Turning Spheres • Luke Mann's Finish • Bowls from a 2x4 • Olive Oil Dispenser

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American Woodturner®

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

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Bonnie Klein: Tops in Turning

For her outstanding contributions to woodturning, AAW recognizes Bonnie Klein as our 2003 Lifetime Honorary Member. See page 26 for details.

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Bonnie Klein has turned thousands of colorful tops during her 20 years of teaching and demonstrating turning techniques.
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I really appreciate all the feedback about the Spring issue of the journal. It is good to know that so many responded positively about the changes that were made. Our new editor, Carl Voss, and the Publications Committee are working hard to make it more readable and helpful to you—our members. Continue to watch for the improvements. And if you have a story idea or suggestion, Carl or one of the Board are always open to hear it.

It is only days until the opening of the 17th Annual AAW Symposium at the Pasadena, CA, Conference Center. I hope you are able to attend. The staffs of the AAW, the participating California chapters and the AAW board members have all put a lot of effort into making this one of the best we have ever organized. I think we have a very exciting and informative lineup of demonstrators. If you haven't already done so, take a few minutes to check out the list of demonstrators and the subjects they will cover, beginning on page 53. With more than 120 rotations, the biggest problem most attendees have will be choosing the sessions to attend.

Also for your planning, the 2004 symposium will be in Orlando, Florida, on July 23-25. The 2005 will be in Overland Park, Kansas (greater Kansas City area), on July 22-24.

The totem poles that the AAW installed at the Arrowmont School of Arts and Crafts in the fall of 1990 have been restored (at this writing there were a couple of chapter contributions still missing). I want to thank all the chapters that undertook the job of restoring or recreating their pieces and getting them to Arrowmont. And a special thanks to Arrowmont and employees Jeff Brown and Max Posey for their work in removing the old and erecting the new pieces. For more about this effort, see page 44.

This is my last column as President—I can't believe two years have gone by so quickly. It has been a pleasure meeting many members and sharing experiences, thoughts and stories about something we love–WOODTURNING.

Bobby Clemons
banddclemons@bledsoe.net

The 17th Annual Symposium in Pasadena June 27 to 29 promises to be a great meeting of woodturners from all over the world. The AAW Board of Directors, staff, and support people have worked diligently to prepare the best symposium yet. There are a variety of turning opportunities for the very beginning turners to the top level of advanced turners.

Rotations include bowl and spindle turning, hollow vessel forms, design and enhancement of vessels, production turning, wood identification, website and Internet marketing. These are a part of the rotations that are available at the Pasadena symposium.

The trade show promises to be the largest ever with 78 vendors contracted as of this writing. The exhibition hall will be filled with a variety of tools, equipment, wood stock, and instructional videos to name only a few of those scheduled.

As always, spouse tours are available for the entire symposium. Different tours are planned each day to offer spouses a variety of ways to enjoy the Los Angeles-area scenery. Saturday's banquet and auction promise to be unique with an outdoor meal followed by the auction held at the Civic Auditorium.

Looking forward to seeing you in Pasadena.

Willard Baxter
Conference Committee Chairman

EOG winners report on their experiences

A key part of the EOG process includes reporting on how recipients put funds to use. Indeed, the final 20 percent of the grant is withheld until the recipient files a "what happened" report. Here are highlights from four recent winners.

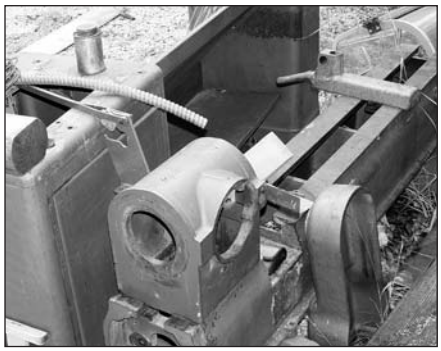
Travis Kurzmack, LaPorte, CO. Travis, a high school student, won an EOG to attend the 2002 AAW Symposium in Providence.

"One of the most effective teachers I saw was Masaaki Hiroi, a turner from Japan. While his tools and lathe were completely different from what most people used at the symposium, what he taught was useful. First, he showed that a $5,000 lathe is not needed to turn well. Also, he picked shapes that didn't need to be turned in a specific order.

"Another important aspect about his forms were that they didn't require a special type of wood with interesting grain patterns in order to look good. Rather, they could be painted. By using simple wood, the forms that he made were easier to see, and the paint allowed for more possibilities.

"I recently taught a friend of mine how to turn. After we got the basic cuts down, I showed him a book of bowl outlines and we came up with a design for a bowl. I believe part of the reason that he was successful was because he saw someone his own age turning. And after seeing pictures of Masaaki Hiroi's lathe, he believed it was something that was within his budget."

Stacey Hager, president of the Central Texas Woodturners, reported on his chapter's overhaul of a rusting Powermatic 90 frame with a Oneway drive train. The chapter, based in Austin, machined new pulleys, redesigned the motor mounts, modified the cases and stand, devised a vibration damping system, and solved a myriad of technical problems for their new "PowerWay" lathe.



Photos above show the before and after of the Central Texas Woodturners' new "PowerWay" lathe.

"This is the kind of support that breeds success and helps clubs spread the joy of turning wood throughout their community," Stacey reported.

Antelope Valley Woodturners of Palmdale, CA, created a resource website with EOG funding. With the help of member Chris Wright, a designer, the club launched www.woodturnersresource.com.

Highlights of the site include moderated bulletin boards, resource pages, and project plans and ideas. One recent bulletin board exchange, for example, discussed how to introduce blue streaks in buckeye burl.

Loren Heyer of Elsie Allen High School, Santa Rosa, CA, put EOG funds to good use to purchase two mini-lathes and a set of turning tools for his school.

