.

Niche Magazine Honors Davoud Khosravi

Davoud Khosravi, a woodturner with Wooden Pottery of Campbellville, Ontario, Canada was honored in February with the Niche woodturning award. His entry, "Pyramids," was selected from four finalists.

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

Other finalists were Kim Blatt, Fleetwood, PA; Jim Sprinkle, Charlottesville, VA, and Keith Tompkins, Tivoli, NY.



"Pyramids" by Davoud Khosravi.
Maple and purpleheart; largest is 71x10".

WEBSITE WINNERS

Multi-Axis Goblet



"Goblet in the Garden"
by Petteri Leppikallio.
Masur birch; 8".

First Place: Petteri Leppikallio, Laylaininen, Finland
Second Place: Charles Henderson, Roswell, NM
Third Place: Kurt Bird, Rogers, AR
Judge: Mark Sfirri

"The inspiration for this goblet comes from a fictional garden where mysterious creatures and plants grow. I have been toying with seedpod and seed forms lately and basically I just tried to create a new specie which forms a cup over the seed when it grows. Luckily spring is getting closer everyday so I don't have to spend too much time with these in my imaginary garden."

NEXT CONTEST: 6" Spheres

Deadline: April 2. For more details, see woodturner.org, then follow the links to the AAW online forum.

Applause! 34 Chapters Celebrate Anniversaries

Pop a bottle of champagne! Let's toast 34 AAW chapters that will celebrate milestone anniversaries in 2008.

20 Years

Central Indiana Chapter
Carmel, IN

Central Texas Woodturners Association
Austin, TX

Chicago Woodturners
Vernon Hills, IL

Gulf Coast Woodturners Association
Pasadena, TX

Michigan Association of Woodturners
Fenton, MI

Mountaineer Woodturners
St Mary's, WV

Northwestern Michigan Chapter
Traverse City, MI

Pikes Peak Woodturners
Colorado Springs, CO

South Florida Woodturners Guild
Miami, FL

Tidewater Turners of Virginia
Virginia Beach, VA

Tennessee Association of Woodturners
Nashville, TN

Tri-State Woodturners/Chattanooga
Chattanooga, TN

Utah Association of Woodturners
Salt Lake City, UT

Woodturners of North Texas
Fort Worth, TX

15 Years

Buckeye Woodworkers and Turners
Tallmadge, OH

Cape Cod Woodturners
Harwich Port, MA

Central Coast Woodturners of California
Nipomo, CA

Glendale Woodturners Guild
La Crescenta, CA

Granite State Woodturners
Auburn, NH

Kansas Chapter of the AAW
Topeka, KS

Ornamental Turners International
Redmond, WA

Wisconsin Woodturners
Pewaukee, WI

10 Years

Alabama Woodturners Association
Indian Springs, AL

Arizona Woodturners Association
Gilbert, AZ

Central Illinois Woodturners
Peoria, IL

Chattahoochee Woodturners
Athens, GA

Concho Valley Woodturners
San Angelo, TX

Dakota Woodturners
Bismarck, ND

Hunt County Woodturners
Caddo Mills, TX

Lehigh Valley Woodturners
Bath, PA

Northeast Wisconsin Woodturners
Oshkosh, WI

Rio Grande Woodturners
Edinburg, TX

Tri County Woodturners
Tampa, FL

Woodturners of Southern Oklahoma
Ardmore, OK

Woodturners of Southwest Florida
North Fort Myers, FL



A WOODTURNER LIVES HERE

Of course Alan Lacer could have purchased a metal post for his mailbox, but why be normal? Alan turned this 6"x6"x9' cedar post, complete with a finial. Just in case there was any doubt that a woodturner lived here, Alan then mortised a 4x4" turned support arm for the box. The arm for the flag is a turned skew.

THANK YOU TO GENEROUS VOLUNTEERS

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

- **Phil Brown, Bethesda, MD**
directory maps
- **Joe Donohue, Sparks, NV**
website calendar updates
- **Charlie Hoffman, Minneapolis, MN**
legal services
- **Pete Kekel, Erlanger, KY**
exhibition support
- **Herbert Kurtz, Melrose Park, PA**
accounting
- **Dan Luttrell, Richmond, VA**
local chapters
- **Minnesota Assn. of Woodturners**
AAW Gallery and office support
- **Joel Rakower, Dix Hills, NY**
accounting
- **Paul Vonk, Mountain City, GA**
website and bulk e-mail
- **Steve Worchester, Plano, TX**
website forum

POPNews

"The mission of the Professional Outreach Program is to promote a greater understanding of professionalism within the field of contemporary woodturning."

The Sphere Exhibition and Auction

A special exhibit in Richmond, *The Sphere*, will represent the work of more than 50 invited woodturners. These spheres will be part of a silent auction at the symposium to support future POP events, functions, and awards.



Mark Sfirri's entry for *The Sphere* exhibit

AAW Instant Gallery Excellence Awards

At this year's symposium, the POP will sponsor a variety of awards for pieces exhibited in the Instant Gallery that exemplify outstanding artistry and professionalism: Purchase Awards for the AAW Permanent Collection, Excellence Awards, Youth Awards (18 and under), and Collegian Awards (full-time students 18+ years).

More details on these awards will follow in the next issue of *American Woodturner* and also will be listed on the AAW website.



Left: "Midnight Inspiration / Evolution of the Wheel #36" by Jim Keller. Mesquite and osage orange; 21" diameter.

Below: "Ash Jars" by John Jordan. Ash and steel; 12x6½" and 6½x4½".

Photo by Cervini Haas Gallery.

Collectors of Wood Art: A Decade On

Collectors of Wood Art (CWA) held its annual Forum in Scottsdale, Arizona, in January, celebrating the 10th year of the organization's existence. The occasion represented considerable growth and change in the field of contemporary wood art, though the principle players in CWA remained virtually the same.

Robyn Horn, who essentially created the organization a decade ago by inviting leading collectors, artists, and curators to Little Rock to consider the establishing of the organization, received CWA's Lifetime Achievement award.

Many of the artists were the same, but the work had changed dramatically since the first gathering. A decade ago, CWA's founding members chose to be inclusive of all approaches to wood art, including furniture and sculpture, although at the time the majority of the collectors focused on turned wood bowls and vessels. Since then, many of the leading artists, including Horn and Michael Peterson, have virtually abandoned the lathe. These artists,



like many others who still turn wood, are now focused on sculptural pursuits. Although there was relatively little interest in sculptural work among collectors when CWA was created, such works are now favored over the bowls and vessels that gave birth to the group.

While it might seem that such changes bode poorly for woodturning, they create a larger context for the work to be viewed in. Increasingly, museums are collecting and exhibiting woodturning, including such notable institutions as the Carnegie Museum in Pittsburgh and the Philadelphia Museum of Art, both of which had curators in attendance at the Scottsdale Forum.

Scottsdale, with its 125 galleries, studios, and museums, was selected for the CWA Forum because of its prominence as a thriving arts center. As has been the practice with prior Forum gatherings, local galleries are contacted to make them aware that wood collectors are coming to town; many choose to exhibit wood to entice Forum participants to visit their galleries. In Scottsdale, the Cervini Haas Gallery stood out with an exhibition titled *Spotlight on: Wood*, which featured a number of leading artists, including turners.

For more details about CWA, see collectorsofwoodart.org.

—Kevin Wallace

Creating more than 1,000 translucent aspen shades over the last 15 years has made New Hampshire's Peter Bloch a shady operator.

Lamp Master

Outside of Peter Bloch's shop, spalting aspen logs are waiting for their chance to shine. Peter has built a niche business (woodshades.com) by turning delicate transparent lampshades from quaking and big-tooth



Above: 30" table lamp; 14x17" shade. "I turn the aspen down to about $\frac{1}{10}$ ". I vary the thickness slightly, depending on the spalting. If it's slightly thicker than $\frac{1}{10}$ ", the shade is a little redder; less than $\frac{1}{10}$ " makes a whiter shade."

Left: 30" table lamp; 14x17" shade. "Some buyers are drawn to the insect damage in the spalting. Other buyers see images in the shades. It's a lot like looking at clouds and seeing faces."



This 60"-tall floor lamp includes a 14x20" spalting aspen shade. At Peter's studio, spalting occurs naturally over 12 months.

aspen harvested near his home in New London, New Hampshire.

"It's physically intense work," Peter notes. "Most of the blocks weigh as much as 200 pounds when I lift them on the lathe. Of course, I turn away most of the aspen to get to the $\frac{1}{10}$ "-thin shade.

"I turn each shade from a single log. The shape is concentric and aligns with the annual rings. The shades expand and contract daily, but stay round. I believe the rings add to the support. Perhaps my shades are more durable than any other type of lampshade."

With the help of blacksmiths, Peter also expects to incorporate his shades into three or four architectural light fixtures this year.

AAW 2008



Virginia State Capitol



Richmond skyline



Lidded boxes by Benoît Avery

Pack your bags. It's time to head to
Richmond

**Don't miss one turn of the lathe
June 20–22 at the 2008
AAW National Symposium**

The symposium committee has lined up more than 160 demonstrations to entice you. You don't want to miss any of the 700-plus pieces expected for the Instant Gallery or the special woodturning exhibits awaiting you. For more details, see woodturner.org.

Richmond photos courtesy of Richmond Metropolitan Convention and Visitors Bureau. Skyline photo: Buddy Mays



Multiaxis wall sculpture by Nick Agar



Open segmented bowl by Bill Smith

National Symposium

3 DAYS • 54 DEMONSTRATORS • 162 ROTATIONS

Nick Agar, United Kingdom

■ **Multicenter Wall Sculpture**

Tired of bowls? I'll show several examples of surface decoration, including textures, adding color with a spray diffuser, colored wax, and power carving.

Nick's additional rotations:

■ **Decorative Shield**

Benoît Averly, France

■ **Textured Hut Boxes**

I will show you more about my box-making process. Making boxes about 6–7" high, I will show you how I rough-turn them, finish them, and how I do the texture on them. And I can even teach you a little French!

Benoît's additional rotations:

■ **Woodturning in France**

■ **Little Boxes the French Way**

Eli Avisera, Israel

■ **Star-Segment Inlay**

I will show how to assemble a classic star pattern that we'll incorporate into the base of a goblet. You'll see different ways to use the same star pattern in other projects. I'll also share how to prevent the ebony sanding dust from staining maple. Eli's additional rotations:

■ **Bowls with Inlaid Leaf Pattern**

■ **End-Grain Boxes**

Dixie Biggs, Florida

■ **Simple Surface Embellishments**

I'll show you some easy ways to enhance your work with the use of dyes, grain fillers, or the simple use of dot, dots, and more dots.

Dixie's additional rotations:

■ **Sprouting Leaves on Wood**

Matthew Birchfield, Virginia

■ **Shotgun-Shell Box**

This demonstration teaches all aspects of how to turn a full-scale replica of a 12-gauge shotgun shell with a twist: the "brass" unscrews to reveal a small box.

Tom Boley, Virginia

■ **Setting Up a Woodturning Business**



Is it time to move from hobby turning to a business? You'll learn about facility needs, equipment requirements, finding customers, and about materials and supplies as well as about business records, products, safety, and pricing.

Dug Campbell, Virginia

■ **Spindle Duplication**

From simple cylinders and tapers to more problematic architectural turnings, this class will focus on this basic tenet: The reproduction of most turned work can be diffused into a more approachable format for production turners and beginners alike.

Dug's additional rotations:

■ **Inside-Out Ornament**

Myron Curtis, Virginia

■ **Shop-Made Turning Tools**

We'll discuss steel, ferrules, handles, grinding, and design of the cutting edge, plus my simplified tool-sharpening technique. I'll share with you some of the many learning experiences from more than 65 years in the shop.

Myron's additional rotations:

■ **Repetitive Turnings**

■ **Turning Spheres**

Jamie Donaldson, Kentucky

■ **Video for Club Meetings**

Using proper camera technique is not rocket science for an operator versed in both turning and basic camera operation. This subject also can be utilized by individuals interested in documenting the turning processes for their own purposes.

Cindy Drozda and

David Nittmann, Colorado

■ **Right Brain, Left Brain**

Engaging both sides of the brain is essential for creating a successful

artwork. Cindy (Ms. Left Brain) and David (Mr. Right Brain) interact on and off the lathe to demonstrate how to engage both hemispheres in the pursuit of a signature style of artwork.

James Duxbury, North Carolina

■ **Kaleidoscopes**

After much experimentation, I have taken the best features from many other kaleidoscopes and added a few of my own twists to create a kaleidoscope that functions well and produces a beautiful piece of gallery-quality wooden art.

David Ellsworth, Pennsylvania

■ **Teaching Methods**

Stop by for a discussion to explore current methods of teaching woodturning, our history of teaching, how we receive information, alternative methods of teaching, and the effects of teaching on our growth as a creative medium.

J. Paul Fennell, Arizona

■ **How to Ship Your Work**



Have you ever worked for weeks or months on a piece for a show, shipped it, only to be notified that it arrived damaged? My rotation will discuss the options in shipping, packaging,

insurance, and other things to consider for peace of mind.

Doug Finkel, Virginia

■ **Bowl Talk: Decisions, Decisions**

We'll start with natural-edge bowls that celebrate the collaboration between the maker and the material. Then we'll chart a path through a series of bowls based on the amount of tooling and reworking that the turner has decided to impart. Doug's additional rotations:

■ **The Palmer Sharpless 3-Ring Circus**

continued

Mark Gardner, North Carolina

■ **Turn a Square Bowl With 3 Axes**



This demo illustrates my approach to turning and the use of the lathe as a tool for shaping wood,

not just for making it round. To turn three different axes, I hold the bowl on the lathe using 2x4s, hot glue, and drywall screws. Mark's additional rotations:

- **Surface Embellishment**
- **Turn a Hollow Form**

Larry Hasiak, Florida

■ **The ABCs of NIP**



Grab a front-row seat and learn more about the stunning characteristics of Norfolk Island Pine while I turn a

hollow vessel. You'll learn about spalting and see the techniques to expose this wood's star pattern.

Larry's additional rotations:

- **Hollowing the Low-Tech Way**
- **From Vessel to Ornaments**

Mack Headley, Virginia

■ **Turned Furniture in the 18th Century**

At Colonial Williamsburg, we reproduced our lathe with the help of blacksmiths for the museum's reconstructed Anthony Hay Cabinet Shop. I will also cover 18th-century preferences in design vocabulary, scale of detail, and subtlety and control of the curve.

Kurt Hertzog, New York

■ **Penturning Tips & Tricks**

We'll cover a variety of tips and tricks that will help you turn the best pen possible. Included will be techniques for glue-up, wood orientation, measuring, sanding, finishing, and assembly. Most of what you learn won't require special tools or equipment.

Kurt's additional rotations:

- **Making Your Pens Unique**

Julie Heryet, United Kingdom

■ **Guiro Instrument**

The guiro, a popular Caribbean percussion instrument, is a wonderful turning project. I'll show you multicenter techniques and how to hollow a small end-grain project such as this.

Julie's additional rotations:

- **Hand-Chased Boxes**

Jim Hilburger, New York

■ **Gadgets & Jigs**

The chips will fly! I will make a sanding disc in seconds, use another tool to drill a self-centering hole in a stick pen, and assemble a wooden top that is simple yet very functional, along with other jigs. And that's just for starters.

Todd Hoyer, Arizona

■ **Wood and Its Characteristics**

Find a seat and we'll spend our time exploring wood and its unique characteristics as related to the turned form. I will cover cell structures and their orientation in the log and how it relates to wood movement, shrinkage, and cracking. And we'll talk about spalting, insect damage, burls, and weathering.

Todd's additional rotations:

- **Vessel Orientation**
- **Turning Crotches**

Bonnie Klein and Jon Magill, Washington

■ **Projects on the Rose-Engine Lathe**

Rev up your rose engines! Learn the basics, some of the capabilities, and watch a couple of projects being created on the MDF rose-engine lathe.

Dale Larson, Oregon

■ **Drying Bowl Blanks Successfully**



We will cover how to rough-out and then successfully dry green bowl blanks without cracking or degrading.

I will focus on air-drying, but will also discuss kilns, soap and alcohol soaking, microwave and freezing methods.

Dale's additional rotations:

- **Reading the Tree**
- **Turning Spheres by Eye**

Albert LeCoff, Pennsylvania

■ **Nothing is New: Then and Now**

With the help of friends, we'll compare and contrast the last 75 years of contemporary woodturning. We'll draw on photos from the Wood Turning Center archives and other sources.

Alan Leland, North Carolina

■ **Stools**

With the proper tool techniques and skills for both faceplate work and between-center work, turning a three-legged stool can be a rewarding experience. The first part of the demonstration will cover turning the seat and legs for a 17"-tall stool. In the last part of the demonstration, I will go over drilling the leg holes in the seat and measuring the cross braces for a large stool.

Alan's additional rotations:

- **Heirloom Lamp**

John Lucas, Tennessee

■ **Banksia Pods and Tagua Nuts**

I'm eager to show you how to use tagua-nut turnings for accents in your projects, including making chatter-work inserts and tagua-nut inlays. Before our session is over, you'll also learn how to turn a dollhouse-size lamp.

Jon Magill, Washington

■ **Build a Rose-Engine Lathe**

I will take you through what is involved in building your own homemade rose-engine lathe. The complete detailed plans, construction drawings, parts list, and suppliers will be available. We will look at all the components, the assembly, and some of the fascinating accessories that will let you begin your exploration into ornamental turning.

Jim Miles, North Carolina

■ **Segmented and Stave Construction**

Join me for a lively discussion of herringbone and open-herringbone construction, missing-staved construction, segmented staves, and missing-segmented staves.



OUTSTANDING PANEL DISCUSSIONS

A Buyer's Perspective on Woodturning. Kevin Wallace, moderator; Arthur and Jane Mason, panelists. "What makes a turned-wood artwork worth acquiring? Gain insight into the world of dealers, collectors, and curators. Learn the criteria used in selecting works to be exhibited in galleries and museums and how to apply this knowledge to your own career."

Sorting Reality from Myth. Betty Scarpino, moderator; John Kelsey, Terry Martin, and Kevin Wallace, panelists. "We will talk about how legends are made. Is it simply publicity? Are timing and placement important? Big fish in a small pond? Are there legends who don't measure up? Is it important to be famous? Learn what a well-written, well-placed article can do for an artist."

Teaching Woodturning. Michael Mocho and Mark St. Leger, moderators. "Woodturning ability does not automatically make one a capable instructor. This session is for those who would like to share their enthusiasm for woodturning with others and learn a variety of effective communication strategies suited for particular ages, time formats, and skill levels. There will be plenty of information on how to prepare for different class formats, as well as project suggestions, time-management strategies, and important safety considerations. There will also be numerous examples of common instructional challenges and suggested solutions."

The Critique Process. Jim Christiansen, moderator; Stephen Hatcher, panelist. "We will cover what the critique is and why it is important. We will use our own works to illustrate constructive critique for positive growth, along with suggestions for holding critiques during local chapter meetings."

Michael Mocho, New Mexico

■ Lathe Textural Technique



Come learn how to use a variety of commercial and shop-made tools to easily add texture and low-tech ornamental effects that add interesting detail and contrast to your work. I'll demonstrate the application of chatter work, indexed embossing, reeding, and synchronized-burr texture.

Michael's additional rotations:

■ Sculptural Sanding

Jan Peters, California

■ Marketing Your Work

Join us for a program addressing the how-to and why of successfully marketing your work from a gallery or store perspective. We'll talk about things to do and not do in preparing a marketing plan to assist retailers in selling your work.

Binh Pho, Illinois

■ Turn a Thin-Walled Bowl



If you are intimidated with turning a thin-walled vessel, please come to see this demo.

I guarantee this demo will change your mind. Using green wood and a light source to gauge wall thickness, I will also demonstrate how to use a conventional bowl gouge to turn a bowl. Binh's additional rotations:

■ Surface Design with Airbrush

■ Surface Design with Piercing

■ Transform the Inspiration to Your Work

James Proffitt, Virginia

■ Platters With Enhancements

Stop by and see how pyrography, coloring, and texturing can enhance the rims and centers of your platters.

continued

Youth Turning Room

The AAW will again offer woodturning instruction in Richmond for youth ages 10 through 17. Youth must be accompanied to Richmond by a registered adult. Youth registration will be free and will include a complimentary banquet ticket (subject to availability, provided the adult sponsor has purchased a banquet ticket).

Register youth by contacting the AAW office at 651-484-9094 before May 15. In late May, registered youth will be contacted via e-mail about session schedules.

Nick Cook, Bonnie Klein, Larry Miller, and Joe Ruminski will conduct hands-on turning instruction.

The Youth Turning Room will feature 25 brand-new turning stations. Participating youth will be eligible for a drawing to win a complete turning station donated by generous supporters: WMH Tool Group (JET mid-lathes on stands), Teknatool International (Nova Precision midi-chucks and dead cup drive centers), Crown Tools (basic tool sets), Cryosteel Engineering Technologies (turning tools), Dust Bee Gone (safety goggles), Vince's WoodNWonders (finishing supplies), and Woodcraft Supplies (face shields). Freight from Richmond will be the responsibility of the lathe winners.

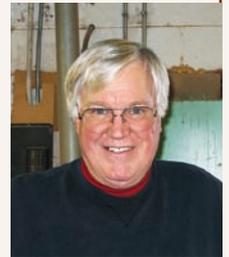
This ambitious program will require at least 15 volunteer assistants in the Youth Turning Room during each rotation. If you'd like to help, please contact Al Hockenbery (youth@hockenbery.net). This is your opportunity to change a life and help another generation of woodturners.

In addition, separate youth display tables will be set up in the Instant Gallery.

—Al Hockenbery, Chairman of the Education Committee



Bonnie Klein



Nick Cook

Richard Raffan, Australia

■ **Back to Basics**

I'll show how to get the most from your skewers, gouges, and scrapers, and why tools catch. Along the way, I'll turn a few scoops, pots, and bowls. You won't be disappointed.

Richard's additional rotations:

- **Bowls**
- **End-Grain Box**



Avelino Samuel, U.S. Virgin Islands

■ **Layout and Carving Spiral Vessels**

The demonstration will include the anatomy of a vessel, layout, jigs and tools, and sanding techniques. I'll show you

how to shape with power carvers, cut V-grooves, and refine the shape with a rabbet plane.

Avelino's additional rotations:

- **Layout and Carving Straight Vessels**

Tib Shaw, Minnesota

■ **Do A Lot With a Little: Photographing Your Work**

Stop by to learn easy set-ups and pointers for photographing your turned pieces. Using inexpensive materials and following a few basic principles will help you create clear and attractive photos of your work without a huge investment of time or space.

Bill Smith, Pennsylvania

■ **Open-Segmentation Basics**

Learn everything you need to know to get started in open-segmented turning. I will guide you through a simple project from start to finish including design, jigs, materials, and turning.

Bill's additional rotations:

- **Beyond the Basics**

Hayley Smith, Arizona

■ **Design: Whatever Turns You On!**

A woodturner's most important tool is not found in the tool rack. I will discuss with you sources of inspiration, and how to develop them and apply them to your

work. Then it's time for the tool rack! Hayley's additional rotations:

- **Design: Revolving, Evolving Ideas**
- **Surface Treatments: Texture & Color**



Ted Sokolowski, Pennsylvania

■ **Pepper Mill**

As you watch a pepper mill evolve from a 3x3x9" blank, I'll share what I think about in terms of

curves and their relationships to one another. Subjects such as parallelism, Rule of Thirds, volume, weight, and quality of line will be discussed.

Mark St. Leger, Virginia

■ **Rocking On**



Join me and learn all the steps to create a lidded box turned on the bias. When complete, the box will gently rock with the lid, creating a ticktock

effect as it rocks to its final resting point. I'll share the designs for shop-made jigs to hold small pieces for turning.

Mark's other rotations:

- **Third Axis of Motion**

Jim Staley, North Carolina

■ **Turning Steels**

You've heard the claims given without supporting data: "My tool is made from the best steel." Or: "This gouge will turn five times as many bowls." Now hear the results of the first scientific, unbiased, quantitative tests of steels for woodturning.

Al Stirt, Vermont

■ **Open Bowl Turning/Balancing the Grain**

Learn how to rough out a green-wood bowl and then finish-turn a dry bowl. I'll emphasize how to get the best grain pattern from straight-grain wood by manipulating the turning block.

Al's additional rotations:

- **Turned and Carved Square Platter**
- **Turned, Painted, and Carved Graffiti Platter**

Curt Theobald, Wyoming

■ **Segmented Patterns**

Segmented turners shouldn't miss this demo on how to accurately plan projects before any wood is cut. I'll demonstrate drawing the blueprint for a bowl with a segmented pattern and the building process of the pattern. Then we'll discuss how to create several patterns to enhance segmented woodturnings.

Curt's additional rotations:

- **Evolution of Segmented Turning**
- **Understanding Wood Movement**



Linda Van Gehuchten, Pennsylvania

■ **Natural-Edge Angel**

I will show you step-by-step procedures on how to turn one of my signature angels with a textured halo and some heavenly details. Techniques include turning a natural-

edge bowl and a small spindle turning with texturing.

Linda's additional rotations:

- **Nativity Scene**

Jacques Vesery, Maine

■ **Concepts in Design**

This lecture is an in-depth comparison of design components before and after turning, including form, balance, and proportions. Through a presentation of several artists' work, we will learn how variations and growth help a body of work evolve.

Jacques' additional rotations:

- **Creating a Canvas of Good Form**
- **Texture and Color Become Second Nature**
- **Attention to the Little Things in Life**

Malcolm Zander, Canada

■ **Form and Design**

What is form? Is there such a thing as "good" or "bad" form? How can I develop new forms in my work? Where can I find new ideas and sources of inspiration? This talk, illustrated with many slides, will look at these questions and more.

Malcolm's additional rotations:

- **Thin-Walled and Pierced**

Highlights

Turned for Use II

This themed exhibit of juried work opens June 19 at Gallery5. Don't miss a preview of this exhibit in the Summer journal. Open through July 11.

The Sphere

At the Greater Richmond Convention Center (symposium site), you'll see a display of 50-plus spheres (up to 6" diameter) turned by Professional Outreach Program members. These pieces will be sold at auction. For more details, see *page 14*.

Instant Gallery

Surround yourself with inspiring new work created by attendees. More than 1,000 pieces have been on display at the past symposiums. The Instant Gallery critique on Sunday morning will include Excellence Awards. Details: *page 14*.

Special Interest Night

Make plans to join one of the special-interest groups meeting on Friday evening. At press time, we've reserved rooms for boxmakers, Collectors of Wood Art, penturners, ornamental turners, and segmented turners, plus education opportunities. Demonstration rooms are available for more groups; contact Al Hockenbery (al@woodturner.org).

Resident Artists

The resident artist program is a new feature for this year's symposium. For details about the work of Louise Hibbert and Sarah Parker-Eaton, see the Winter 2007 issue.

EOG Auction

Join us for the Saturday evening auction of turned pieces. Proceeds from the auction benefit the AAW Educational Opportunity Grants (EOG) program.

Return to the Community

Attendees are encouraged to bring tops and turned toys for donation to Children's Hospital in Richmond. For more details, see woodturner.org.

Our Biggest Trade Show Ever

You won't see a larger exhibit of woodturning equipment anywhere else on the planet. Reserve several hours during your stay to walk among booths of the major lathe manufacturers and a myriad of specialty suppliers.

Learn to Turn/Win a Lathe

Don't miss the Learn to Turn hands-on area on June 19 sponsored by Choice Woods and Delta Machinery. More than 20 symposium attendees will win a new Delta midi-lathe. Visit the Learn to Turn area near the registration desk for details.

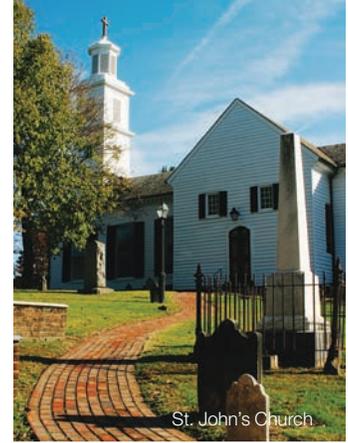


Photo: Jay Paul

10 More Great Reasons to See Richmond

1. Catch the 1775 reenactment of Patrick Henry's "Give me liberty or give me death" speech at historic St. John's Church.
2. Egg-citing exhibits at the Virginia Museum of Fine Arts include the largest public collection of Fabergé Easter eggs outside of Russia.
3. Relive American history with a visit to The Museum and White House of the Confederacy. Wander among the world's largest collection of Confederate artifacts and Jefferson Davis' mansion.
4. Bend an elbow at the Legend Brewing Company, just one of the area's microbrew pubs.
5. Test your kayak skills on the James River, where you'll find Class III and Class IV rapids in a rare urban setting.
6. Need to get away for lunch? Patrons of Chez Foushee restaurant rave about the albacore tuna salad and white-bean hummus.
7. Feel youthful when you walk through Henricus Historical Park, which re-creates the 1611 English settlement, Cite of Henricus.
8. Meet your turning friends for breakfast at the Third Street Diner, five blocks from the convention center. Don't miss the Diner Red (corned beef) Hash. Open 24/7.
9. On Shockoe Hill, wander about the Virginia State Capitol, designed by Thomas Jefferson. This building also served as the Capitol of the Confederacy.
10. If you crave food finds, make a beeline to Buz & Ned's Real Barbecue for a tangy "coarsely chopped and oversized" pork or boneless chicken sandwich.

Getting to Richmond

Air Travel

Discounted airfares are available through Northwest Airlines. Please contact your travel agent for information and ticket purchases if you plan to fly into Richmond International Airport (RIC). Be sure to mention the airline ID code so AAW will be properly credited.

NORTHWEST AIRLINES code NMDMP
Reservations may also be made through Verene Travel, official travel agent for AAW, at 651-481-4970.

Ground Transportation

Cab fares from the airport to host hotels run \$25-\$30. The trip takes about 10-15 minutes.

Avis Rent A Car Systems has extended a discounted rate for those who want to utilize a rental car. Call 800-331-1600 and use Avis Worldwide Discount code J867085 to receive the discount.

Lodging

Ask for the AAW discount to receive our special rates. Reserve your room early; rooms are limited and available on a first-come, first-served basis. A block of rooms is reserved until May 20, but the hotels may be sold out earlier if demand is high. Need a roommate? See the AAW online forums.

Richmond Marriott (host hotel)

804-643-3400

Rate: \$115 plus tax for a single or double

Omni Richmond Hotel (alternate hotel)

804-344-7000

Rate: \$119 plus tax for a single or double

Confirmation packages include directions to the Richmond hotels. The demonstration schedule is included in the on-site registration packet or at woodturner.org.

Williamsburg KOA

757-565-2907

info@williamsburgkoa.com

Solid wood body, segmented feature ring

Transitional Vessels

By Jim Rodgers

Transitional vessels highlight beautiful turning stock with a feature ring that adds minimal decoration. Although there are many different methods to construct this vessel, the one shown here is a simple and reliable method using two faceplates, a live center system, and standard lathe tools.

The two-faceplate method allows you to form the vessel as a whole unit, separate it into two halves, hollow the interior like a bowl, and then glue the parts together as a completed vessel. The chucking method for this technique has another important advantage over traditional chucking methods: You keep the components in alignment each time you remove and remount them from the lathe.

Because the diameter of the vessel is less than 4 1/2", cross-grain movement should not be a problem. However, it's always wise to incorporate completely dried and stable hardwood (moisture content at 6–8 percent) into your segmented projects.

Note: Always make your glue blocks from a dense hardwood such as maple or ash. MDF, particleboard, or plywood could delaminate and cause an accident. Use high-quality machine screws to fasten glue blocks to the faceplates. Drywall screws are too brittle for this task. For this project, #8x1 1/2" machine screws are a good match.

After you absorb the information in this article, view the step-by-step slide show on the AAW website. Follow the links from woodturner.org to the American Woodturner tab.

Get started

For turning tools, you'll need a 3/8"-deep fluted gouge, a narrow parting tool, a heavy-duty bowl scraper, and a 1/4" shallow fluted gouge. You'll need two 3"-diameter faceplates; for these smaller projects, aluminum faceplates are acceptable. You'll also need a revolving center system and a Oneway thread adapter.



A feature ring of segmented turning adds interest to these small vessels. Burl turning stock adds appeal and ensures stability.

To machine the segmented sections, you'll need a cutting sled for your tablesaw. For details on building a 15-degree cutting sled, follow the journal links on the AAW website to the Winter 2005 issue, "Building a 15-Degree Cutting Sled." To prepare the segmented parts, make a sanding stick described on page 24.

The finished size for this vessel is 7x4 1/2"; the size of the body defines the size of the feature ring. You probably have the materials for the body and segmented feature ring in your scrap box.

Select hardwood stock for a solid body, bandsaw it into rectangular stock, and cut it into bottom and top



portions. The bottom portion should be about 80 percent of the block. When the feature ring is built, it's diameter will be the widest diameter of the vessel and fit within the Golden Mean design consideration.

Select other components based on the size of the vessel: a base (usually a darker wood) and neck (possibly a burl of contrasting color or grain). The base width is normally about 50 percent of the final body and the neck about 30–40 percent of the same.

Cut veneers to the same outer dimensions of the body to emphasize the color transitions from base to body to feature ring to top of body and to the neck. Dark veneers sharpen the transitions.

Design and build the feature ring

The feature ring is a segmented ring built from an accent or decorative wood using veneers for spacers. A 12-segment ring is a good starting point. You can find the segment edge length on the “Segment Edge Estimation Table” posted on the AAW website.

Measure the diameter of the body and look up the segment edge length required. (Because there is little vertical curvature at the center of the vessel, a $\frac{3}{4}$ " thickness is generous.) Cut the pieces with a cutting sled (Photo 1).

For more details on assembling the feature ring, see the article “Segmented Turning School” in the Winter 2005 issue of the journal. As detailed in that article, cut, sand, and glue together segments 1–6 and 7–12 by clamping them in a hose clamp and using two small dowels to separate the unglued segments (Photo 2). These dowels force any minor cutting errors to accumulate at the dowel pivot point. Use a polyvinyl acetate (PVA) glue such as Titebond II to glue together the pieces.

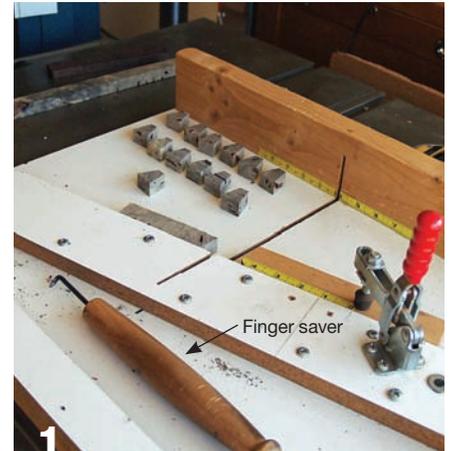
After the glue dries, sand the two half rings flat. Then glue and clamp the feature ring together.

Stack your vessel pieces to get a rough idea of the appearance and proportion (Photo 3).

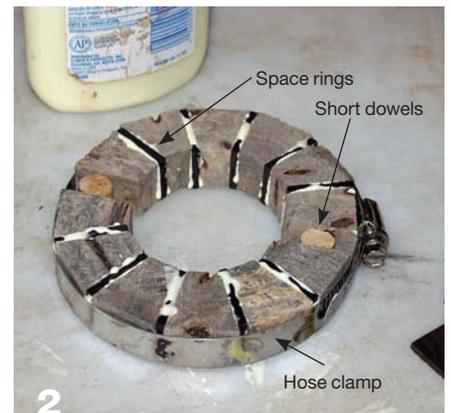
Prepare the faceplates

The glue surfaces must be flat for the components (subassemblies) to align well and for the glue to hold securely during turning. If the surfaces are flat, the feature ring will look crisp.

Flatten the glue block attached to the faceplate with either a deep-fluted gouge or a skew chisel laid on its side and worked as a negative-rake scraper. When you think the surface is flat, check it with a bright



1 With a cutting sled, cut 12 pieces for the feature ring. The finger saver (a sharpened Allen wrench in a handle) helps hold and retrieve small segmented pieces.



2 With two small dowels as spacers, use a hose clamp to hold two half rings together while the glue dries.



3 After assembling the feature ring, check the proportions of the vessel sections.



4 With the lathe running at a slow speed, flatten the glue block with a sanding stick.

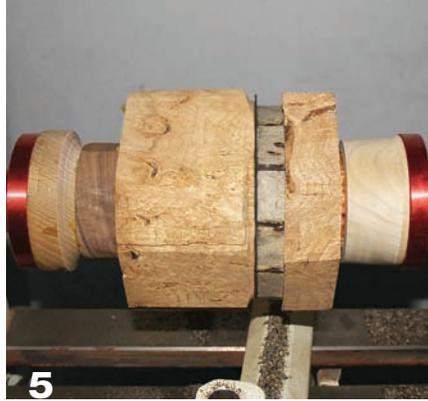
light held against a straightedge. No light shining through ensures flatness. When you get close to flat, use a sanding stick with the lathe running at slow speed (500–800 rpm) to finish flattening the block (Photo 4).

Build the assemblies

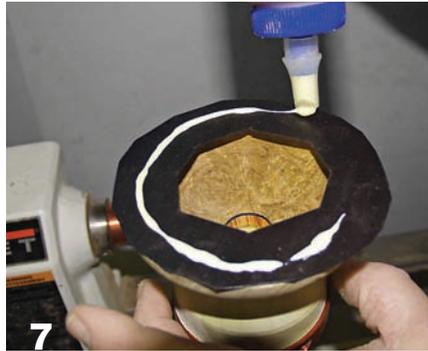
Sand the components, including the feature ring, flat on one side. To avoid mounting the wrong side on the faceplate, mark the exact center of the opposite side.

Glue the base to one of the faceplates and glue blocks. Then flatten the base as described earlier. After the glue tacks (about 5 minutes), remove the assembly and place it in another clamping device to dry. (I use my drill press.) After the base section is glued and removed, assemble the top to the second faceplate following the same procedure.

Remount the base and glue the lower body to it. If you insert a veneer between layers, you must



5 Apply pressure to the assembly by tightening the tailstock quill.



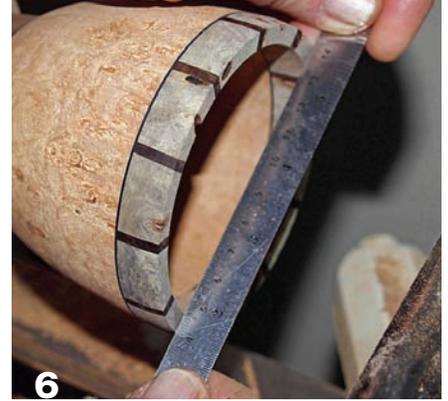
7 Dry-clamp the sections to test the fit and apply a bead of glue to the veneer section.

keep a constant clamping pressure until the glue is dry. If you remove the clamping pressure too early, the moisture from the glue may crinkle the veneer and open the glue joint.

After the glue dries, remount the lower body and use a sanding stick to flatten the assembly. Install the feature ring as the last layer on the bottom assembly. Repeat this procedure for the top assembly.

Turn the exterior shape

After flattening the abutting surfaces, press the two halves together.



6 True the edge of the mounted feature ring and check for flatness with a straightedge.



8 Align the two sections and apply clamping pressure with the tailstock.

Mount the top assembly (faceplate, glue block, and turning stock) on the revolving center thread adapter. Press the two halves together, using the tailstock quill to apply pressure (Photo 5).

Then turn and refine the exterior shape of the vessel with a deep-fluted bowl gouge. Do not reduce the diameter of the base or neck section at this step; postponing this provides more strength during hollowing. Slide the top assembly out of the way.

Hollow the interior halves

With your $\frac{3}{8}$ " deep-fluted gouge, hollow the base interior using standard steps for hollowing a bowl. If your vessel is deeper than the diameter, you may find a large bowl scraper helpful. (I turn the wall thickness to $\frac{3}{16}$ " or $\frac{1}{4}$ ". When I later reshape the outside, I can correct for

Flattening Stick Improves Assembly

Make a flattening stick like the one shown at right from a $\frac{3}{16}$ " strip of 80-grit sandpaper. Adhere the sanding paper to the hardwood with 3M Type 77 adhesive.





alignment issues or problems generated during the initial shaping). Sand the interior to 180-grit and seal the interior. (I use a coat of 3-pound cut shellac.)

After the sealer dries, true the edge, check it with a straightedge (Photo 6), and sand it with a flattening stick. Repeat these steps for the top assembly.

Join the two halves

Remount the top portion onto the tailstock/live center adapter. Then attach the base to the headstock and glue together the two sections. First apply a bead of glue to the top. Then run a bead of glue around the veneer section (Photo 7). For accent, insert a sheet of veneer. The live center will help you get close alignment of the two sections (Photo 8). Use the tailstock to apply clamping pressure. Allow the glue to dry.

Part off the top section

With a narrow parting tool, part off the top section from the live center, allowing the entire vessel to rotate on the headstock. If your design

includes a natural-edge neck, flatten the top and glue on the neck stock using the method described earlier.

Complete the shaping of the top/neck sections carefully. Increasing the lathe speed and using a ¼" shallow fluted gouge makes the turning task easier. Take your time and take light cuts, which will minimize vibrations.

Complete the vessel

Reduce the base to its final proportions (the vessel at left has a 1½"-diameter base). By adding a small parting cut at the exact bottom of the vessel, your eyes get a confirmation of the base shape. This will help you refine the shape before you begin sanding and finishing the vessel.

Finish the vessel while it is still attached to the faceplate. Sand to 220-grit and then apply three to five coats of a wipe-on polyurethane finish. Resand between each coat of finish with 320-grit sandpaper and use 0000 steel wool before wiping on the final finish.

Finish the base

Part off the vessel with a thin parting tool angled slightly toward the tailstock to create a small concave shape on the bottom. If you fear catching the vessel with a lathe tool, stop the lathe with a ½" tenon still remaining. Then saw through the remaining tenon (I use a Japanese pull saw) and remove any tenon remnants with a small carving tool.

With a small sanding disc mounted in the lathe or drill press, carefully sand the remaining center of the foot and repeat the finishing steps above.

Jim Rodgers (JLRodgers.com) is a studio turner and demonstrator who lives in Martinez, CA. He's a member of the Bay Area Woodturners Association.

Understanding Cross-Grain Glue-Ups

I have built these transitional vessels for five or six years and have made quite a few for gift shops and galleries. They have ended up in collections in both dry and humid locations, and I have never had one come apart. Maybe it is luck, but I believe that there are mechanical considerations that also help with the construction:

- Keep the size of the vessel small for several reasons. Due to their cross-grain structure, burls aren't affected much during seasonal wood movement. Also, a small piece is easier for the vacationing customer to pack, less costly for the galleries to sell, and you use more shop scraps.
- For the body, I use only burl woods that I have dried for several months. Burls are stable and don't move. In my area, maple and redwood burl are readily available and sell well when incorporated into a vessel.
- The glue that I use is Titebond or Titebond II, which will creep with the wood movement. I never use cyanoacrylate (CA) glue because it doesn't move with the wood.
- The glue joints are as tight as I can make them. The rings and the face of the burl are flattened and sanded with the sanding stick. If I insert veneer, my clamps keep positive pressure for 3–4 hours before next construction stage.
- All wood is sealed inside and outside, which minimizes absorption of moisture. As the vessels are constructed, I apply shellac inside. If they are more open in design, the inside is finished with a urethane oil varnish such as Waterlox or Minwax Wipe-On Poly.

—Jim Rodgers

Environmental Responsibility

By Bradford Whitman

In the Winter 2007 issue, Brad Whitman explored the environmental impacts of woodturning with respect to the selection and purchasing of tropical hardwoods, endangered tree species, and tropical deforestation. Part II discusses the third-party certification of forest management and wood products by the Forest Stewardship Council (FSC) and how woodturners can become environmentally responsible by shifting from blind purchases to certified wood purchases for lathe projects.

As explained in Part I, there are at least three essentials for environmental protection in the international wood trade: 1) correct identification of tree species and protection of those species that are endangered or threatened, 2) prevention of over-cutting, illegal logging, and the destruction of fragile and biodiverse ecosystems of high conservation value, and 3) verifiable chain-of-custody control over the importation and sale of wood products. The most reliable means of achieving these goals is through an independent, third-party certification system.

There are various certification systems around the world operated by industry groups, governmental bodies, and nongovernmental organizations (NGOs) composed of representatives of environmental groups, indigenous peoples, industry,



and labor. As an environmental lawyer, I am familiar with a number of regulatory systems and their enforcement. In order to be effective and have integrity and credibility, a forest certification system must be transparent to public scrutiny and employ a network of inspectors and auditors who can apply clear and specific standards to the forestry operation and track the shipment of certified wood from the forest to the retail consumer.

Finally, a key factor in ensuring the long-term success and integrity of any system is the inclusion of local workers and indigenous peoples and the adoption of fair trade criteria that provide for their welfare.

I researched several forest certification systems, and I interviewed knowledgeable persons in industry, academia, and certain NGOs. The Forest Stewardship Council (FSC) system is superior to all other systems in its success in meeting the three key requirements.

Enforceable criteria for forest management

The FSC (fscus.org) was established through the efforts of the Rainforest Alliance (rainforest-alliance.org), the preeminent environmental group in tropical forest conservation. Since its founding in 1994, the FSC has established 57 enforceable criteria for forest management. The FSC addresses reforestation, biodiversity, the protection of threatened and endangered species, erosion control, the use of pesticides and other chemicals, and the welfare of workers and indigenous peoples.

The FSC system is multilayered. The FSC itself accredits separate entities like SmartWood (an affiliate of the Rainforest Alliance) to issue certificates for Forest Management and Chain of Custody trade. SmartWood works through and audits a network of local country partners who administer the criteria. FSC-certified wood products usually bear a green logo shown *opposite*. A list of FSC Certificates are summarized online at fsc-info.org.

Some people complain that the strictness of the FSC criteria inhibits the addition of new acreage. Any certification system is better than none, but unless the criteria are comprehensive and specific, the whole effort is a halfway measure at best, or a sham at worst. Although only slightly more than 10 percent of the world's harvestable forests are independently certified today, the pace of certification is definitely accelerating. In 2006, 3.7 million acres of forest in Brazil obtained FSC certification. In December 2007, there were more than 7,500 FSC Chain of Custody certificates in 84 countries.

Even the FSC encounters obstacles in ensuring integrity. In October 2007, there was a distorted media account of certification abuse by a corporate affiliate of FSC-certified Asia Pulp & Paper (AP&P) that destroyed rainforests in Indonesia and improperly sheltered its bad practices under its association with AP&P, which had certified operations in China. SmartWood reacted promptly with the FSC and The World Wildlife Fund, and took action against AP&P. The FSC published a tighter policy that would prevent the issuance of certificates and the use of the green logo when any affiliate of a certified operation destroys high conservation value forest or conducts logging illegally.



A pallet of timber carries the certification of the Forest Stewardship Council.

The number of abuses within the FSC certification system has been extremely small (fewer than 10 each year) compared to the number of certificates and the great differences in customs and cultures in these countries. The environmental benefit of FSC is unquestionably huge.

Getting on board

Woodturners have work to do to catch up to the environmental responsibility shown by the building and architectural trades, especially in the construction of new educational and corporate facilities and government buildings throughout America and Europe. Every year the annual meeting of the Green Building Council (usgbc.org) has grown. (The FSC certification is the only standard that this industry council recognizes as evidence of the wood product's sustainability.)

Several years ago, The Home Depot forced western softwood suppliers to join the FSC system in America and not sell old-growth timber. It all started with a boycott of Home Depot—i.e., the consumers educated by the environmental groups applying pressure. That's what the Green Building Council is doing on a much larger scale.

Admittedly, the woodturning market is much smaller in terms of board feet, but it is significant because it relies heavily on many species of tropical hardwoods, and the wood-purchasing is global, from the U.S. to Australia. And based on my investigation, the percentage of thick turning stock that is cut legally and in compliance with FSC's criteria is nil.

To test my conclusions, I sent an Internet query to a well-known supplier of woodturning stock that offers 89 different exotic hardwoods. I asked if FSC or other certification could be provided for turning stock of any of these types of wood. I received no reply.

I then submitted a dummy request for *Dalbergia* (the rosewood/cocobolo group) via the online "FSC Certified Product Inquiry" form found at fscus.org. I received prompt acknowledgements, but again no offers to sell stock.

Next, I searched through a less-restrictive system operated by Metafore (certifiedwoodsearch.org). Metafore said it carried four *Dalbergiae*, including "Northern rosewood." Later I received a "0 Supplier" response to my request, which confirmed my conclusions.

One web-based supplier, Diamond Tropical Hardwoods, also known as **Cocobolo King** (cocoboloking.com), showed images of salvaged logs that might be good for turning. Some of Cocobolo King's stock is from trees felled by a hurricane, and the company's local affiliate is planting cocobolo saplings on plantations. That was the only potential supply of *Dalbergia* turning stock that I could establish as meeting recognized environmental criteria.

African Blackwood

It's well documented that Blackwood (mpingo) is facing extinction in the wild, as stated in Part I of this series. The fascinating story of the African Blackwood Conservation Project (blackwoodconservation.org) is both shocking and inspiring.

In 2005, China soared toward the top of the list of hardwood importing countries when the Chinese government banned logging that had contributed to massive erosion and flooding. Illegal logging immediately exploded in Tanzania. The crisis spurred ABCP to raise enough money to grow mpingos from seed, to plant (and guard) 21,000 saplings (to the benefit of local mpingo carvers), to launch an endangered tree education program in the schools, and to plant other hardwoods for export and fast-growing fuelwoods needed by villagers.

—Brad Whitman

The woodturner's role

Woodturners interested in turning FSC-certified stock play a critical role in changing this situation.

First, several importers emphasized that turners must consider switching from familiar hardwoods (like *Dalbergia*) to alternative species that are abundant and could be certified in thick stock sizes. One supplier told me that it is simply illegal to export *Dalbergia*-type wood from certain Latin American countries in thicknesses greater than 11cm (4 inches). Think about carvers who switched from elephant ivory to other bone and other substitutes.

Or, as one member of my chapter said, "Think globally, turn locally."

Second, we must be willing to pay the premium of 20 percent to defray the costs of meeting the FSC criteria. A parallel example is paying a few cents more per cup for free-trade coffee than the popular brands.

Close to home, there is a Puerto Rican forestry operation, **Tropic Ventures** (eyeontherainforest.org), that uses ecologically protective measures to thin the forest and line-plant Blue Mahoe (*Talipariti elatum/Hibiscus elatus*) for small-lot sales to woodturners and others. The wood from this operation is not independently certified, but the practices are supervised by the Institute of Ecotechnics (UK). Tropic is experimenting with other species such as Honduras mahogany.

Third, the same helpful supplier encouraged me to ask SmartWood to help locate sources around the world.

SmartWood is a natural ally in solving this problem, along with its affiliate, Rainforest Alliance. SmartWood is already experimenting with a program called "Rediscovered Wood Operations" to market timber reclaimed from orchards, lakes, and rivers. A Canadian company, **Triton Logging** (tritonlogging.com), operates a similar program. Turners extoll this type of reclaimed wood for its interesting properties.

Fourth, there already exist tropical hardwood importers and distributors in this country who could assist woodturners, along with SmartWood, in developing a supply of certified turning stock. I spoke to Larry Percivalle, marketing manager of **EarthSource Forest Products** (earthsourcewood.com) based in Oakland, California. It holds FSC certificates for operations in Latin America and hopes to offer FSC wood from Africa this year. Its Guatemala operations have been praised as providing both good jobs and good protection of the rainforest. Among the fine crafts made from certified wood that are shown on EarthSource's website are a chair, music stand, and segmented bowls.

When wood is not stamped with the FSC logo, Jack Bockman of **EcoTimber** (ecotimber.com) of San Rafael, California, recommends

checking product invoices for FSC certification. If you purchase what you believe is FSC-certified wood but there are no FSC logos on the product packaging, it most likely is not certified (no matter what the rest of the information provided by the manufacturer or supplier might indicate). Jack explained that some importers having FSC-COC certificates also trade in uncertified timber.

I also spoke with Tom Wilson of **International Specialties, Inc.** (intlspecialchars.com), based in Collierville, Tennessee. His company represents **Precious Woods** of Brazil and also imports from Bolivia and Peru under a SmartWood certificate. Many of the tropical hardwoods shown in images on his website are FSC certified.

Europe currently consumes thicker stock than the USA, and the unusable "shorts" from that production could be a good source for woodturners. As with all tropicals, turners must investigate toxicity before selecting any species.

Finally, we must recognize that we have a specialty need, not unlike the musical-instrument makers who formed a buyers' cooperative to obtain ebony and blackwood.

Proof positive that markets react to consumer pressure.

Brad Whitman (bradturnsgreen.com) is an AAW member from Wynnewood, PA. He is an environmental advocate, author, and arbitrator.

Woodturner Feedback

In the AAW's online Forum and by e-mail, members commented on Part I of "Environmental Responsibility." One view was that investigating adverse environmental impacts and exploring alternatives to the blind purchase of tropical woods had no place whatsoever in the journal.

Other AAW members wrote that they had been concerned and were looking for sustainable alternatives. One professional turner and AAW member cited an FSC certification registered under his name and viewed tree conservation as integral to his woodturning.

Together the two parts of this series make it clear that the topic deserves serious attention among woodturners and that turners have both a responsibility and a practical role to play.

There was criticism that applying environmental criteria ousts subsistence farmers from

their land. In fact, one of the critical components of FSC certification and of other successful long-term conservation efforts like the African Blackwood Conservation Project discussed on page 27 (and shade-grown coffee for that matter) is ensuring "fair trade" in a variety of forms for local peoples.

Rose-Engines & Kings

Rose-Engines and Kings: Contemporary Ornamental

Turning 2008 is on display through March 22 at the Wood Turning Center in Philadelphia.

A companion exhibit featuring selections from the Wood Turning Center collection includes a special tribute to Dale Chase, a California ornamental turner who died in late 2007.

Ornamental turning has its roots in the 1600s when European kings appointed highly skilled artists with specialty lathes to execute the finest treasures in ivory and exotic materials for their personal collections.

A vibrant international community keeps ornamental turning alive. Ornamental turners continue the mathematics, engineering, and execution practiced historically. They use historic machines (rose-engine and Holtzapffel lathes) and/or contemporary machines and cutters they have customized for their work.

Jon Sauer, an ornamental turner from California, curated the show.



"Pattern Bowls" by Joshua Salesin of Santa Cruz, CA. Osage orange and loreto cherry; diameters range from 4½" to 7". "The organic spiral and floret patterns are achieved using an antique hand-powered rose-engine lathe."



"Untitled Texas Persimmon Box" by John Buehrer of Overland, MO. Texas persimmon; 3⅜x3". "The four engine-turned surfaces in this piece were all cut using the same rosette and reflect the various effects that are achieved with subtle variations in cutting technique. The foot of the box had its profile cut with a second rosette."



"Rose Cup II" by Al Collins of Lawndale, CA. African blackwood, boxwood, pink ivory inlay; 6½x3". At the 2006 Ornamental Turners Guild Biannual Symposium, Al won the coveted Rose Cup for best rose-engine work.



"Holtz Box" by Dewey Garrett of Livermore, CA. Faux ivory; 1¾x2¾". Dewey decorated the outside of the box with a quote from John Jacob Holtzapffel's 1884 book on ornamental turning.

OT



Build an Overhead Drive

By Jon Magill

Welcome to the first installment of a new department dedicated to ornamental turning (OT).

Like everything else in OT, and turning for that matter, there are at least a hundred ways to accomplish the same thing. That's true with this project, too, so read the following as general direction and approach it with your own ingenuity and available materials.

As those of you new to OT become more experienced, you will inevitably expand your arsenal of cutting frames and drilling spindles. See related article on *page 32*.

As a beginner (especially if you started with a rose engine), it is often sufficient to have a single motorized cutting frame. Over time, though, as you acquire more cutting frames to do more specialized tasks, you will want to easily switch between them. When you reach this point, you may want to build an overhead drive, as shown *above*.

The primary advantage of an overhead drive is one of economy. One motor drives all of your cutting frames and drilling spindles. I also appreciate that the motor is positioned farther from my face and ears while I'm turning.

This basic overhead is derived from an original design by English ornamental turner Paul Fletcher. Typically with a motor on the far end of the crane arm, that weight translates into belt tension, which supplies the traction necessary to spin the cutter on the cutting frame. Notches on the underside of the arm support the arm on top of a wedge-shaped pivot, the fulcrum for the whole arm.

These notches allow moving the arm forward or backward, which increases or decreases the belt tension. The upright support is a solid piece of $\frac{3}{4}$ "-diameter steel rod. You could

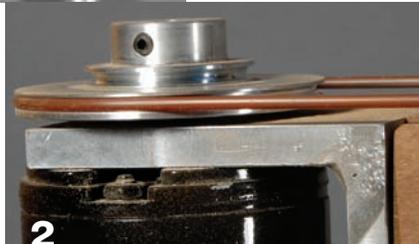
use galvanized pipe just as successfully. A number of holes drilled along the rod or pipe allows for adjusting the height. A simple clevis pin and a washer provide the support for the pivot to sit atop. Keeping the arrangement level isn't critical, but for the pivot and notches to work as intended, the closer to level it is the better (**Photo 1**).

A safety cord prevents the arm from toppling over if the belt breaks or comes off while you are turning. Using another clevis pin and cleating off the cord around it makes for a simple way to adjust it anytime you adjust the height of the arm.

If you use a single-speed motor, a step pulley will allow simple speed adjustments. A variable-speed motor is a luxury. If you use a variable-speed motor, I find it is helpful to still have at least two steps to keep the motor spinning within its optimal range (**Photo 2**).



The notches on the underside of the arm allow adjustment on top of the pivot block, which is supported by a clevis pin. The washer between the two allows the arrangement to rotate freely.



Even with a variable-speed motor, at least two steps in the pulley allow fine-tuning speeds. More steps would easily allow the use of a less expensive single-speed motor.

The motor can mount with either a flat or L-bracket to the back of the arm. The length of the arm should be sized to fit your lathe and layout. The two bars that make up the arm spaced apart by the diameter of your upright, allow the upright to pass between them. This also makes for a simple mounting option for the pulleys at the end of the arms. A bolt passing through the two parts of the arm (with washers outside each pulley and one between them acting as spacers) will keep everything running smoothly. Sliding-glass-door wheels from the hardware store provide a readily available and economical pulley source, seemingly custom made for the round belting (**Photo 3**).

Belting for most applications is 1/8"-round urethane belting. This is bought in lengths cut to fit, with the ends melted together to form a continuous belt of the appropriate length. As shown in **Photo 3**, crossing the belt allows quick and easy reversal of the rotation. Depending on your arrangement, the belt can be crossed on top of the arm as shown, or between the arm and cutting frame. Install additional pulleys on the top of the arm to reduce any belt-slap common with longer belts.



Two inexpensive sliding-glass-door wheels make perfect pulleys for the 1/8"-round belting. Crossing the belting provides a simple way to reverse the cutter direction.



HINTS, TIPS, AND Q&A

- Just like regular turning, cutting with the grain, or "downhill," will reduce fuzz. Many cuts overlap, so plan the sequence of cuts to eliminate tear-out and fuzz.
- Cutters must be sharp! You will never achieve a reflective cut off the tool, which is always the goal in OT, if your cutter isn't sharp. I once read that you can never get a better finish off of your tool than the finish on the tool itself. In other words, unless your cutter has a mirror finish, you cannot expect to produce a mirror finish on your work.
- Avoid using burrs designed for rotary carving. They rarely if ever leave a pleasing cut or finish. They also usually fall short of producing attractive OT patterns.
- Adjust the speed of your cutter to match your wood and the diameter at which you are cutting. A fast cutter will burn as it gets nearer the center (where the rotation of the workpiece is slower). Some woods are more prone to burning, and the cutter needs to be slowed for them. Maple is an example of a wood that requires a slower speed.
- The diameter of your cutter will determine the scale and detail of your decorations. Generally, smaller-diameter cutters allow decorations to be closer together with more details.

Send feedback, questions, and topic suggestions to jon@magill.com.

The Cutting Edge of OT

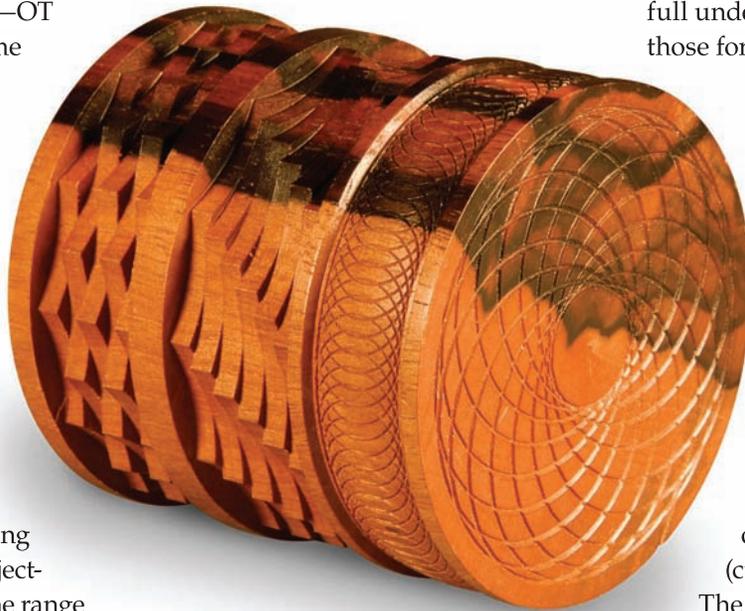
By Jon Magill

Ornamental turning—OT as it's known in some turning circles—is a broad and interesting, but specialized, niche of woodturning. Journal articles (see the Spring 2007 issue) and subsequent symposium demos have aroused considerable interest in OT.

Last year's goal of the Ornamental Turners International (an AAW chapter) was simply to expose more AAW members to this style of turning with a gallery of works, a project-centric article, and a hint of the range of what can be accomplished with OT. Armed with information on building a rose-engine lathe, many members have now started down the path of OT enjoyment.

Because learning ornamental turning is like learning to turn from the beginning, now seems like a good time to cover some OT basics.

The majority of what is accomplished in OT is attributable to the specialized cutting implements and ingenious chucks. The cutters (plain and profiled) produce endless patterns. The chucks move and position the work in ways that many find mystifying.



This ornamental turning sample shows just two variations of the thousands possible on the basket-weave pattern. The left is a simple alternating pattern; the right a pseudo-spiral effect. The face and the right end show two types of circular cuts possible with the eccentric cutting frame (ECF). The cut on the side of the cylinder has been "beaded" first with the ECF, then decorated on the resulting curved surface with additional circular patterns.

Over the centuries a dizzying and ingenious array of chucks have been invented that allow the positioning, orientation, and movement of the workpiece in ways that most find hard to visualize. Although the range of chucks is important for a

full understanding of OT, we'll leave those for a future article.

For now, let's regress a step and take a closer look at the OT tool's role and the broad range of OT cutting implements. After all, this is where the whole story begins.

Because the majority of the work done on a rose engine uses only one cutter style, the previous rose-engine article oversimplified some of the details for tooling (cutters and cutting frames).

The typical tool used on a rose engine has a tip sharpened to a 60-degree angle and held in one orientation. As a result, the more involved discussion of various cutters and cutting frames was glossed over due to space limitations.

OT differs from regular woodturning in that most of the work is done with a rotary cutter introduced to the workpiece, which is either stationary, indexed to a specific spindle position, or slowly revolving.

OT is all about: 1) precisely positioning, orienting, and moving the cutter; 2) optionally introducing a profiled cutter; and 3) positioning or moving the workpiece itself. Applied in

various combinations, these ingredients serve to create the infinite decorative possibilities seen in OT patterns.

Today, most of the cutting is performed with a rotary tool of some sort. It was the dramatic improvements and the invention of new types of rotary tools during the Victorian era in England that really enabled OT to take off in new and more creative directions.

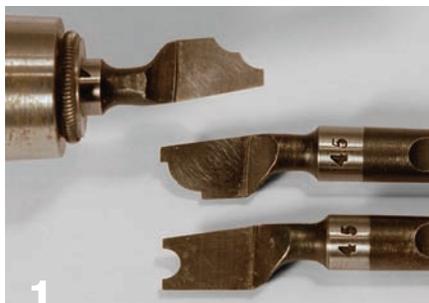
Before the introduction and perfection of the modern rotary tools, fixed tools were the norm. These often carried the profile of a shape the turner wanted to produce on the work. In earlier work, these tools were often handheld, simply as horizontal scrapers.

By the Victorian era, many cutters were standardized in size and held rigidly in the sliderest. The sliderest allowed the controlled introduction of the tool to the workpiece, including controlled depths, for consistency, precision, and repeatability.

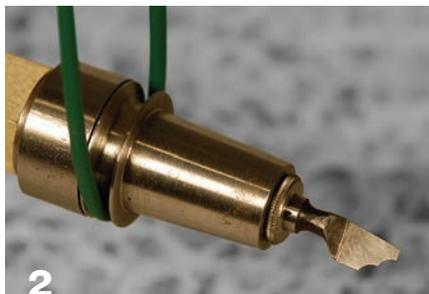
For more than a century prior to the Victorian era, drilling tools were widely employed. Although there was some use of simple pointed drills, many of the interesting early patterns were generated using elaborately profiled drills (**Photo 1**).

These profiled ornamental drills were mounted in a drilling spindle, the earliest of the rotary cutters (**Photo 2**).

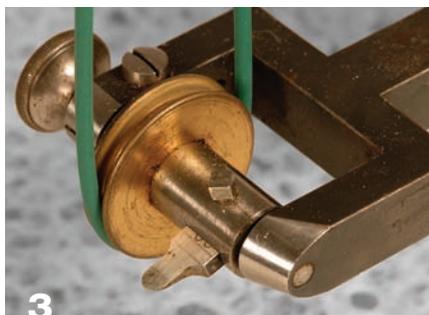
A drilling spindle held in the toolbox of the sliderest could be maneuvered around a workpiece in a controlled fashion. Fluting is the easiest procedure to visualize. To cut flutes, the spindle of the lathe is locked in the desired orientation, and the drilling spindle is brought into the work to the depth for the intended pattern. Then using the sliderest, the drilling spindle is moved along the work using the hand crank of the sliderest, resulting in a fluted



1 Examples of antique ornamental drills. Note the variety of profiles among these antique ornamental drills. These are all slightly offset, or cranked out, so that as they revolve, they only cut from the centerline out. The inside corner of each tip is exactly aligned with the centerline of the drilling spindle.



2 This is the typical nose of a drilling spindle with a drill in place. The belting connects to the overhead drive.



3 A roundnose cutter is installed in this antique vertical cutting frame (VCF).



4 Two examples of horizontal cutting frame (HCF) cutter heads are shown above. Both have 60-degree tips appropriate for rose-engine work. The motorized version, left, uses 1/8" round carbide cutters. The belt-driven version, right, uses triangular carbide inserts borrowed from the metalworking industry.

pattern. At the end of the cut, the drill is withdrawn, and the lathe's spindle is rotated to the next position and locked. The cutting process is repeated to create subsequent flutes around the piece.

4 basic cutting frames

Moving beyond the patterns possible with rotating drills required the invention of new cutting tools, known as **cutting frames**.

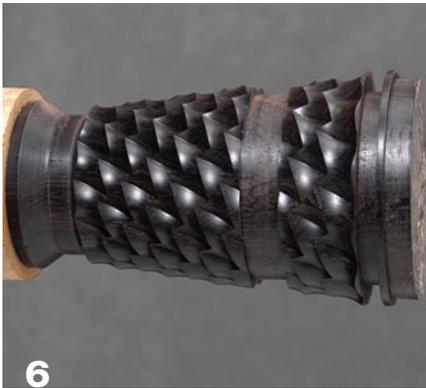
Cutting frames, and drilling spindles for that matter, are usually belt-driven, typically with 1/8" round belting, coming down from an overhead drive. The overhead drive, typical of all OT lathes, is the hallmark by which an ornamental lathe can be immediately recognized. (See a related article about overhead drives on [page 30](#).)

Because they could hold a cutter and rotate in a particular orientation, cutting frames revolutionized OT when they were introduced. The simplest is the **vertical cutting frame (VCF)**. The name can be confusing in that the cutter is spinning about a horizontal axis but making a vertical cut. The typical VCF has a single pulley for the drive belt, which goes up to the overhead drive. When the VCF is employed with a square-tipped cutter, it creates the familiar basket-weave pattern so often associated with OT (**Photo 3**).

Next in the cutting-frame family is the **horizontal cutting frame** or HCF. The belt-driven HCF is simply a VCF with the addition of two jockey pulleys that allow the cutter to spin about a vertical axis and make a horizontal cut. These added pulleys allow the belting to bend 90 degrees and go up to the overhead drive. For 90 percent of rose-engine lathe work, an HCF is used with a cutter sharpened to 60 degrees (**Photo 4**).



This universal cutting frame (UCF) is styled after the original design by Birch. The bevel gears on this model allow the belt to remain directed upward to the overhead drive while the cutting head can be tipped through various angles between horizontal and vertical.



A surprising range of patterns can be created with the UCF simply by tipping it at angles. This pattern was produced using a rose-engine lathe and the UCF tilted to about 30 degrees.



With chips flying, a modern eccentric cutting frame (ECF) uses an $\frac{1}{8}$ " round carbide cutter. An example of the ECF's versatility is that it can cut a variety of hemispherical shapes merely by introducing it to the work at an angle, shown here at about 45 degrees.

Why not allow the cutter to work at any angle between vertical and horizontal? That's the job of the **universal cutting frame** or UCF (Photo 5). You can create many interesting patterns just by tipping the cutter at an angle (Photo 6). However, the UCF's greatest value is in making cuts where the angle must be aligned precisely, as when matching the lead angle of a spiral cut as it wraps around a cylinder.

Suffice it to say that the UCF adds significant complexity over the VCF and HCF. There have been many ingenious schemes to allow tipping the cutter over at any angle while maintaining the belt orientation upward toward the overhead drive.

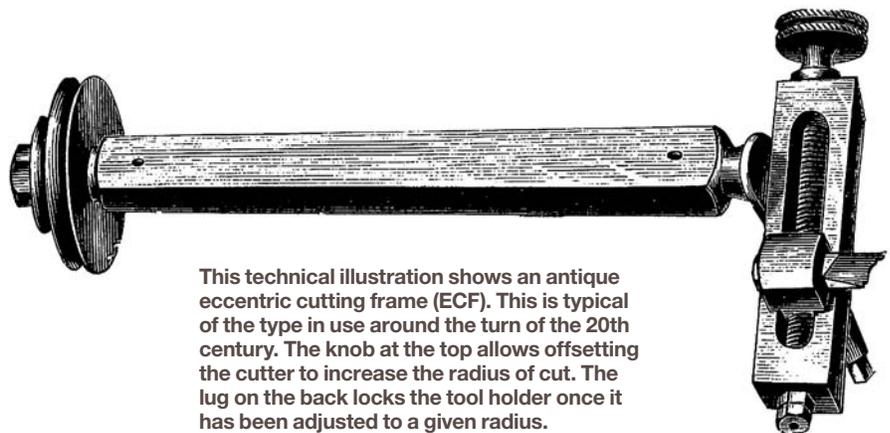
Last but not least of the conventional cutting frames is the **eccentric cutting frame** or ECF. The ECF has a cutter holder that can be moved off-center relative to the axis of its spindle, thereby cutting circular patterns. Antique ECFs had a threaded screw running through the head and a knob with a micrometer scale to accurately set the eccentricity of the cutter. Contemporary ECFs tend to be simpler in design and often can be set by direct measurement off of a known centerline position. These modern ECFs are also often designed as simply a cutting head to be held in a drilling spindle.

The range of patterns possible with the ECF nearly defies description. For this reason many hold the ECF in the highest regard due to its versatility. It can obviously cut circular patterns on the face or side of a cylinder, as shown on page 32. By cutting on the side of a slowly rotating cylinder, the ECF will produce a shallow bead. When set at a 45-degree angle to the end of a cylinder, the ECF can produce hemispherical shapes. Nearly complete spheres can be cut as well by swinging the ECF around until it is almost perpendicular to the workpiece (Photo 7).

Beyond the scope of this article, members may be interested to learn more about other specialized cutting frames that existed. These were far less used, rare, and often very obscure in their application. Some of the special cutting frames include the elliptical, epicycloidal, and rose-cutting frames. Many books on OT describe these in overview terms.

The OT cutters

Antique cutting frames typically employed cutters that came in two different sizes. The larger of the two sizes was based on the same width and thickness as the standardized small sliderest tools of the day. These were typically $\frac{11}{32}$ "



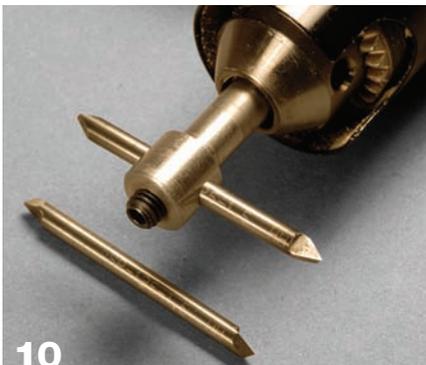
This technical illustration shows an antique eccentric cutting frame (ECF). This is typical of the type in use around the turn of the 20th century. The knob at the top allows offsetting the cutter to increase the radius of cut. The lug on the back locks the tool holder once it has been adjusted to a given radius.



8 Period cutters from the heyday of OT include large-size cutting frame cutters, *top right*, stamped to indicate their 0.20" width. The small-size cutting frame cutters, *bottom right*, are often referred to as ECF cutters, as ECFs typically did not accommodate the larger sizes. The left three cutters are elaborately profiled examples of special cutters used as fixed tools in the sliderest.



9 Using materials available today, a flex-shaft handpiece can be adapted to be held in the sliderest, thereby allowing use of various router bits and slotting cutters. From experience, burrs, like those pictured *lower left*, do not produce desirable patterns and should be avoided.



10 This is a simple design for a cutter to hold round carbide split-end blanks, reshaped and sharpened as desired. This one is a 1/8"-diameter cutter with a 60-degree point. From readily available blanks, cutters can be made in a variety of sizes.

wide and 5/32" thick. The smaller of the two cutting frame sizes was 0.210" wide and 0.110" thick. These smaller cutters could be accommodated in most cutting frames via a packing trough or C-shaped adapter that reduced the size of the cutter opening in the cutting frame, while keeping the cutting surface of the smaller cutter on the same centerline as a larger cutter would have been.

The cutters were normally sold in sets, with multiples of each profile included, in a range of sizes. The profiles were known by their own numbers, and the width of a given cutter (in hundredths of an inch) was normally stamped on the cutter shank. A typical set of the day may have exceeded 300 cutters, with an assortment of sliderest tools, large and small cutting frame cutters, and a variety of drills (**Photo 8**).

Fortunately, tastes and styles have changed since the Victorian era. The modern OTer doesn't need to buy a set of 300-plus cutters to get going. Many of the cutters that are the easiest to make also yield the highest visual impact. Square, convex, concave, and the simple radiused tips produce striking results.

The old cutters were made of high-carbon steel of high purity. They were typically in the Rockwell C hardness range around 65. Today we have many off-the-shelf cutters that can be shaped and sharpened easily. Carbide split-end blanks offer a great starting point and are available in a variety of diameters and lengths from most machine-tool suppliers.

Some carbide-tipped router bits and slotting cutters lend themselves to reshaping as well. Of course, silicone carbide (green) or diamond wheels are required to shape and sharpen carbide cutters.

Safety note: Be sure to use a respirator whenever grinding carbide.

Finally, if you are contemplating making your own cutters, why not make your own cutting frame too? The easiest adaptation to get started is to use a flex-shaft tool. Many of these can hold shank tools up to 1/4", including router bits mentioned earlier.

Make your own cutters

Devise some means to hold the handpiece vertically, horizontally or anywhere in between. Then adapt some type of cutter to it (**Photo 9**).

You might try off-the-shelf slotting cutters, which can easily create a basket-weave pattern. Avoid using burrs (intended for rotary carving), because few, if any, create pleasing results.

Using carbide split-end blanks mentioned earlier, you can make a simple holder for round bits (**Photo 10**).

Antique drills, cutters, and VCF courtesy of Fred Armbruster, Ornamental Turning Works.

Jon Magill (jon@magill.com) is an ornamental turner who lives in Clinton, WA. Jon is a member of both the Seattle Chapter AAW and Ornamental Turners International, an AAW chapter dedicated to ornamental turning. Jon Magill and Bonnie Klein will demonstrate ornamental turning techniques at the June 20–22 AAW symposium in Richmond.

We have only seen the tip of the iceberg; there is a lot more to cover in OT. Look for future articles on the array of specialized OT chucks and how to adapt your existing lathe to do a variety of OT work.

Food-Safe Finishes

By Bob Flexner

Let your nose be your guide

Idoubt any issue has crippled woodturners as much as the controversy over food safety—that is, which finishes are safe to use on salad bowls and other objects that will come in contact with food.

So much confusion has been sown that many woodturners choose to “play it safe” and use walnut oil, mineral oil, or some form of raw linseed oil on their turnings, even though these finishes perform poorly because they don’t cure well—or don’t cure at all.

The shame is that this controversy ever got started in the first place.

There has never been any evidence of a food-safety problem with any clear finish sold to woodworkers or woodturners. Only the widespread poor understanding of wood finishes in general has made this controversy possible.

Food-safe finishes

I believe the topic got off on the wrong path almost 30 years ago in *Fine Woodworking* magazine and is fueled by continued comments and cautions in much of the woodworking literature, especially articles written by and for woodturners. The existence of several brands of salad-bowl finishes also serves to perpetuate the controversy because these finishes

are marketed as “food safe,” implying that other finishes aren’t.

Amazingly, the only legitimate issue in the entire food-safety discussion is the instructions on the cans of salad-bowl finish, which claim the finish is safe to eat off of before it has had time to cure adequately. More about that later.

Most likely you are familiar with the controversy over food safety. You may have even seen or heard my name cited as an advocate for all finishes being food safe (a lonely position even though it seems so obvious to me).

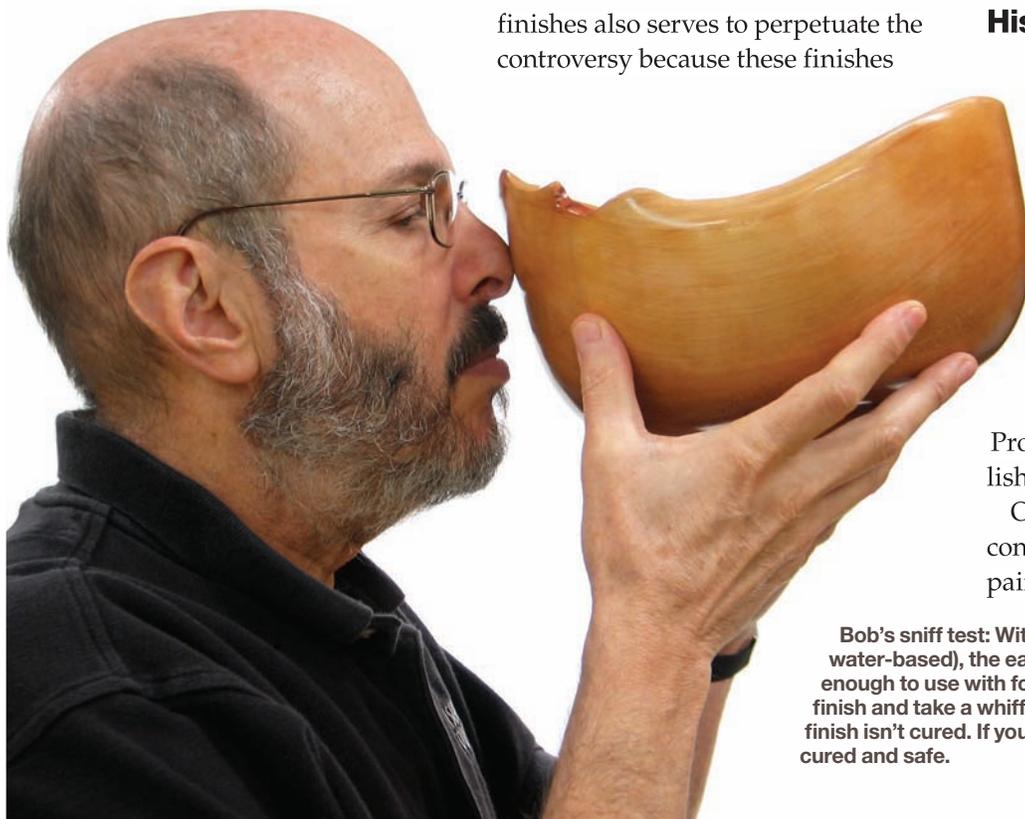
History lesson

To fully understand the issue surrounding food safety and finishes, you need to know a little history.

As you may remember, the 1970s was a time not only of explosive growth in woodworking but also of increased attention given to all sorts of environmental issues. In fact, the Environmental Protection Agency (EPA) was established in 1971.

One of the environmental issues concerned the existence of lead in paint. Lead compounds make

Bob’s sniff test: With any solvent-based finish (not water-based), the easy way to tell if the finish is cured enough to use with food is to press your nose against the finish and take a whiff. If you can still smell solvent, the finish isn’t cured. If you can’t smell anything, the finish is cured and safe.



pigments perform better, and many of the most effective pigments contained a large percentage of lead. The dust from these pigments, which resembles finely ground earth in its consistency, would settle on floors, get on children's hands, and then into their mouths. Some children chewed on paint chips containing the sweet-tasting lead pigments.

When ingested, lead causes mental and developmental problems in humans, especially in children whose brains are still maturing. So there was a widespread interest in removing lead from paint pigments.

Lead compounds were also used in very small amounts (usually less than half of 1 percent of the total solids) as a drier in oils, varnishes, and oil paints. (Driers are catalysts that speed the introduction of oxygen and thus the curing of these coatings.) This amount of lead wasn't enough to be a major concern like lead in pigments, but lead in driers was included in the efforts to remove all lead from consumer coatings.

The Consumer Products Safety Commission (CPSC) officially accomplished this in 1978, though most paint manufacturers had removed the lead from products several decades earlier.

You can read the CPSC directive on the Web by going to the AAW website and following the link to woodturner.org/foodsafepdf.

With the exceptions noted in this directive, including certain artists' paints, some industrial and agricultural coatings, and coatings on the backs of mirrors, paints and clear finishes no longer contain lead, or at least not more than a trace, .06 percent, or .0006 of the total solids, being the upper limit permitted. The specialized coatings that still contain lead in greater amounts are required to state this on the label.



All clear finishes are safe to use on objects that come in contact with food. The finish on this bowl is wiping varnish—varnish thinned about 50 percent with mineral spirits to make it easy to apply. Several coats of wiping varnish produce a very nice sheen, slight yellowing, and excellent water and scratch resistance.



The finish on this hand-carved spoon is walnut oil, a finish that is popular with woodworkers who have been led to believe there is a food-safety issue. Walnut oil doesn't cure well so it leaves the spoon looking dull.

Thus, since 1978 there has been no reason to avoid using *any* oil or varnish finish (or consumer oil-based paint, for that matter) because of fear of lead.

Nonlead driers

Oils, varnishes, and oil paints continued, and continue now, to contain other metal driers because these are necessary for the coatings to cure within a reasonable time. These driers include salts of cobalt, manganese, and zirconium—bad-sounding stuff. And the bad “sound,” rather than any serious research or thought, was and is responsible for creating the controversy about food-safe finishes.

It's too easy for someone without any technical knowledge to sound credible making statements such as, “I wouldn't eat off a finish that contains cobalt!” Or, “Why take the chance? You never know what we

might learn about these substances in the future.”

In fact, the U.S. Food and Drug Administration (FDA) considers these and other nonlead driers to be safe for food contact when used in coatings. Not only is the amount of drier in a coating tiny compared to the amount of pigment in paint, but also the drier is totally encased in the crosslinked finish once it has cured. Even if you were to eat a chip of a clear finish, it would simply pass through your system like any other plastic material, without causing any harm.

You can read the FDA regulations for coatings by Googling “21CFR175.300” and clicking on the current top link. For the approved driers, scroll to page 168 and then to (xxii). You'll find all the driers, which are salts of the various metals, commonly used in consumer finishes.



Both of these brands of salad-bowl finish are regular alkyd varnish thinned about 50 percent with mineral spirits. They contain metal driers from the same FDA list as do all varnishes (otherwise, they wouldn't dry). For almost three decades woodworking books and magazines have cautioned against using varnishes (and also boiled linseed oil) because of the included toxic driers, while simultaneously recommending the use of these salad bowl finishes as safe. This contradiction alone should make you question the validity of the food-safety issue in choosing a finish.

Keep in mind that the FDA lists the ingredients that can be used safely in food-contact coatings, but it does not "approve" the coatings themselves. Manufacturers are responsible for formulating these coatings so they cure properly.

Roots of confusion

So how did this confusion get started?

In the late 1970s when the existence of lead in paints and finishes was becoming an issue, *Fine Woodworking* was the only national woodworking magazine devoting attention to finishes. So in a sense, the magazine was in the wrong place at the wrong time. The responsibility for accurate reporting to the woodworking community fell entirely on its shoulders.

There were a few mentions of concern in *Fine Woodworking* about lead between 1975 and 1979. But the definitive statement, and the explanation that I believe got the controversy started, appeared in a

short (one-third page) sidebar included in an article on oil finishes in the Nov./Dec. 1979 issue. I remember reading this sidebar at the time and finding it confusing.

The sidebar begins with the following statement:

"Many conventional clear finishing materials normally used for furniture and other interior wood surfaces contain compounds which, if ingested, are dangerous. Driers pose the greatest threat. Ordinarily they are composed of metals or metal compounds; driers containing lead are the most dangerous, but no amount of any metal can be considered absolutely safe. Drying oils such as linseed and tung and most varnishes contain metallic drier compounds. Even though the actual quantity of metal in a given amount of finishing material is small, little by little it can accumulate to dangerous levels in humans."

After explaining the possible safety hazards of these finishes on children's toys and food-contact surfaces, the sidebar continues:

"A report by the Safety Products Division of the U.S. Food and Drug Administration indicates that their major concern is with the presence of lead and mercury [used in latex paints] in a finishing material. The report concludes that as long as lead and other metals are not present, a finish can be considered nontoxic and acceptable for food service and toys."

Then after volunteering that lacquers and water-based finishes fall into the "nontoxic" classification, there are these two statements:

"Among the finishes approved by the FDA are Behlen Salad Bowl Finish..." and

"The Watco-Dennis Corp. maintains that Watco oil leaves a solid, nontoxic finish, but stresses that at least 30 days should elapse between finishing and use of food utensils and children's toys to ensure complete polymerization."

No conclusion is offered. But the reader is clearly left with the impression that concern is warranted and it's best not to take a chance, even though the contradictions scream off the page.

Clearly, the author and the FDA don't agree on the toxicity of metals other than lead used as driers, or that "little by little [the approved metal driers] can accumulate to dangerous levels in humans." But the author offers no evidence or explanation for his contrary views.

Nor does the author offer any explanation for Behlen Salad Bowl Finish and Watco Danish Oil being safe to use when both contained, and still contain, nonlead driers—even though this would seem to contradict his previous stated cautions.

Playing it safe

So from 1979 forward, confusion has reigned surrounding the food safety of various finishes. It was understandable that *Fine Woodworking* editors and editors of woodworking magazines that started up in the 1980s and 1990s would "play it safe" and caution their readers about which finishes were safe to use.

No one stopped to consider that there had been no reported cases of harm coming to anyone from any sort of contact with any cured, clear finish—that is, *any* cured, clear finish. Until someone was willing to devote the time and energy necessary to look deeply into this issue, the worry would continue.

Repeating the myth

In the March/April 1998 issue of *Fine Woodworking*, one of the magazine's editors tried just this with a three-page article. (After the 1979 sidebar, this is the only attempt I'm familiar



with, other than what I've written, to make sense of this issue.)

The author explained that he'd had "scores of conversations with chemists and regulatory agencies, finish manufacturers, finishing experts and woodworkers," and yet he came away with an even more confusing jumble of information than the 1979 sidebar contained. Missing from the jumble was any evidence of any health problems with any finish.

Reading the article, however, one could only conclude that it was best to rely on the listed "edible" finishes such as pure tung oil, raw linseed oil, mineral oil, walnut oil, beeswax, carnauba wax, shellac, or nothing—no finish at all—just to be safe.

Cured is the operative word

Here's the real kicker. Throughout this three-decade-long concern over food safety, woodworking magazines have recommended salad-bowl finish as safe for food contact. Manufacturers had, after all, formulated this finish to be safe.

But salad-bowl finishes are simply thinned varnish, what I call a

wiping varnish. They contain driers from the same FDA list, as do all varnishes on the market.

So the "play-it-safers" not only ignore the authority of the FDA and the total absence of any reported health problems from contact with nonlead-containing finishes, they also ignore the contradictions in their own recommendations.

Does this not make you question the legitimacy of this entire debate?

In the early 1990s, when I was researching my book on wood-working finishes, I called Behlen, the principal manufacturer of salad-bowl finish at the time, to ask how the company could market their finish as food safe when it must contain driers. The discussion went something like this:

"Of course, Bob, our Salad Bowl Finish contains driers. How else would it cure?"

"But... but," I stammered, "how can you call it 'food safe?'"

"Because it is. All varnishes are food safe. It's just a marketing situation. There's a big market for food-safe varnishes, so we simply label our varnish as such. We sell lots of this finish."

Obviously, marketing worked. But here's the most incredible assertion of all. The two national brands of salad-bowl finish currently available, Behlen and General Finishes, both claim on their containers that the finish is safe to eat off of after 72 hours—three days.

Bob's sniff test

I suggest a simple test. Apply one or two coats of either product to wood and let the finish cure for three days in a warm room. Then put your nose against the finish and take a whiff, as shown on *page 36*.

Would you really eat off this surface? There's still paint thinner coming out! The finish isn't cured. At the very least, it will affect the taste of the food.

Wait until you can't smell any finish anymore. Then it's safe.

Remember, the FDA regulation requires not only that the ingredients used come from their list but that the finish also must be cured.

Conclusion

It's not possible to prove a negative. You can't prove, for example, that milk doesn't cause any sort of health problem and is totally safe (beyond a doubt). You can only assume it doesn't because there is absolutely no evidence it does.

The same is true for wood finishes that have fully cured. You can't prove that no harm can come from eating off them. But here again, there's absolutely no evidence that harm does come.

Until someone can actually produce evidence beyond the gratuitous "play-it-safe" warnings that a commercially available clear finish causes some type of harm, let's choose a finish for salad bowls and other eating utensils the same way we choose a finish for other wood objects: for water and scratch resistance, color, and ease of application.

Let's put the issue of food safety to rest and move on.

Bob Flexner (BFlexner@sbcglobal.net) lives in Norman, OK, and is author of *Understanding Wood Finishing*, now in its second, fully revised edition.



Cutting boards are cut on, of course, which defeats the purpose of using any finish to make them look nicer. In my opinion it's best to leave them unfinished unless you are selling them and find you can improve sales with a finish. Don't make the cutting boards look too nice, though, or people won't buy them because they won't want to mess them up.

The Sphere

The Professional Outreach Program (POP) has organized an exhibit, *The Sphere*, for the AAW symposium in Richmond. More than 50 woodturners have been invited to submit original work based on a 6"-diameter or smaller sphere. The pieces will be auctioned before the conclusion of the symposium.



"Reassembowled" by Benoît Averly of St. Point, France. Walnut; 5½" diameter. "In 2004, I met Richard Raffan and Michael Hosaluk. Richard gave me the idea of cutting a bowl in two halves and Michael gave me the idea of gluing them back together."



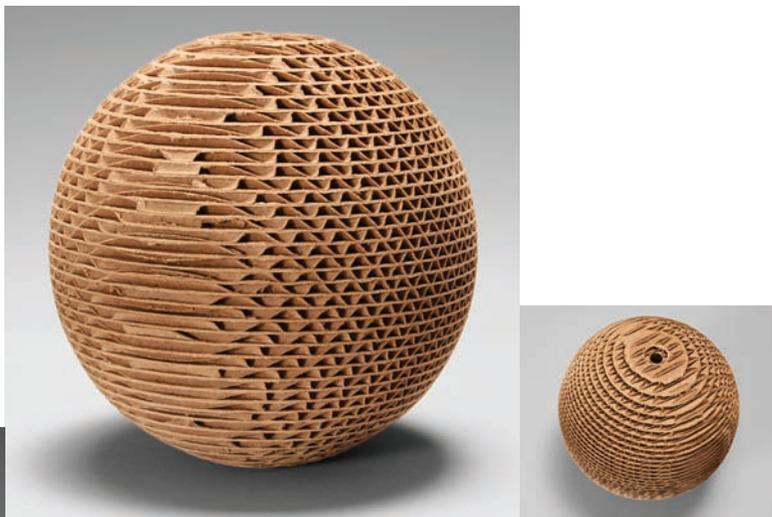
"Netsphere" by David Nittmann of Boulder, CO. Alder; 5½" diameter. "The challenge is the shape, the rest is easy."

"You Complete Me" by Bill Smith of Doylestown, PA. Holly and purpleheart; 5" diameter. "This piece is composed of two interlocking hemispheres. Each hemisphere is a complete sculptural piece in its own right. When joined together, they form a perfect sphere, the strongest form devised by nature.

Making the first hemisphere was relatively straight-forward. Creating the second to exactly match and interlock with the first added a whole new dimension to the concept of precision woodturning. This sculpture was inspired by the popular movie *Jerry McGuire*.



“Gaia” by Derek Weidman of Green Lake, PA. Painted box elder; 5½". “The piece is a carved and painted multi-axis turning. Gaia is the goddess of the Earth in Greek mythology, being both a planet (sphere) and a woman simultaneously. I felt it was in that synthesis that made her a perfect character to try to portray for this exhibition.”

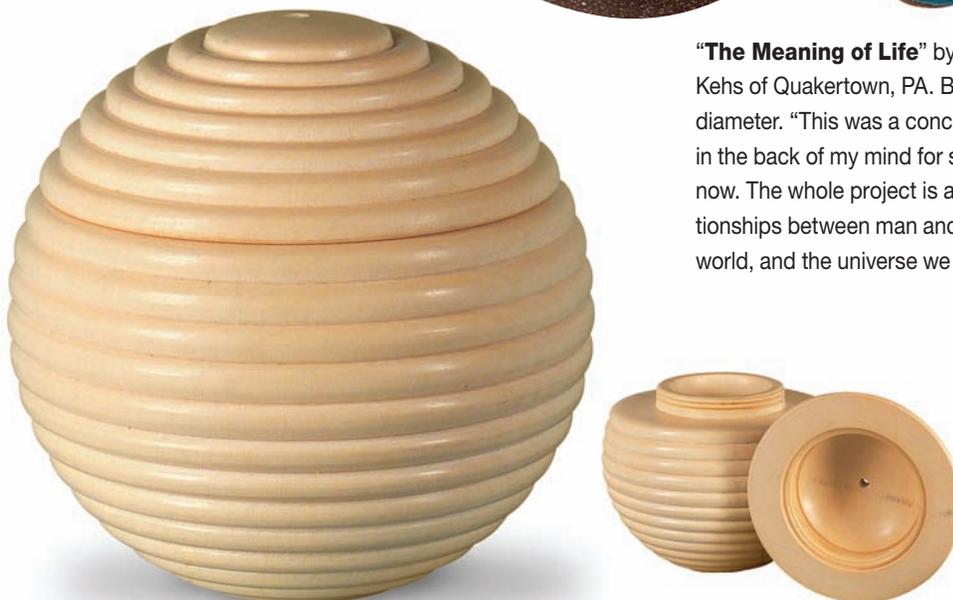


“6” Corrugated Sphere” by Jason Schneider of Snowmass Village, CO. “The cardboard corrugations are all facing in the same direction on a horizontal plane. As your eye travels around the sphere, it changes from an interestingly varied texture to an almost invisible form as you look through the corrugations.”



“The Meaning of Life” by Michael Kehs of Quakertown, PA. Box elder; 4½" diameter. “This was a concept I’ve had in the back of my mind for several years now. The whole project is all about relationships between man and woman, our world, and the universe we all live in.”

“Salt Shaker” by Dale Larson of Gresham, OR. “This is half of ‘In Black and White,’ a pair of 3"-diameter salt and pepper shakers of black-wood and holly. The challenge with these matched spheres was that the threaded joint and insides needed to be completely turned and finished while the outside was still a cylinder.”



By Jacques Vesery
and Kevin Wallace,
co-curators



"Second Rocking Bowl" by Hans Weissflog of Hildesheim, Germany. Cocobolo; 6⁷/₁₆ × 4⁵/₁₆ × 3¹/₈".

Far From the

An evolutionary view of contemporary woodturning

F*ar From the Tree* offers a fresh perspective on contemporary woodturning, juxtaposing works by pioneering artists focusing upon the natural beauty of wood by utilizing simple vessel forms and bold new works that expand the field's expressive potential. The title references both the source of material and the "family tree" of woodturning, and the exhibition explores where the field of contemporary artistic woodturning has come from and where it is going.

Central to the exhibition are pioneering artists who shaped the field. James Prestini created work as a woodturner from 1933 to 1953 and is credited by many as the first

Far From the Tree premiered in the Messler Gallery at the Center for Furniture Craftmanship in Rockport, Maine. The exhibit is on display through April 18 at the AAW Gallery in St. Paul. Next stops include the Ohio Craft Museum, Columbus (July 13–Aug. 30) and the Southern Ohio Musuem in Portsmouth (Sept. 12–Oct. 30).

to create pure wood forms that transcended utility. Bob Stocksdale, Ed Moulthrop, Rude Osolnik, and Melvin Lindquist are among the artists who further explored the potential of woodturning, taking it beyond utility and giving birth to contemporary artistic woodturning.

Following in the footsteps of these individuals are a number of artists working today who create work that combines purity of form and the natural beauty of the wood. David Ellsworth, Richard Raffan, and Bill Luce are among those striving for simplicity. Ellsworth is undoubtedly the best-known woodturner internationally, due to his technical expertise and knowledge of form as well as his willingness to share his aesthetic and technical knowledge.

Raffan makes the form a priority over the process, and his work has been referred to as a quest for "the perfect bowl" for his use of the continual flowing line. While fairly new to the field, Luce uses form to

showcase the natural beauty of the material while keeping form as the most important component.

A number of artists have built upon these foundations to create bold new work. Alan Stirt and Merryll Saylan challenge prevailing notions and make clear the potential of the turned object as an art form, while having connection to utility. Clarity of form grounds their works to the basis of woodturning as art.

John Jordan has a continual thread in his pieces, which has created a focused body of work like no other artist in the field. It is as if all his pieces are children of the same parents. Gorst duPlessis creates small, lidded forms using the process known as ornamental turning. Such works require the heart of an artist and the mind of an engineer, and involve careful planning.

In the growth of the field, there have been a number of artists who can be best described as the avant-garde. Michael Brolly and Giles

Gilson initially shocked the world of woodturning, Giles by painting over the natural beauty of the wood and Broly with his futuristic figures.

A number of artists in the exhibition brought a new level of sophistication and technical excellence to the field. Using exotic hardwoods, William Hunter raised the bar aesthetically and technically, looking to nature for inspiration and embracing beauty and refinement in his work. Bringing a more technical aspect to their work, Harvey Fein,

Ron Fleming, Michael Lee, and Alain Mailland use their work as a means of sharing a love of the natural world. Although Fleming's work is turned, the lathe becomes secondary to the carved surface that reflects his passion for what he creates. Lee and Mailland seem to be from a different field (and perhaps planet) altogether, but a large percentage of what they create starts with the lathe.

William Moore is known for combining woodturning and the art of metal spinning, allowing the materials to contrast and complement each other. As one of the few artists in the field who studied art, he brings an insight into sculpture and design that has led him to create works that inspire others with their use of form and gesture.

Stoney Lamar and Robyn Horn are among the first woodturners to depart from the bowl and vessel form to create pure sculpture. While the lathe is ideal for creating round forms, Lamar uses it as a carving tool to create dramatic forms and surface textures. Horn eschewed the bowl and vessel form from the beginning of her career in woodworking, looking instead to forms made of stone and rock, such as geodes, millstones, and stepping-stones.

Michael Peterson made it clear from his arrival on the woodturning scene that he was an artist who was open to whatever path allowed him to express his vision. Wood proved the ideal material, and Peterson's turned wood vessels reflected the natural world in a bold new manner, whether inspired by a small shell or a landscape.



"Inviolable Portal" by Betty Scarpino of Indianapolis, IN. Ash; 14" diameter.

Similarly, Christian Burchard, who works with fresh madrone and allows it to distort as it dries, is inspired by his turned pieces in creating works off the lathe.

In the works of these artists, the lathe is not a discard, but merely less important than the work's outcome. Falling from the tree and occasionally distanced from the lathe, the works in the exhibition share a great deal—a history, a love of wood, and an approach to self-expression that is without limits.

To view all the pieces in the exhibit, go to messlergallery.org.

Co-curators Jacques Vesery (jvesery@mac.com) and Kevin Wallace (kevinw3306@gmail.com) are *American Woodturner* contributing editors.

Tree

Mark Sfirri, and Hans Weissflog challenge woodturners to rethink design and strive for technical excellence. Mark Sfirri, a master of multi-axis turnings, manipulates wood to create asymmetrical objects while Hans Weissflog creates what he calls boxes—forms where pierced interiors and exteriors create illusion.

Each explores techniques to convey a different aesthetic in wood art in his or her own way. Harvey Fein, a fairly recent artist on the scene, continues to amaze viewers by challenging himself in the studio.



"Hudson Bay Platter #4" by Al Stirt of Enosburg Falls, VT. Mahogany and milk paint; 2×24½×22".

Wood Through & Through

By Richard Kleinhenz

Penturner Richard Kleinhenz has been on a quest to maximize the wood in the pens he turns. In the last issue of American Woodturner, Rich showed AAW members how to turn a wooden grip section on a fountain pen. He's now ready to share his technique for creating a fountain pen with a functional wooden clip having some spring in it.

In the online groups that I am a member of (one address is penmakersguild.com), I have seen several wooden clips featured, but none was exactly what I envisioned. I wanted something a little less obtrusive, something that looked more like a traditional pen clip and less like a shop project.

An opportunity presented itself when I was working with my pen-turning friend Glenn McCullough on a collaborative project. After we completed the project, I started developing the technique that follows.

A clip with a tenon

The basic approach is to rout a slot into the pen cap down to the brass tube, and epoxy in place a clip that has a mounting tenon at its end.

One obstacle to this is that on many pen caps, the thin wood layer over the brass tube offers little glue area for a strong joint. The solution involves two different tubes: one normal cap tube to support the threads and a second smaller-diameter tube towards the top of the cap that increases the wood's wall thickness.

The clips themselves are scroll-sawn or laser-cut from a thin slab of wood. I went through several iterations to arrive at a shape that works.

Follow along for several alternative assembly methods, based on available tooling. With the basic concepts, you can adapt the methods to your own shop and tooling, thus shortening your learning curve.

Parts and tooling

This project is based on the El Grande kit. I like the El Grande because the final product is extremely light. To me, lightness in a fountain pen is a very desirable property. Several of the pens I have made this way have weighed only 21 grams.

The sidebar on *page 46* provides the appropriate dimensions for turning this pen from a Gentleman's kit.



The pen stock and parts are shown *opposite top*. (I like olive wood because it turns easily, finishes well, and has expressive grain.) The photo *opposite middle* shows the tools I use.

Turn the closed-end body

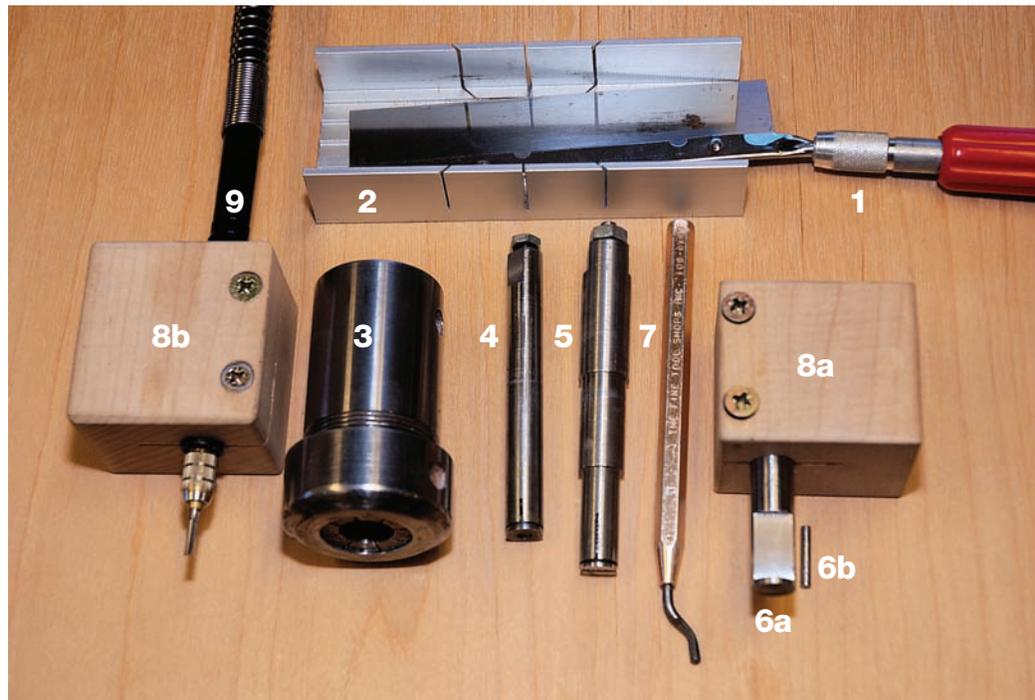
Let's start by turning the main body. Cut a 3"-long pen blank. Because of the way the cap is constructed, don't select a cross-cut blank. You should have a total length of 5 1/2" available. If you also want to make a wood grip section, you need a minimum of 6" (and you have to plan carefully). With a 3/64" bit, drill to the depth of 1.97" (the length of the brass tube).



The pen includes a Bethlehem olive wood blank (1) and laser-cut clips made from blood wood (2). Parts from the El Grande pen kit include center coupling (3), nib section (4), centerband fitting (5), body brass tube (6), cap brass tube (7), and converter pump (8). This is the upgrade pump I prefer. A brass cap tube (9) from a Sierra pen kit completes the inventory.

Without removing the blank from the drilling vise, drill another hole to a depth of 2.9" using a #N drill bit (0.302") or another bit slightly larger (8mm or 5/16" is acceptable if you don't have letter bits). Turn the main pen body on an expansion chuck held in a Beall collet chuck and appropriately sized ER32 collet. If you plan on using a CA finish, rub a little paste wax on the mandrel to prevent the barrel from sticking to it. The diameter at the open end should be 0.535".

Make sure the diameter at 2" from the open end (where the brass tube ends and the wall thickness increases) is still the full diameter, as this is a weak point. With a 1" skew or any tool you are comfortable with, finish the end of the barrel (Photo 1). Use a vertical arcing movement just like making one half of a V-cut. Of course you can also round over the end. For the shape at the body end, try to mirror the shape you want for the cap *opposite*.



For the pen body, try to mirror the shape of the cap. Finish to 400-grit, then apply some coats of thin cyanoacrylate (CA) glue. Polish to a high gloss.

Above: A razor saw (1) and miter box (2) allow you to make clean cuts. A Beall collet chuck (3) or similar spring-collet chuck makes it easy to grab different diameters reliably. An expansion mandrel (4) is used for the main body. A stepped expansion mandrel (5) is an option for holding the cap. A homemade pin chuck (6a) and pin (6b) is used for the cap. A machinist's deburring tool (7) eases assembly. A pair of wood blocks to hold the pin chuck and Dremel hand piece (8a, 8b) allow precise cutting of the clip slot. An old-style Dremel hand piece with a 1/8" cutter (9) is used to rout a slot for the clip. A centerband-fitting manipulator (10) aids in fitting the hidden threads in the centerband.

Finish the body

My favorite finish is thin CA. Since there are so many variations of this finish, and when I demo this is where I get the most questions, I will explain in some detail the method I'm using. Be aware that there are huge differences in the way different brands of CA and accelerator behave. Whatever brand works for you, stick with it! I currently use Starbond thin, odorless. The odorless CA is not exactly odorless, but it is much less irritating than regular CA. For accelerator, I rely on TMI or Starbond aerosols; both work well for me.

Specs for a Gentleman's kit

Main body: Cut blank 2.8". Drill $1\frac{1}{32}$ " to a depth of 2.365". Drill second concentric hole to a depth of 2.57", using a #N drill bit. Glue in the standard Gentleman's body brass tube. Turn and finish, .600" at the open end.

Cap: Cut the blank to a length of 2.2". Drill with a $\frac{3}{64}$ " bit to a 1" depth. Drill a second concentric hole to a depth of 2" using a $\frac{3}{64}$ " drill bit. Cut the cap brass tube to 1" length. Cut 1" section off a body brass tube from a Liger/El Grande kit. Glue in the brass tube sections.

If you want to economize on brass tubes: Use a 1" section off the Gentleman's body tube for the smaller cap tube. Drill the first hole in the main body only to the depth of the remaining body tube section, the second hole still goes to 2.57". Use a $1\frac{1}{32}$ " drill for the second hole in the cap. Be aware that the grip section does not clear that smaller tube. This works if you use the stock centerband fitting, but may be marginal if you modify the fitting in some way.

To make a pin chuck for the body, start with $\frac{29}{64}$ " drill rod and file/sand on the lathe to fit. For the cap, start with a 14mm drill rod.

Sand with 400-grit cloth-backed paper. (I prefer the $1\frac{1}{2}$ "-wide rolls.) If you have some marks from your lathe work, begin with a coarser grit and work up to 400. With the lathe at a slow speed (320 rpm on my variable-speed lathe), drizzle a few drops of thin CA on the barrel. Using a strip of 400-grit cloth-backed sandpaper already loaded with wood dust, rub the CA slurry into the surface, which seals the grain.

When the CA starts to set, pull away the paper and hit the barrel with a short burst of accelerator. Because the hardened slurry is cloudy and obscures the grain's beauty, sand off the CA down to bare wood.

Wipe dust off the surface with a paper towel, and spread a few drops of the thin CA across the barrel by putting a small plastic bag over your finger and applying the CA with the lathe still running at a slow rpm. (This is one way to recycle all those plastic bags shipped with pen parts.) Make sure the end of the barrel is completely covered, then hit the entire barrel again with a short burst of accelerator. Spread another few drops with the plastic bag, rotating it so an unused side faces the barrel. Repeat this process four times.

After each application, feel the surface. If it is rough, level it off with a skew laid flat on the tool rest and scrape the body gently. At the minimum, perform this scraping step after the last CA application. If I sand the surface directly, it is much harder to achieve a flat surface, because the finger follows the rough surface. Scrape until 70–80 percent of the surface is dull. (Shiny areas are low and not touched by the skew.)

Now, switch to fresh 400-grit sandpaper and sand the surface until all shiny spots disappear. Complete this step with several lengthwise strokes.

Square up the open end of the barrel with a parting tool. Then switch to Micro-Mesh in 1,500, 1,800, 2,400, 3,200 and 4,000 grits. With each grit, polish with the lathe running at high speed (3,000 rpm), using light pressure so as to not build up heat. Finish with some lengthwise strokes with Micro-Mesh.

Remove the Beall chuck from the lathe as it makes a convenient handle while you polish the pen barrel on a polishing wheel. After polishing with Tripoli compound, switch to white diamond. I used to polish pens only with white diamond, but I found that the wax that binds the polishing powder produces a temporary shine that dulls with a little handling. Using the Tripoli seems to eliminate that problem.

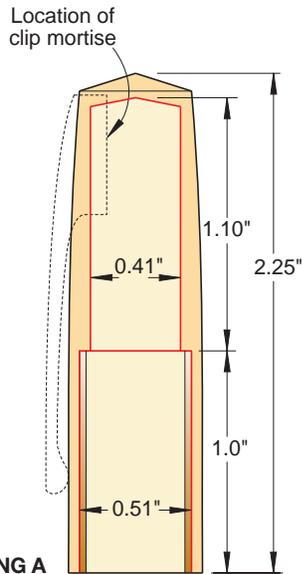
During all the polishing steps it's particularly important to pay attention to the end of the barrel to make sure it is polished to the same level as the rest of the pen.

Turn the cap

Note: If you want to construct a wood grip section, please refer to the Winter 2007 issue of American Woodturner.

The cap presents two challenges: The wood in the normal construction is thin, allowing little material for a routed slot to accept the clip. There are two possible solutions: either turn the cap fatter (not a choice I like) or use a smaller tube. However, the diameter of the brass tube at the open end is fixed to mount the threads.

The solution is a two-tube construction. The lower part is a section of the normal cap tube; the upper section requires a tube with enough room to accommodate the nib. The tube from a Sierra pen fills the bill. The length required for the lower section has to be sufficient so the grip section does not run into the step (**Drawing A**).



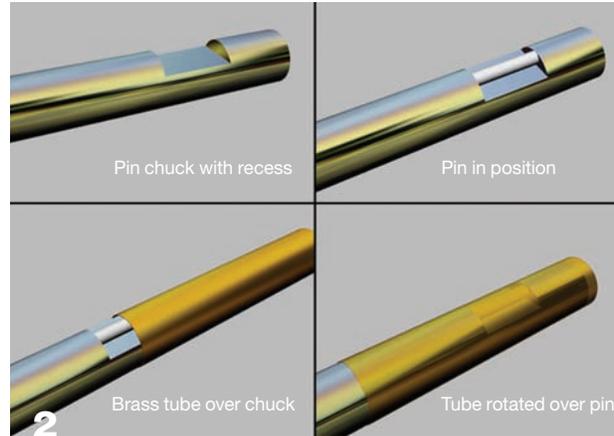
DRAWING A

Cut a blank $2\frac{1}{4}$ " long. Using a 13.3mm drill bit, drill to a depth of 1". Without removing the blank, drill a second concentric hole to a depth of 2.1" using a $2\frac{7}{8}$ " drill bit. Cut an El Grande cap tube to a length of 1" and a Sierra pen tube to a length of 1.1". By using these two tubes, you gain .050" wall thickness in the upper section. The increased wall thickness opens the door to a refined shape.

An easy way to cut brass tubes is to use a fine saw and miter box such as those favored by model railroaders. An X-Acto set is shown on *page 45*.

Epoxy the brass tubes into the blank. It is not necessary to square the end. The combined length of the brass tubes is the length of the tube plus the original El Grande metal centerband that you don't use.

An alternate way of boring the holes is to use a metal lathe and a boring bar. This assures that the two holes are perfectly concentric, and allows use of a homemade expansion mandrel as shown on *page 45*. You must bore the holes for a slip-fit so they remain concentric after the brass tubes are glued in place. However, a metal lathe is not necessary. I will use drilled holes that may not be concentric enough for such a stepped mandrel here.



2 A pin chuck is a close-fitting rod that has a machined recess. A small pin acts as a cam and locks the tube when it is rotated slightly. The recess depth matches the cam diameter.

To turn the cap, use a pin chuck (**Photo 2**), which you can easily make at your wood lathe. On the lathe, machine a 4"-piece of $\frac{1}{2}$ " steel rod to allow an El Grande cap tube to just slip on. (A file, a running lathe, and sandpaper are great tools to achieve this.) The fit should be snug, as a loose fit will result in eccentric turning. Cut the $\frac{1}{8} \times \frac{3}{4}$ " pin from a piece of a nail and remove the cutting burr (if any). Exact dimensions are not important.

Use a grinder to grind a $\frac{3}{4}$ "-long flat on the mandrel, $\frac{1}{8}$ " from the end. (The $\frac{1}{8}$ " allows the entire pin to disappear inside the cap during actual use.) The depth of the slot should be slightly less than the diameter of the pin you just made.

Finish the flat with a file, to a depth that just allows the brass tube to slip over. Accuracy in making this mandrel (diameter as well as depth of the slot) pays off with improved functionality. Although a slight amount of slop is tolerable for turning, a good fit is necessary so there is no slip while cutting the slot.

Insert the pin chuck in a Beall collet chuck and slip on the cap blank, covering the pin. Turn the cap to shape. If you want to taper the cap, remember that the step between

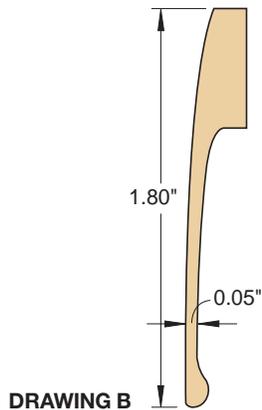


3 For a centerband, glue a predrilled $\frac{1}{4}$ "-thick piece of wood at the end of the cap. Turn the final dimension to 0.600".

the two brass tube sections is the weakest point, so keep a fat wall thickness across that internal step.

Because you will turn a wooden centerband, don't be overly concerned about the exact external diameter of the cap (I turn to approximately .61" diameter). Then part off $\frac{1}{4}$ " on the left and glue on a predrilled $\frac{1}{4}$ " piece of wood for the centerband (**Photo 3**).

Now turn to the final dimension of approximately 0.600". Shape the end of the cap to match the main body. Square the open end of the cap even with or a little longer than the brass tube. (This squaring is the reason we wanted the pin to disappear completely inside the cap, as described *above*.) Finish the cap with CA as described earlier.



Create a wooden clip

I have my clips laser-cut, but you can cut your own at the scrollsaw. I went through several design variations of the clip to arrive at the shape I like (**Drawing B**). You can develop your own shape, of course, but keep the following pointers in mind.

Wood is fairly stiff, and if you deflect wood, it usually breaks.

However, if you bend thin wood, it bends and springs back—perfect for a pen clip. If you can stay in the thickness range where wood bends rather than breaks, you can make a functional clip.

Keep the wood near the end fairly thin. As you go up toward the attachment tenon, the thickness increases. It's important to have a flexing section that will bend before it breaks at the point where it can't move, up where it curves into the tenon. If you make a thick clip, it will not flex. And if you try to use a nonflexing clip, it will break.

The other key consideration is the grain direction. You want the grain to run exactly within the clip. The slab that the clip is cut from needs to be laid out so the grain runs in its plane, and the clip needs to be aligned on the slab such that the grain runs the length of the clip. I rotate the clip slightly to make the grain (assumed parallel the long

edge of the drawing) run along the clip. Wherever grain runs out to a surface, there is a weak spot and breaks can occur. Sometimes the grain direction isn't obvious. I find it beneficial to rip a thin strip and break it. The break indicates the grain direction.

Another important point is wood species. I have used blood wood and maple. Both are strong and straight-grained. I rotate the clips slightly in my layout so that the grain runs in the best orientation on both clips.

The width of the cutter determines the thickness of the starting slab of wood. (I use a $\frac{1}{8}$ " cutter.) Cut a test slot and measure it. You may find the $\frac{1}{8}$ " cutter cuts a slightly wider slot than 0.125". If so, cut the clips from a thicker wood slab. It's easier to thin down a clip to fit than to deal with a gap.

Finish the clip

If you want to try laser-cut clips, contact a local trophy/awards business. Laser equipment is fairly common today in this industry. (I get laser-cut clips from Ken Nelsen at kallenshaanwoods.com.) The clips arrive on a slab, as shown on *page 45*. The laser cutting leaves a black charred surface that must be removed. I use a combination of belt sander, small sanding drums mounted in a Dremel tool, and hand-sanding to clean up the clip and break any sharp edges. Round the end of the tenon to fit the routed slot on a belt sander or by using a small sanding block. Because I don't find a small opening right under the clip objectionable, I don't try to round the other end of the tenon.

I have tried several finishing methods for wooden clips. Gloss lacquer (I used Deft) applied with a small brush works well. Apply four or five layers in 15-minute intervals



From the top: A blood wood lasered clip with burn marks (*top*), sanded (*center*), and finished with a thin coat of CA glue (*bottom*).

followed by 24 hours or more curing time. This is done on the finished, mounted clip. I use a plastic bag under the clip to avoid major accidents.

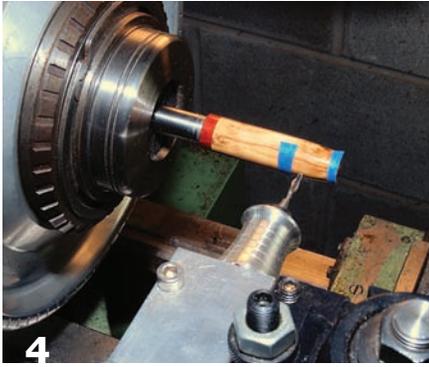
With wood species such as blood wood, the surface is not completely smooth because the grain is filled with fine sanding dust. The slight roughness is revealed once the first coat of lacquer has dried.

The second method for finishing is wiping on thin CA glue. I put a small drop of CA on the clip and spread it out with a piece of paper towel to cover all surfaces. After two or three applications, sand with 400-grit sandpaper, Micro-Mesh 1,500 through 4,000, and a buffing wheel to produce a glossy finish. The photo *above* shows a clip as received with the charred surface, sanded, and finished with thin CA.

Rout the clip-mounting slot

The simplest way to cut a slot is on a metal lathe (**Photo 4**). Hold a Foredom-type hand piece in an adapter that's secured in the tool post. This makes it easy to cut a slot. The length of the slot is matched to the length of the clip tenon. I use a $\frac{1}{8}$ " down-cutting spiral router bit with $\frac{1}{4}$ " shank to minimize tear-out.

If you don't have access to a metal lathe, you can cut an accurate slot with the setup shown in **Photo 5**. Cut two blocks to hold both the cap



4 At a metal lathe, cut a slot from the pen clip with a Foredom-type hand piece and a 1/8" down-cutting spiral router bit.

mandrel as well as a Dremel flex-drive hand piece above the table. With tape, mark the desired slot length. Making sure the bases of the blocks stay in firm contact with the table, make shallow passes back and forth until you reach the brass tube. Practice first on scrap, as you don't want to tilt the block even slightly while cutting.

Photo 6 shows the finished slot routed down to the brass tube. You can blend the clip so it flows into the cap barrel, but I don't normally bother with that. I prefer a noticeable step.

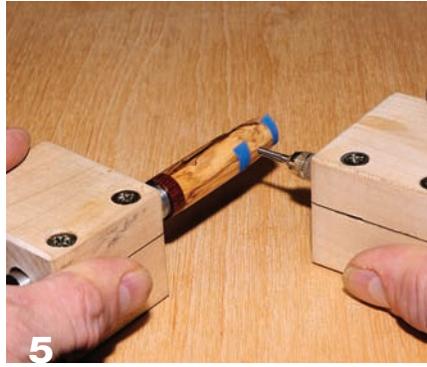
For another design option, move the attachment point up and let the slot run out the end of the barrel.

Assemble your pen

With two-part epoxy, glue the clip in place, making sure you coat the side walls of the slot. Remove any squeeze-out as it appears. Do not use CA at this step.

I recommend a slip-fit and glue for the center-fitting rather than a press-fit. Screw the center coupling into a centerband fitting by holding the fitting in the Beall collet chuck.

Scrape the brass to let the main body slip on. If you use sandpaper, the brass will get warm and the glue holding the plastic threads will weaken. You don't need to be careful of the plastic rim of the centerband fitting because it will be removed.



5 Homemade blocks hold the pen cap (left) and a Dremel flex-drive hand piece (right). Keep the blocks in contact with the table.

I prefer a glue-fit to a press-fit because the wood body has to transmit the pressure during assembly. Experience has taught me that not only can you mar the end of the body, it is also possible to collapse or damage the wood.

Modify the centerband fitting to slip completely into the cap tube. It's held in the collet chuck, and the stepped-up front sections of all the large-diameter front steps are turned down to the same diameter as the rear section.

After you get close to the final diameter, screw in the center coupling, which adds rigidity.

At this point, be careful of the metal rim of the coupling. Make sure you reduce the diameter of the plastic so it will slip into the brass



6 The finished pen-clip mortise on the cap is routed to the brass tube. Check the fit with the clip before adhering with epoxy.

tube without compression, which would result in a tight thread. Then glue in the centerband fitting.

A simple assembly tool Angelo Iafrate developed works great; it's a spare center coupling glued into a wooden handle. His centerband-fitting manipulator (see page 45) allows easy positioning of the centerband fitting in the tube so that it is flush with the front surface.

Final assembly is trivial, but it pays to adhere to the following steps:

- Epoxy the center coupling into the body.
- Before the epoxy sets, screw the section into the coupling and rotate the whole affair so the nib lines up with the best grain.
- Wait until the epoxy sets, then epoxy the centerband fitting into the cap tube.
- Screw the cap onto the pen and again rotate the cap wood for the best grain alignment.

Penturner Richard Kleinhenz (woodnpen@optonline.net) lives in Wappingers Falls, NY.

What happens if the clip breaks?

If the clip ever breaks, you can fashion some internal chuck that will let you hold the cap rigid in the wood block. A hardwood dowel turned to the right diameter might do the trick, as might an expansion chuck that can pass through the cap threads and hold the upper tube. You can then form a new slot, removing the clip remnants, and epoxy a new clip in. Of course I hope you will never have to do that!



The Straka Chuck

Versatile and proven reverse-chucking

By Alan Lacer

In *Woodturning*, a little-known book published in 1970, author Eldon Rebhorn included a fuzzy photo of a chucking system used to complete the bottom of bowls. With scarce instruction for construction or the fine points of adjusting and using this chuck, I doubt if many turners made use of that system.

The woodturning community has Jack Straka to thank for taking Rebhorn's basic idea and developing it into something far more useful. In honor of Jack's development of a reversing chuck, I wish to refer to it as the Straka chuck.

I first met Jack and his version of the chuck in the early 1980s. The chuck Jack had at that time was constructed of a redwood base and plywood rings to secure the bowl. The next time I saw Jack, his chuck had evolved with a thick aluminum base, but still with the plywood rings.

This is something all bowl and vessel turners could use in the shop.

Build the base

The base is the essential foundation of the chuck and requires some care and accuracy in constructing. I prefer to use two pieces of $\frac{3}{4}$ "-thick high-quality veneer-core plywood, such as Baltic birch, glued together to make one thick piece. The size should be just slightly less than the maximum diameter of your lathe.

Plan on dedicating a faceplate to the chuck, as mounting and remounting could affect its accuracy.

Using yellow glue, clamp the two plywood pieces. Once dried, bandsaw the block roughly to round.

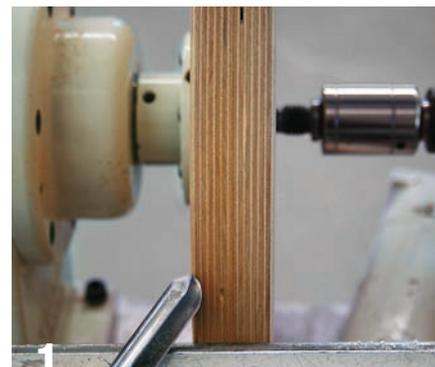
Mount a high-quality faceplate with a minimum of six holes to the block using #12 sheet-metal screws that penetrate at least 1" into the base.

Turn the block to round, working carefully with a bowl gouge from both faces to minimize chip-out (Photo 1). Fill any voids or major tears on the outside rim. Sand to 220-grit.

Lightly face off the front to create a flat surface. Using a backup board, sand the face to 120-grit.

From the outside rim, cut shallow grooves into the face every $\frac{1}{2}$ " with the corner of a parting tool or the long point of a skew chisel (Photo 2). Remove the assembly (faceplate and base) from the lathe.

With the grooved side up, divide the outer groove into three equal parts. This does not need to be a



Trim the glued up disc gently from both ends to create a cylinder. Sand it smoothly, being sure there are no sharp corners.

perfect division, but only an approximation. You can accomplish this by calculating the circumference ($\pi \times \text{radius} \times 2$) and dividing that into thirds, by trial and error with a pair of dividers or a compass, or by using a 60-degree drafting triangle.

Once the three points are identified, use a ruler to draw a straight line from each point to the center of the base. Now move to a drill press with the table squared to the bit. With a $\frac{2}{64}$ " bit (or use a $\frac{5}{16}$ " brad-point bit and enlarge it with the $\frac{2}{64}$ " bit), drill through the three points in the outer grooves. To stabilize the drilling operation and reduce splitting, position two boards on either side of the faceplate (matching the thickness of the faceplate).

Starting at the outermost holes and following along the lines to the center, drill a series of holes in every other groove. Stop 1" away from the faceplate.

Identify one of the lines of holes as the key, to which the rings will always be oriented. You can indicate that set of holes with a simple colored mark at the top or put in a contrasting plug of wood near the outer rim (**Photo 3**). As an alternative, you can number each set of holes as "1, 2, and 3" so they will be positioned the same each time they're mounted.



2 Draw lines about every $\frac{1}{2}$ ". Cut into these lines lightly with the long point of a skew or corner of a parting tool. Divide the disc into three equally spaced sectors.

Build the rings

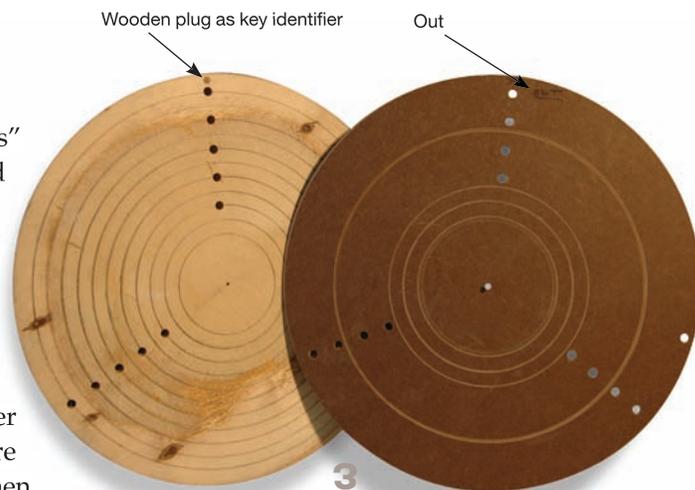
These are the "clamps" of the chuck that hold the turned piece against the base. I use $\frac{1}{4}$ "- or $\frac{3}{8}$ "-thick Baltic birch plywood or any other good quality veneer-core plywood. (The thinner the plywood, the more flex you will have when clamping heavier work.) For larger diameter or deep bowls/vessels, you should construct the rings from $\frac{1}{2}$ "- or $\frac{3}{4}$ "-thick material.

You will want to cut several rings with different diameter openings and with different bolt-hole locations. For the first run of these rings, plan on making about six rings with these differing variables. In time, you will probably end up with a dozen or so of the rings to fit the sizes and styles of bowls you frequently turn.

Construct a template for drilling the rings. Bandsaw to round a $\frac{1}{4}$ "-thick piece of tempered hardboard or plywood (this need not be the best quality) the same diameter as the base (**Photo 3**). I tap a nail in the center of this disc to the center of the base; this will aid in securing the ring during the drilling step.

Either at the drill press or with a handheld drill and a $\frac{2}{64}$ " bit, drill through the back of the base and through the template to reproduce the pattern of holes found on the base. Be sure to mark on the template the key set of holes and which side is out or away from the base.

Cut at least six round discs from the $\frac{1}{4}$ "- or $\frac{3}{8}$ "-thick Baltic birch plywood. The outside diameter isn't critical; center openings of 3", 5", 7", 9", 11", and 13" make a good starter set of discs for a 16"-swing lathe. You will develop a variety of outside



3 Create a disc from thin plywood or hardboard to become a drilling template for the rings and to protect the face of the base when cutting through the rings.

In praise of reverse chucking

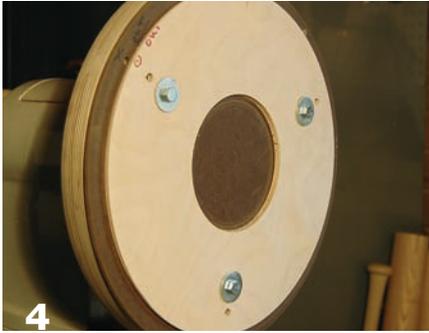
The days are long past (and should never have been) when woodturners glued felt on the bottom of bowls, left screw holes in the bottom, or filled screw holes. Further, the holding system should not dictate diameters or shapes of the lower portion and base of our bowls/vessels.

So for better craftsmanship and design you need to do some form of reverse chucking.

Look at it this way: We cannot turn faster or cheaper work than the production-made or cheap imports out there, but we can turn better work. Sometimes it is just a matter of attention to good design and details.

The Straka chuck offers a number of advantages as a chucking system:

- Relatively inexpensive to build (mostly one-time expenses)
- An efficient way to remove all signs of mounting
- Affords excellent access to the bottom of a bowl/vessel, which is important for refining the shape and undercutting or hollowing a foot or base
- Provides a wide range of design options for the bottom (foot, rounded bottom, sitting on details such as a bead, undercut rim to rest on, etc.)
- Virtually impossible to knock the piece off the lathe
- A vast improvement over Cole jaws and other chucks that grip the rim (less worry about cracking the rim by over-tightening).



4 With a thin-kerf parting tool, cut through the ring. Remove the ring from the base and sand by hand any sharp or split edges of the center opening.

diameters and interior diameters depending on your bowl or platter work. For starters, make two discs with the same outside diameter as the base, two about 20 percent smaller, and two about 30 percent smaller.

To make a clamping ring, secure one of the discs to the template with a small brad (center to center). Drill through the template to produce at least one set of three bolt holes (all the same diameter), leaving at least 1" to the outside of the disc for rigidity.

You may need to clamp together the two pieces to avoid any movement. As an alternative, once one hole is drilled, place one bolt through both pieces to keep your alignment. Be sure to mark on this disc which hole (or set of holes) aligns with the "key" and which is the outside of the ring. You can place two or three sets of these holes on a ring, which gives it more versatility with different-shaped bowls.

Mount one of the discs to the base with the drilling template sandwiched between the disc and base. (The template protects the face of the base in a later step.) Use $\frac{5}{16}$ " bolts, washers, and wing nuts. The bolts should be just long enough to accept the wing nut on the backside of the chuck.

Use a detail gouge or the long point of a skew to true up the outside edge of the ring. With a parting tool (a thin-kerf parting tool



5 To pad a ring with clear plastic hosing, cut through the top of the natural curve of the hose. When cut like this, the natural spring of the hose will hold it inside the opening.

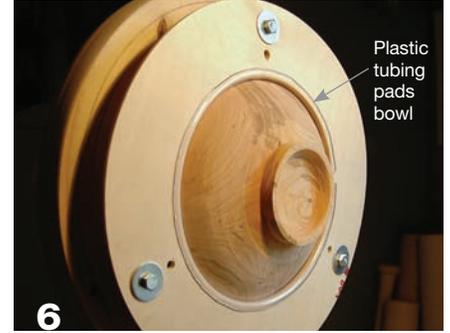
works especially well), cut through the ring and into the drilling template at a determined diameter (Photo 4). If room allows, position the tailstock with center against the center of the plywood, which stops it from becoming a flying disc when you punch through. Go slow with the final cut.

For the first run you may just want to make the openings in multiples of 1", perhaps starting with a 4" opening. The size of the chuck and the size of the bowls you routinely turn will ultimately be deciding factors.

Be sure and leave at least 1" of material from the opening to the drilled bolt holes in the ring. Do the same with the remaining rings by varying the hole size.

Remove the ring from the chuck. Hand-sand the opening and the outer rim to eliminate sharp edges.

There are several options for a pad in the inner opening. Two are a pliable strip of rubber glued at three points (usually between the bolt holes) and rubber tubing that is split open along its length and applied inside the opening. The strip of rubber can be anything from inner tube stock, to rubber gasket material, to $\frac{1}{8}$ " router mat material. (Each disc needs three pieces approximately $1\frac{1}{2}$ " wide by 3" in length.) For this example, I have used $\frac{3}{8}$ " and $\frac{1}{2}$ " ID clear plastic, soft tubing, and $\frac{3}{8}$ " ID



6 When the piece is centered and firmly mounted, turn to desired shape and details. Complete by sanding the turned areas. Stay well away from the bolt heads and the ring.

latex rubber hose. The hose diameter will be larger if you use thicker plywood for the rings. The strips require gluing, while the plastic split hose usually stays put due to its own springiness. (I glue the latex hose in place). If you use plastic, cut along the top of its natural curve (Photo 5).

Put the chuck to use

With all of the parts constructed, you are ready to put a bowl into the chuck. The one big variable left is the height of your bowl. You will need to obtain $\frac{5}{16}$ " bolts in sets of three and in various lengths. For really deep bowls or vessels you can use all-thread rod to create the required lengths of rods to hold the piece in the chuck. Although more difficult to find, carriage bolts 4" and longer are safer than hexhead bolts; you are less likely to be injured if you inadvertently touch the bolt head. Use wing nuts and washers to attach the bolts on the back of the base (with washers under the bolt head if not using carriage bolts).

With the chuck sitting flat on a bench, place the bowl with rim down onto the face of the base. Center the bowl using the cut grooves in the face as a guideline. A precise alignment comes later.

Determine which ring matches the bowl. Sometimes it is a question of where you want to grip the bowl as



To center the piece on the chuck, use a pencil to find the high point of the bowl. Loosen the wing nuts, push from the center of the penciled length, and tighten the nuts.

well as the shape of the bowl, which may be the real deciding factor. If you grip the bowl in the midpoint or even closer to the rim, this gives a lot of open area to work on the base. Lay the selected ring over the bowl, being sure to line up the keys on the base and ring (**Photo 6**).

Next, determine what length of bolt is required. I place a washer below the head of the bolt (these go through the ring from the outside) and a washer on the backside of the base where the wing nut will draw the bowl down against the base. Put the bolts, washers, and wing nuts through the ring and base, but leave the wing nuts slightly loose at this time. The bolts should be just long enough to go through the chuck holding the bowl, washers, and wing nuts.

Place the chuck with bowl on the lathe. How well is the piece centered? By just turning the lathe by hand, you'll quickly see if the piece is centered. I turn the piece by hand, use a pencil on the tool rest, and find the "high spot" (**Photo 7**). Next, lightly tap on this spot, then check again with the pencil to see if the piece is centered. When centered, the pencil line goes around the bowl continuously. The trick is to have the bowl clamped tightly enough to hold the bowl in position while centering, but loose enough to make small corrections by tapping.



At his studio in Hawaii, AAW member Kelly Dunn details the bottom of a bowl with a homemade 36"-diameter Straka chuck on his bowl lathe.

When satisfied with the centering, tighten the wing nuts firmly. Be careful to not overtighten, especially with thin-walled pieces.

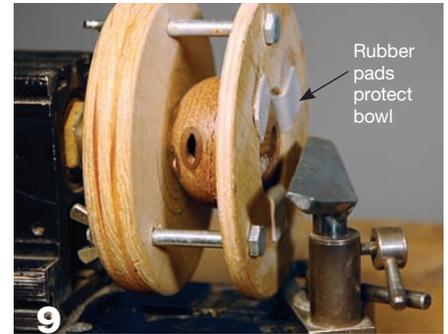
Turn the base to the desired shape, details, and diameter, and remove all screw holes or chuck marks. Remember, this system is only for the lower portions and underside of the bowl or vessel—don't try to come up too high on the bowl or too close to the ring. Sand to complete this area of your piece.

With a little up-front construction time, you have created a versatile reverse-chucking system. It works well on bowls and vessels of differing sizes and shapes. Some turners even use the chuck for closed hollow forms.

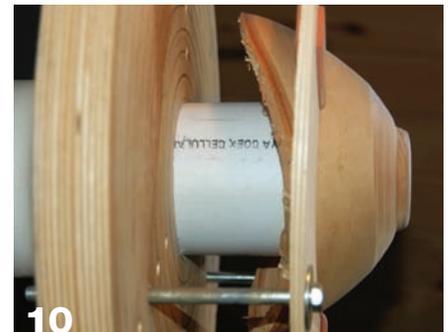
The Straka chuck has some limitations on extremely thin work, pieces with uneven tops or rims (such as natural-edged bowls), or delicate pieces (due to voids or structural weak spots) that would not take the clamping action.

Once you learn to use the chuck, you will find it also mounts quickly and holds the piece securely with virtually no chance of pitching the piece off the lathe.

The size of the chuck can be varied for different-size lathes or operations. Hawaiian turner Kelly Dunn uses a 36"-diameter Straka chuck (**Photo 8**). For small work, I regularly



The Straka chuck can be miniaturized for small work. The 4½"-diameter chuck is used to hollow both ends of a Christmas tree ornament's bulb on a mini lathe.



By using a short section of thick-walled Schedule 40 PVC, you can turn the bottom of natural-edged bowls with the Straka chuck. With both ends squared, the pipe sets about ½" into the base.

use a 4½"-diameter chuck (**Photo 9**) at my Klein lathe.

With a little ingenuity and thick-walled Schedule 40 PVC pipe (cut square on the ends), you can even modify the Straka chuck to accept natural-rimmed bowls (**Photo 10**). After you cut a recess in the chuck base to match the outside diameter of the PVC and pad the PVC, turn a base or foot as you desire.

Special thanks to Jack Straka and Kelly Dunn for their help with this article.

Alan Lacer (AlanLacer.com) is an *American Woodturner* contributing editor who lives near River Falls, WI.

Members Gallery

If you haven't had a chance to visit the AAW Forum recently, you may be pleasantly surprised when you do look at the quality of work submitted by members. At last count, the website included more than 4,000 images, which can be easily searched by member name or by date (aawforum.org). Here are some recent posts by AAW members.



"Bat Box" by Jerry Gilman, Smoky Mountain Woodturners. Holly, pink ivory, satinwood, and ebony; 6" tall. "The inspiration for this came from the Bell South Building in Nashville, known as the Bat Building. I turned this on my shop-made ornamental lathe."



"Serenity" by Carole Valentine, Tidewater Turners. Eastern red cedar; 6 $\frac{3}{4}$ x 3 $\frac{1}{2}$ ". "This went through two iterations: The first time I applied Waterlox to achieve a deep, high-gloss finish. After a few weeks the oil finish became tacky. This is when I learned that the resins in Eastern red cedar act as a sort of solvent on oil finishes. I remounted the piece and carefully turned away the oil finish, resanded to 2,000 grit, and applied 50 percent thinned lacquer for a soft satin finish. The lacquer does not pop the grain as an oil finish does, but neither does it react with the resins."



"Corrugata Bowl" by Steve Carlson, Chicago Woodturners. Australian corrugata burl; 4 x 14". "For anyone who has not worked with this wood, it's very hard. First, I use a Freedom flex shaft power carving tool. I begin sanding with cushioned drum sanders to remove all the carving scratches and I sand by hand up to 600 grit. I like to spray just enough shellac on my pieces to enable me to polish them to a nice shine, without the pieces looking like they have a heavy finish on them."



“Wild and Calm” by Jonathan Delp of Richmond, VA. Poplar; 10×7½×7" and 12×12×6". “This idea came from an art school assignment from Virginia Commonwealth University. We were asked to create a set of pieces that were opposites; my opposites were wild and calm. I tried to express this through water and fire, though the water piece was more successful.”



“Shedua Box” by Mike Stafford of Rocky Mount, NC. Shedua; 2½×3½". “This box was inspired by a box turned by Bob Knauss that I saw in Phil Iron’s book, *Woodturning*. The beautiful piece of shedua was gifted to me by my wife and son for Christmas a couple of years ago.”

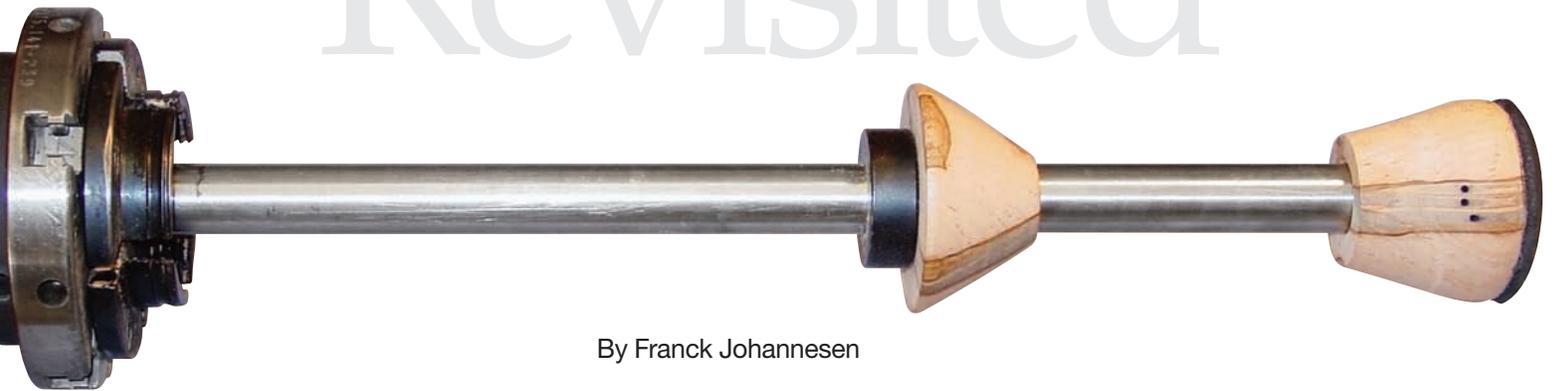


“Red Mallee” by Edward Koenig of Monroe Township, NJ. Red Mallee burl; 4½×16". “This piece is finished with gloss lacquer and rubbed to a smooth satin finish.” Collection of Dave Long.

“Smoke, Wind, and Fire” by J.D. Mathis, Northeastern Oklahoma Woodturners. Box elder; 15½×9". “The inspiration for this piece came from the coloring of the wood. It is spalted, which causes the grey coloring. The red is caused by insect damage, which creates red streaks throughout the tree. I turned the wood to the basic shape and then carved the spirals around the vase inside and out using an assortment of power carving tools.”

Reversing Bar

Revisited



By Franck Johannesen

Mike Mahoney is a creative and efficient woodturner. At a recent Florida Woodturning Symposium, Mike demonstrated his reverse-chucking bar (attributed to the San Diego Woodturners chapter) that made a lot of sense to the attentive audience. The way Mike used it seemed like a better technique than turning a custom jam chuck or other chuck-mounted device.

Here's what I especially like about the reverse-chucking bar: After a sliding cone enters the mouth of the vessel, the hollow form is held between the tailstock live center and a pad on the end of the reversing bar. A sanding disc with a $\frac{1}{4}$ " mandrel could be used as a pad for the end of the bar.

Improving on a design

Dave Stevens of our Sarasota Woodturners chapter had a similar homemade device consisting of a #2 Morse taper adaptor and a V-belt pulley to center the vessel mouth. But the runout at the end of the bar

was erratic. So, we set about making our own reversing bar.

Joe Coupe, current chapter president, took our ideas to a local machine-shop owner, who accurately cut a #2 Morse taper on the end of a $\frac{3}{4}$ "x18" steel rod. After turning a cone and several pads for the end of the rod to act as a drive, our chapter had its first prototype.

We attempted a further refinement to our bar by drilling a $\frac{1}{4}$ " hole to insert a sanding disc as a drive pad held by a setscrew. However, this proved to be less useful due to slippage problems.

For our next prototype, we found that Gripfast, available from Enco Supply (use-enco.com), prevented the cone from slipping. However, the ball detents marred the shaft. We improved the design by drilling a 1" hole in the cone and the drive end to accept a press-fit core made from ultra-high molecular weight (UHMW) polyethylene. When drilled to a slight interference fit, the UHMW core slid on the shaft with enough resistance to adequately

hold and center the vessel. (Using these cones requires an interference fit, or else the cone will slide and loosen up.)

Back to the drawing board. Our next and final solution substituted a split-locking collar for the UHMW core, which allowed a looser hole and made easier adjustments without dimpling the bar, as shown in **Photo 1**.

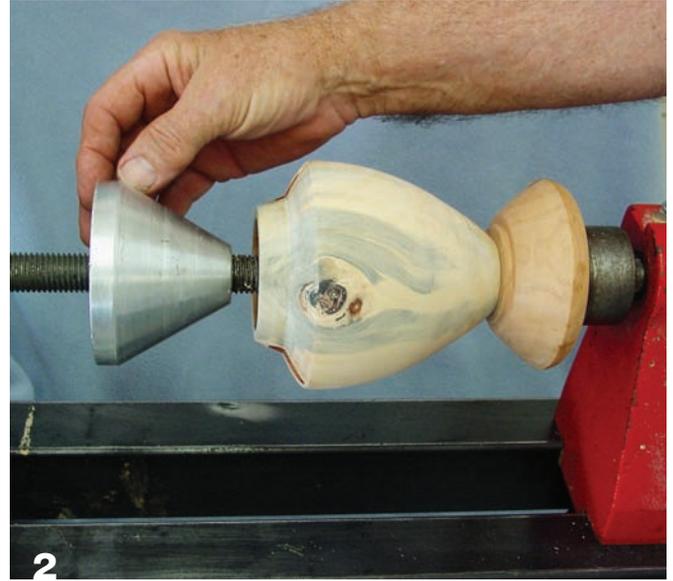
We also substituted a $\frac{3}{4}$ " ACME threaded rod with a nut to hold the core against the cone. This provides more secure holding power for the cone. But in practice, cutting threads on the cone (by using the threaded rod as a tap) to a slight depth is adequate. Chapter members agreed that the ACME threaded rod was more trouble than it was worth.

Neoprene on both the drive and cone prevents marring and improves the gripping power of the drive cone. For my shop, I made cones from 1" to 3" to fit the mouth of the hollow forms I turn regularly.

Our last improvement incorporates a $\frac{3}{4}$ "x10 threaded rod, which



1
Version 1: A split-locking collar snugs the core against the top of the vessel. The reversing bar shown is stainless steel.



2
Version 2: With a threaded rod, it's easy to tighten an aluminum cone (Oneway version shown) onto the vessel.

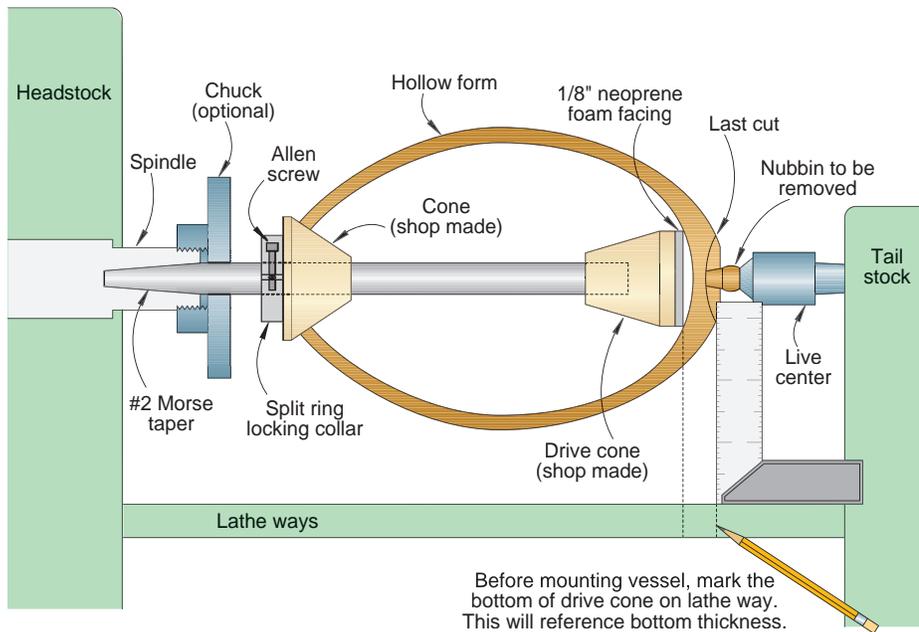


Illustration: Roxanne LeMoine

allows us to use the 3"-diameter aluminum cone from the Oneway live center (**Photo 2**). The aluminum cone is useful because it adapts easily to the mouth of the vessel.

Using the reversing bar provides an additional benefit for determining the thickness of the vessel bottom. By placing a square against the drive pad where shown in the drawing *above*, you can use a marker to indi-

cate the bottom of the vessel. This is a time-saver that eliminates the need to remove the piece to measure the bottom thickness (**Photo 3**). This technique assumes that the bottom is flat for the width of the pad. If the bottom is rounded, the wall thickness will be inaccurate.

Because many of our members turn green wood, we now offer threaded and nonthreaded stain-

less-steel versions to eliminate rust. (Members that own a 3" Oneway cone prefer the threaded rod.) Members paid \$40 apiece for our last run of reversing bars.

Franck Johannesen (vikno@brmemc.net) is a frequent demonstrator. He recently moved from Florida to Ranger, NC, to live near the John C. Campbell School, where he teaches a couple of times a year in the turning program.

In the Fall 2007 issue, Neil Scobie showed members one way to create sculptural squirts. After a positive response, Neil went back to the drawing board to create some alternative designs.



Return of the Squirts

By Neil Scobie

Last fall I showed how to use inside-out turning methods to create tabletop decorative pieces. Since then, I've explored other surface treatments and developed a system that allows you to turn four designs at a time.

Get started

For turning tools, you'll need a $\frac{3}{4}$ " or 1" spindle roughing gouge and a $\frac{1}{2}$ " spindle gouge to finish close to the headstock and tailstock. You'll also need a 4-jaw scroll chuck, a spur center, and a tail center.

Before you begin building squirts, you need to create a center mandrel from a nearly perfect square of $2 \times 2 \times 12$ " hardwood. This piece can be any species, as its sole purpose is a fixture to attach the squirt blanks. First, square up the stock with your tablesaw. Mark the centerpoint of

each end, either by drawing diagonal lines from the corners or by using a marking gauge.

What you plan to do with the surfaces after turning will influence the stock you select for the squirts. The pieces shown on these pages are turned from Huon pine, which is similar to basswood in turning properties. See the sidebar on *page 62* for more details.

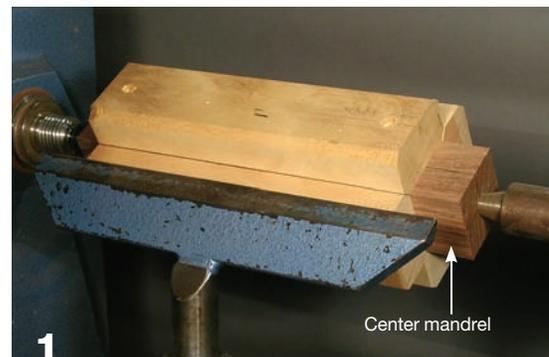
Prepare the blanks

The squirts were sawn to $2\frac{1}{2} \times 1\frac{3}{8} \times 9$ ". They do not need to be machined perfectly smooth, but they should be accurately sawn. Chamfer the edges at about 45 degrees, which you can do on a jointer or a bandsaw or with a hand plane.

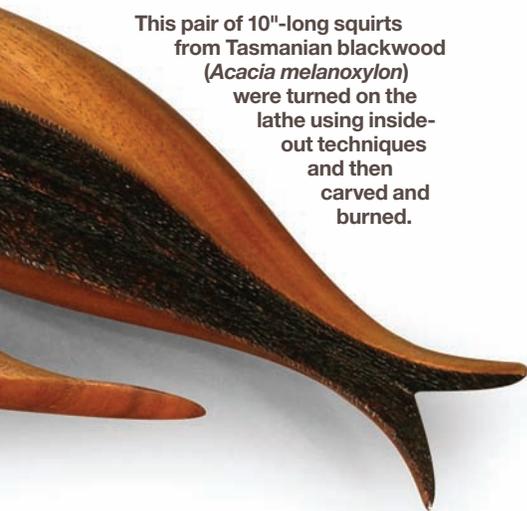
Accurate marking and drilling of the mounting holes will assure proper alignment when you turn the

squirts over for the second step. A marking gauge provides an excellent way to lay out the hole centers.

At a drill press, drill $\frac{3}{16}$ " holes through the blanks and $\frac{1}{8}$ " holes into the mandrel holes. It is a good idea to counterbore the holes on both sides of the blanks $\frac{3}{8}$ " deep and $\frac{3}{8}$ " diameter so that the heads of the screws are below the surface (**Drawing A**).



To turn four squirts simultaneously, mount $2\frac{1}{2} \times 1\frac{3}{8} \times 9$ " blocks to a center mandrel.



This pair of 10"-long squirts from Tasmanian blackwood (*Acacia melanoxylon*) were turned on the lathe using inside-out techniques and then carved and burned.

Turn the first profile

Screw the blanks to the 2" square block using #8x2" screws and put the assembled blanks between centers on the lathe (**Photo 1**). You should now be ready to start turning. You should be aware that when the squirt shapes are turned four at a time, they will end up a flatter shape than when turned in pairs. This is because the center line of each of the 4x squirts is on a larger radius (farther from the spindle center) than the 2x squirts, which creates a flatter shape.

Use your spindle roughing gouge to turn the blanks. Be sure to leave the ends square. The best way to turn this shape is to cut downhill from the ends inward toward the center, then cut from the center of the block downhill to meet the shape you turned in from the ends (**Photo 2**).

Keep an eye on the diameters at each end; you only want to cut to about half of the thickness of the single blank. Follow the sizes on **Drawing A** on page 61. Once you are pleased with the shape (**Photo 3**), sand the surface with 120-grit sandpaper followed by 180 and 320 grits. Power-sanding with a 3"-diameter disc streamlines the sanding task.

Turn the second profile

Remove the screws, turn each of the four blocks inside out, and insert the screws again. Place the block between centers again and turn the second side, using the technique described above (**Photo 4**). The largest diameter should be about 1/2" from the center of the first side shape (**Drawing A**). Reduce the diameter of the ends so that you have about 3/8" between the top and bottom shapes at the smallest point. I made my first pieces about 3/16" thick, which limited the size I could carve the open end of the two squirts. Experience taught me that 3/8" is better.

Because of the soft grain, sandblasting the first pair of squirts (*below*) was a small job, as the soft wood eroded away quickly with 60-grit garnet blasting abrasive. This left a nice texture on the surface with the fine growth-ring pattern of the pine.

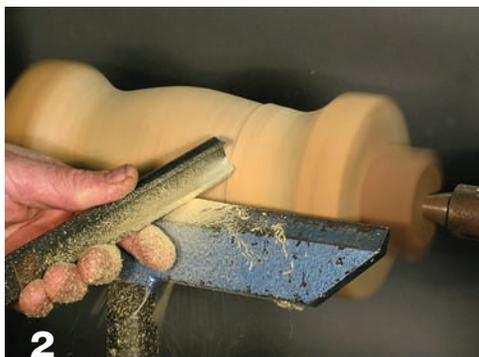


As with the first turning, sand the surface of the second side, taking care not to aggressively round the leading edges. You may even find it better to hand-sand the surface while the lathe is turned off.

A second method of turning four squirts simultaneously is described in the sidebar on page 62.

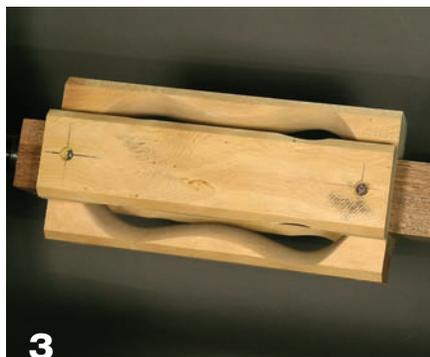
Design challenges

The turning of the hollows and the turned hole that went right through were both new techniques. Keep in mind what hole size you think would look appealing. Mine was 3/4" diameter, which looked about right.



2

Using a 1" gouge, shape the first profile of the squirts. Cut downhill toward each end.



3

Remove each squirt and place the first profile against the center mandrel.



4

Before unscrewing the four squirts, sand the second profile while on the lathe.



5
To mount the squirt to the 12"-diameter disc, apply pressure with the tailstock and secure with screws.



6
With a spindle gouge or small bowl gouge, turn hollows on the first squirt.



7
For another design, turn and sand a hole about 50 percent through the first side.



8
After flipping over the squirt to the second side, turn and sand the decorative hole.



9
Referring to Drawing A, draw the squirt shapes on each piece.



10
With a bandsaw, remove stock outside the pencil lines.

Turn the hollows

Cut a 12"-diameter disc from $\frac{5}{8}$ "-thick plywood or MDF and attach it to the lathe either by a screw center or a faceplate. Using a pencil, mark the positions of the hollows on the flat surface of one of the squirts and mark the centerpoint of each of the hollows. Set the tailstock center in the first hollow mark and apply enough pressure so that the squirt is held against the plywood disc. Insert a screw through the existing screw holes on each end of the squirt to secure it to the disc (Photo 5). Now remove the tailstock and turn the first hollow using a $\frac{3}{8}$ " spindle gouge or a small bowl gouge and sand it. Repeat the process for the other two hollows (Photo 6). For a second squirt, turn a hole through by working from both sides. Set up the squirt as described above and screw the squirt to the disc. Turn

and sand the hole about halfway through the squirt (Photo 7), then remove the screws, turn the squirt over, and replace the screws in the same holes. Turn and sand the second side of the hole (Photo 8). Because I planned to sandblast these two squirts, I sanded them to 120-grit smoothness.

Remove the ends

Referring to Drawing A, pencil where you want to cut the ends and remove the waste with a bandsaw. (Photos 9 and 10). To sand the ends, use a disc or pump-up drum sander (this technique was described in the Fall 2007 issue). Hand-sand the squirts to prepare for your next decorative step.

Carve the squirts

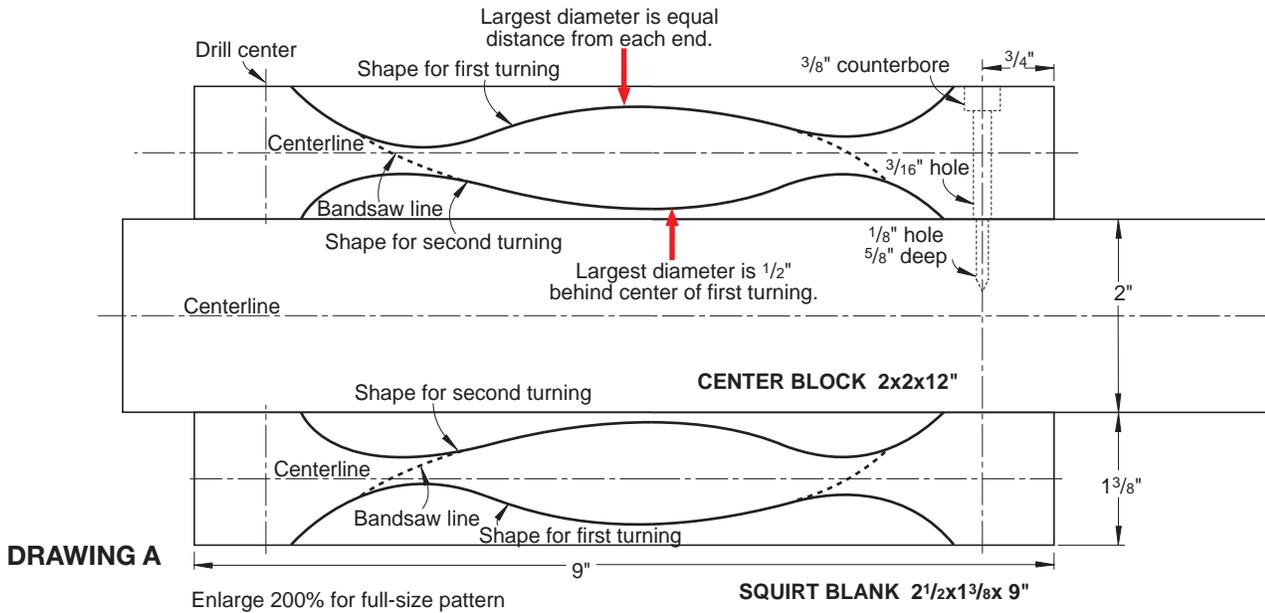
To secure the squirts for hand-carving, use pieces of polystyrene to act as

soft jaws in a standard wood vise. With soft wood like Huon pine, hand-carving gouges are all that is required, but power carving tools (a reciprocating power carver with a V-tool works well) may be required for harder timber or larger squirts.

Start by using a V-carving gouge to carve an opening in one side of the squirt (Photo 11). On this 6"-long squirt, I carved $\frac{3}{8}$ " deep and $\frac{3}{8}$ " wide.



11
Carve the squirt opening with a V-gouge. Carve about $\frac{3}{8}$ " wide and $\frac{3}{8}$ " deep.



To open out and split the end, stand the squirt more upright in the vise and use a Japanese handsaw to cut in from both points, being careful that you leave enough thickness so that the points do not break off (**Photo 12**). After sawing, I used a sharp carving knife and V-tool to finish shaping. Once you are happy with the side opening and split end, wrap sandpaper around a discarded credit card to sand the inside shape. I started with 120 grit followed by 180, 320, and 400 grits.

To carve the hollow in the face of the squirts, polystyrene lining the vise jaws should work fine. Using a shallow carving gouge, carve a

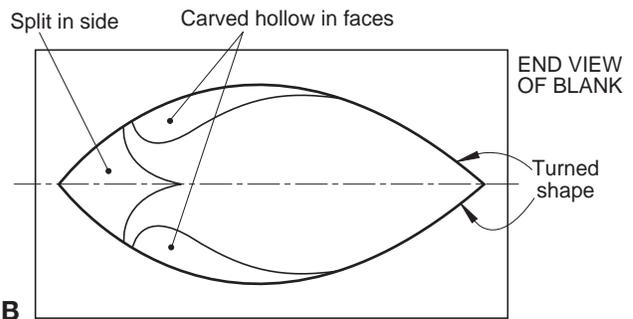
hollow next to the opening you created so that the opening is more pronounced (**Photo 13**). You will need to carve this shape on both sides, using **Drawing B** as a guide on how deep to carve.

To sand the hollow sections and blend them into the turned side shape, use a small sanding pad, about 1/2" to 1" in diameter in an electric

drill and blend in the shapes. I used 180 and 320 grits (**Photo 14**).

Next, sand the squirts fully by hand using 400 and 600 grits. The example on *page 60* shows a design option with a stippled opening and part of one of the squirts to show another design possibility.

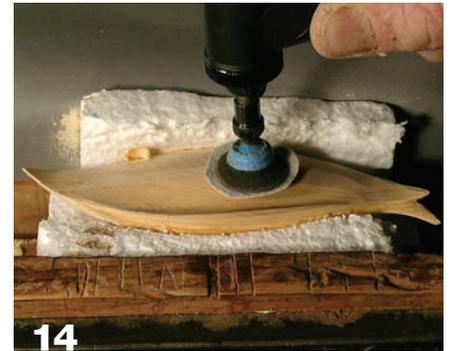
Define the separation between the stippled and smooth sections with a



12
A Japanese handsaw is ideal to open the ends of the squirt.



13
With a shallow carving gouge, make the squirt opening wider.



14
Blend the contours with a 1/2" or 1" sanding pad on a drill or sander.



small V-chisel. I used a ball burr about $\frac{3}{32}$ " in diameter in a rotary power tool followed by a thorough rub with a white scouring pad to remove any torn grain from the stippled areas.

Make a stand

The squirts look quite good sitting together as a pair, but you may wish to make a display stand as shown *above*. One option is to create a stand from one of the end blocks that was bandsawn off the end of the squirt. Draw the shape (Photo 15), then bandsaw and shape the stand with the disc sander. Carve the inside with a shallow carving gouge, leaving a chipped carved texture on the inside surface (Photo 16).

There are many options that you could adapt for this method of multiple turned components. The sidebar at *right* includes three options. Let your imagination run wild, experiment, have fun, and enjoy the challenge.

Neil Scobie (neilandlizscobie.com) is an *American Woodturner* contributing editor. He lives in Lower Bucca, New South Wales.



15 From stock bandsawn from a squirt, create a profile for a stand.



16 Use a shallow carving gouge to remove waste stock from the stand.

Squirting with Options

As described in the Fall 2007 article introducing squirts, a collar (Photo A) provides another method of turning four squirts simultaneously. If you machine four pieces of timber $1\frac{1}{2} \times 1\frac{1}{2} \times 8$ ", secure all pieces in a 4-jaw scroll chuck at one end and press the collar onto the other ends, then secure with the tailstock.

The inside of the collar will need to be the same diameter as the diagonal \times measurement of the four blanks. The turning method is the same as described on previous pages. Turn and sand the first shape, then turn the blanks inside out and replace them in the chuck and collar to turn the second side (Photo B). After turning and sanding the second side, remove the squirts from the chuck and shape the ends (Photo C).



Huon pine, a Tasmanian treasure

Huon pine (*Lagarostrobos franklinii*), Australia's oldest living tree, is only found in the wilderness areas of western and southern Tasmania. The timber is rich golden in color, works easily, and takes a high luster. Its bird's-eye and decorative figure make it popular for high-quality furniture and craft items. Huon pine timber is also very durable and highly sought after for boat building.

Small volumes of saw logs and craftwood are supplied by Forestry Tasmania from stockpiles salvaged from areas inundated by hydroelectric developments during the 1970s and 1980s, and from dead and fallen pieces recovered from a former logging area.

Tips

Got a Great Idea?

Share your turning ideas! If your tip is published, you'll earn \$35. Send your tips along with relevant photos or illustrations and your name, city, and state to:

John Lucas
529 1st Ave. North
Baxter, TN 38544
jlucas@tntech.edu

Upgrade your McNaughton tool post

When turning with the McNaughton coring system, it's of utmost importance that the tip of the coring blade remains level with the center of the work piece. However, sometimes a nasty catch causes the tool post to slip in the banjo. When that happens, you're in for a rough ride.



Rather than crank down hard on the grub screw to prevent this, I devised a simple fix. After I precisely set the height of the tool rest, I measure the distance between the bottom of the tool-rest assembly and the top of the banjo. I then plane a piece of scrap to this dimension, bore a 1" hole to accommodate my tool-rest post, and turn the piece round. With this doughnut inserted on the post, the tool rest can't slip.

I have the standard and small knife sets for the McNaughton system, so I made one of these wooden doughnuts for each set and labeled them. Besides preventing the post from slipping in the banjo, I no longer need to guess the height for the tool post. I just insert the correct donut and start coring bowls.

*Greg Pencheff
Lancaster, Pennsylvania*

When smoke gets in your eyes

I've been bothered with the smoke that lingers when I texture and burn my lathe-turned pieces. My first solution was a dust extractor, but it was too noisy and the volume of air cooled the tip too much.

I found that a computer fan (about 4x4") pulls the smoke away from my eyes. To improve my setup, I also drilled out the fitting on my carving station to fit my lamppost mount so I can adjust the light to be close to the work and on any angle.

*Terry Scott
Auckland, New Zealand*



Minimize damage from buffing catches

Just like catches that occur during turning, we all get catches while buffing that send a piece flying. The real problem with buffing catches is the sudden stop at the end of the piece's travel. I've tried several methods to catch these flying pieces, and the one that works the best is also the simplest.

I use the Beall buffs with a dedicated motor and an arbor extension for my buffing. My motor is mounted to a board and it sits on the end of the lathe bed when I use it. I wrap the arbor extension with clear packing tape to eliminate aluminum marks when the turned piece accidentally touches it.

The system for safely catching flying pieces is simple: Partially fill a plastic trash can with shavings. Then insert a piece of cardboard into the shavings and container as shown at *right*. The shavings provide a soft landing for the flying piece; the cardboard catches the high fliers and deflects them into the shavings.

*Brian Hahn
Avoca, Wisconsin*



A new twist on bottle stoppers

I recently started turning bottle stoppers. I began with the accepted method of drilling a $\frac{3}{8}$ "-diameter hole about $\frac{3}{4}$ " deep in my blank, and gluing in a short length of dowel. After the glue dried, I chucked the dowel in my drill chuck mounted in the headstock and began turning. Unfortunately, the dowel soon squished, twisted, and splintered.

Figuring there had to be a better way, I came across a short length of threaded electrical tubing called lamp rod. I threaded the tubing into a $\frac{3}{8}$ " hole in another blank, and then chucked this into my drill chuck. The tubing threaded on easily enough to go in straight and true, yet held firmly enough to not slip out—even with the tailstock pulled back.

Going one step further, I filled the tubing with solder, creating a solid threaded mandrel that chucks up easily and holds my blanks firmly. (I'm convinced you could substitute epoxy for the solder.) When the stopper is complete, gluing in the dowel and the cork can be done in one easy step!

*Brian Ziff
Watertown, Connecticut*

Dead-level hollowing is on the level



When turning closed forms, I've had trouble keeping the cutter tip at dead center when I couldn't see the tool tip inside the form. The result was that darned bump created in the center, catches, or other nasty results.

While browsing through a discount store, I found some replacement spirit level vials (plastic) on sale at four for \$1. It hit me that a two-bit solution to my blind hollowing problem was right in front of me.

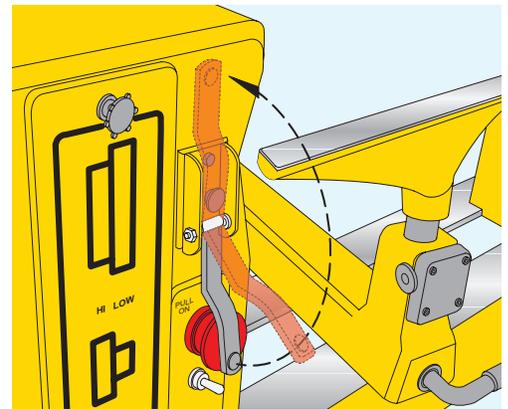
I mark the center top of the tool handle with a black line, and then epoxy one of the bubble vials into a notch cut in the top of the handle. The black line tells me the side-to-side tilt of the cutter bit and the bubble tells me if my tool is dead level, pointed up (bad), or down (not good either).

To set the vial correctly, clamp and level the tool shaft in a vise or clamp of your choice. Apply 5-minute epoxy in the notch, position the vial, and adjust it so it reads level.

*Mark Mandell
Annandale, New Jersey*

Shop-made spindle lock for Powermatic lathe

When I turn at my Powermatic 3520 lathe, I like to have both hands free when removing the chuck or installing a piece in the chuck. However, the spring-loaded spindle lock ties up one of my hands. Now I've found a work-around.



I bent a lever out of a piece of $\frac{5}{8}$ " flat steel 4" long. I then embedded a 10mm rare earth magnet in one end and drilled a hole for a hinge pin in the other. I mounted my lever through the spindle lock button guard as shown in the drawing above. The magnet keeps the spindle lock locked when in the up position, and the lever just lays on top of the on/off switch when disengaged.

*Tom Wheeler
Viroqua, Wisconsin*

Phosphoric acid chases away rust

I live in humid Florida, and my lathe is in an unair-conditioned shed that is almost always moist. I treated the lathe ways with phosphoric acid. It stops rust and keeps it from starting. You can find it in a paint store for use as a metal treatment before painting or in an aerosol can at your friendly NAPA dealer. In some locations, you may find this sold as naval jelly.

*Lynn Edwards
Brooksville, Florida*

Calendar of Events

Summer Calendar deadline: April 1. Send information to carlvoss@mac.com.

California

del Mano Gallery, Los Angeles, *Hot Tea*, contemporary teapots in wood, ceramic, fiber, and mixed media, March 8–April 5. *Small Treasures*, April 12–May 10. *Solo Exhibition: George Peterson*, May 17–June 14. *Turned & Sculptured Wood*, June 28–July 26. Information: delmano.com or 800-del-Mano.

Colorado

10th Annual Rocky Mountain Woodturning Symposium, Sept. 13 and 14 at Loveland. Featured demonstrators include Stuart Batty, Keith Gotschall, and Mike Mahoney. Information: Allen Jensen at 970-663-1868 or rmwoodturningsymposium.com.

Georgia

Southern States VII Woodturning Symposium, April 25–27 at the Georgia Mountains Center in Gainesville. Featured demonstrators include John Mascoll, Graeme Priddle, Avelino Samuel, and Betty Scarpino. Information: southernstates.org or Marsha L. Barnes at 828-837-6532 or pineshingle@brmemc.net.

Illinois

First Midwest Woodturning Symposium, July 25–27 in Mundelein. Featured demonstrators include David Ellsworth, Alan Lacer, Binh Pho, Dick Sing, Steve Sinner, Curt Theobald, and Jacques Vesery. For more information: chicagowoodturners.org or Jan Shotola at 847-412-9781.

Michigan

It Grows on Trees-II call for entries. Deadline: April 30. Open to all forms of woodworking by resident artists in areas affected by Asian Emerald Ash Borer, an insect that kills 100 percent of the infected ash trees. Exhibit arranged for at least three sites. Information: michiganwoodart@gtlakes.com or riversidearts.org/woodshow.ht

Minnesota

AAW Gallery, St. Paul, *Far From the Tree*, through April 18. Artists include Bob Stocksdale, James Prestini, Mel Lindquist, and Rude Osolnik, plus more than 20 contemporary woodturners. *Woodturning in Basic Black*, through April 18. Also, selections from *Step Up to the Plate* and items from the AAW permanent collection are on display in the St. Paul City Hall. Information: AAW Administrative Offices at 651-484-9094 or woodturner.org.

Nina Bliese Gallery, Minneapolis, *New Work by Robyn Horn*, through March 28. *Solo Exhibit: Steve Sinner*, March 31–May 2. *Solo Exhibit: Ben Carpenter*, May 5–June 13. *New Masters of Wood Turning*, June 16–Aug. 15. Information: ninabliesegallery.com or 612-332-2978.

Missouri

The Ornamental Turners International Biannual Symposium, Sept. 26–28 in St. Louis. Featured demonstrators include Fred Armbruster, John Edwards, John Ferreira, Bill Robertson, and Joshua Salesin. Information: ornamentaltturners.org, Alan Bugbee at 860-658-4764 or steve@finetools.com.



Stoney Lamar's "Arcing Back" is part of *Far From the Tree*, an exhibit currently on display at the AAW Gallery in St. Paul. Carob, steel, and milk paint; 36x24x9".



"Early Turned Bowl" by Mark and Melvin Lindquist. Part of the *Far From the Tree* exhibit. Spalted maple; 5¼x11¼".

Ohio

Call for entries for a juried woodturning competition at the Wayne Center for the Arts, Wooster. Show dates June 11–July 20. Seven categories with cash prizes. Co-sponsored by the North Coast and Buckeye AAW chapters. Information: Ray Muniak at 440-526-3602, bwwt.org, or ncwt.org.

Pennsylvania

The Wood Turning Center, Philadelphia, *Rose-Engines & Kings: Contemporary Ornamental Turning 2008*, through March 22. *7 Visions: Wood as Fiber*, March 7–May 17. *Artists' Reflections on the Collection*, April 4–May 17. *Echo Lake: 10 Years*, June 6–July 19. *allTUR-Natives: Form + Spirit*, July 25–Sept. 13. *Challenge VII: Dysfunctional*, Oct. 3–Jan. 17, 2009. Information: 213-923-8000 or woodturningcenter.org.

Remembrance

The piece to the *right* is turned and carved from a ginkgo tree that once stood in the courtyard behind the Botany and Zoology (B&Z) Building at The Ohio State University. The building dates back to the early 1900s and was built in three stages—the original, one addition during the Coolidge administration, and the latest addition during the Kennedy administration. The building is on the National Historic Register, so when it fell into decline and disrepair the university decided to do a major renovation rather than a complete demolition.

All of us housed in the old B&Z were moved off to a brand-new building, and the old dinosaur was partially demolished to make room for a new auditorium and some high-quality teaching space. Before they could start the demolition of the Kennedy administration-era wings, the two old ginkgo trees had to be removed. These trees were well over 100 years old and as tall as the four-story building.

My office was on the top floor of the building, facing the courtyard and the beautiful ginkgo trees. I loved the autumn when the ginkgo leaves turned a golden yellow. It was so beautiful. I was really upset when I found out they were going to cut down the trees, so I went to the associate dean of my college to ask if I could have some of the wood when they removed them. He didn't seem optimistic that I could salvage some of the tree, but I checked in with him every couple of weeks to let him know that I was still very interested in obtaining some wood.

One morning I was working in my office and I received a phone call from the dean. He told me that the trees would be taken down that morning and that if I wanted some of the wood I should go over to the construction site and tell the foreman that the associate dean had sent me to see him. I got over there promptly at 10 a.m., and the foreman had laid out the downed tree so I could inspect it and tell them what section of the tree I wanted. They were even kind enough to cut the log for me and load the sections into my van. That was a bit dodgy since my van wasn't really capable of hauling that heavy wet wood, but I managed to take home four large sections of the log.

The name of this piece is my homage to those beautiful trees.

—Andi Wolfe



"Remembrance."
Ginkgo; 8½x3½"
Glass base by Adam Kaser,
Delaware, OH.
Photo: Jerry Anthony