"One of our beginning projects is a simple metal tool box with a lathe-turned handle," Loren reported. "I'm always surprised at the creativity of some of the students who are quick to move beyond making a basic handle. This generation of woodturners has a range of enthusiasm for woodturning. Recently one of the comments I received was 'wish I had one of these at home.'"

25 EOG Applicants awarded $18,400

Early this year, the AAW Educational Opportunity Grants (EOG) Committee announced $18,400 in awards to winter group (January 2003) applicants. Among the winners were 14 chapters, four individuals, five schools and two woodworking guilds. Twenty-five of 54 applicants won awards.

Winners and proposed EOG funding included:

- **Adirondack Woodturners Association**, Albany, NY. Assistance with organizing two-day mini-symposium scheduled for October.
- **Carolina Mountain Woodturners**, Asheville, NC. Underwrite professional demonstrators for events held on U.S. National Park property, where organizers aren't allowed to charge admission or "pass the hat."
- **Azalea Woodturners**, Vancleave, MS. Grant to assist two-year old chapter build video and book library.
- **Preston Christensen**, Springville, UT. Grant to high school sophomore to attend one-week seminar at Provo, UT.
- **Coulee Region Woodturners**, LaCrosse, WI. Purchase two mini-lathes, chucks, and turning tools for Holmen High School shop program.
- **Tiverton Middle School**, Tiverton, RI. Purchase mini-lathes for expansion of middle school core program and after-school enrichment program.
- **New England Association of Woodworking Teachers**, Derry, NH. Grant for 10-plus high school teachers and 55-plus students to attend the Guild of New Hampshire Woodworkers meeting in Derry.
- **Hart County Woodturners**, Caddo Mills, TX. Purchase lathe, demonstration cabinet and audiovisual equipment for high school shop program.
- **Lucas Hudley**, Newland, NC. Tuition for high school student to attend John C. Campbell and Arrowmont one-week programs.
- **Kansas City Woodturners**. Grant for demonstrator to conduct two-day seminar for beginning woodturners.
- **Lake Superior Woodturners**, Duluth, MN. Purchase mini-lathes and chucks for chapter demonstrations.
- **Leigh Valley Woodturners**, Bethlehem, PA. Purchase mini-lathes and turning tools for chapter demonstrations.
- **Jesse LeMon**, Tallahassee, FL. Purchase turning tools for Lookout Mountain Camp for Boys.
- **Low Country Turners**, Savannah, GA. Underwrite Soren Berger expenses for chapter demonstration.
- **James Meier**, Batavia, NY. Tuition for high school teacher to attend Arrowmont turning workshop.
- **Nor-Cal Woodturners**, Sacramento, CA. Purchase mini-lathes to establish youth education demonstration teams.
- **Northern Rockies Woodworkers Guild**, Bozeman, MT. Conduct two-day workshop with guest demonstrator.
- **Lunenberg High School**, Lunenburg, MA. Purchase chucks and turning tools for high school woodturning club.
- **Fall Mountain Regional High School**, Langdon, NH. Underwrite tuition and expenses for student attendance at New England Woodturning Symposium plus purchase chucks and turning tools.
- **Texas Christian High School**, Houston, TX. Purchase lathe, chucks, and turning tools for shop program.
- **South Coast Woodturners**, Brandon, OR. Purchase mini-lathes and chucks for new chapter.
- **Suburban Woodturners Club**, Lisle, IL. Purchase mini-lathe and equipment for chapter meetings.
- **West Seneca West Middle School**, West Seneca, NY. Purchase mini-lathes and tools for technology classroom.
- **Willamette Valley Woodturners**, Keizer, OR. Purchase lathe and tools for meetings.
- **Woodchuck Turners of Northern Vermont**, St. Albans, VT. Purchase equipment for and underwrite promotion of outreach turning demonstrations.

Deadline and tips for EOG applications

Summer EOG applications must be postmarked no later than July 15. Recipients will be notified by September 1 and must acknowledge acceptance of the grant by January 15, 2004. For complete information, follow links at www.woodturner.org or call 651-484-9094 for a form.

Lee Carter, EOG chairman, offers several tips for EOG applicants:

- Educational is a key word in this program. Proposals for programs (lathe equipment, student and teacher education) carry more weight than an individual request to attend a workshop.
- Student/youth and teacher education get a nod. The EOG committee loves helping the next generation of turners.
- Educate beginners: It's a good thing in the committee's eyes. A chapter's program for beginners has a better chance for approval than something narrow for advanced turners.
- Do the numbers: How many turners will benefit from your grant? A recent award to the Carolina Mountain Woodturners, for example, will impact about 200 turners attending monthly demonstrations at the Folk Art Center on the Blue Ridge Parkway (admission charges or "passing the hat" aren't allowed on federal property).
- How will you leverage the knowledge gained? Be sure to describe what you or your group will do with the information/opportunity to learn.
- Have someone proofread your application.

Teaching Turning From two sides

What happens when a turner takes his craft to school? Here's the story from both the teacher and the turner's viewpoint.

Teacher's tale

Anne L. Schlotterbeck
fourth grade,
Butler Elementary, Savannah, GA

Recently at my urban Savannah, Georgia, public school, I demonstrated the rotation of the planets by choosing several tops turned by my father, a full-time lathe hobbyist.

The students were fascinated by the construction of the toys and the assortment of woods used to make them. The class generated many questions, and that led me to believe that they were mentally stimulated. Follow-up was needed to ensure that their curiosity continued!

I knew that I should find a way to apply the curiosity to real-life simulation. Later in a science unit on forces, I brought out the tops again so that we could include them in other concepts including mass, acceleration, friction, and Newton's Laws.

My father suggested that there might be local resources in Savannah who could demonstrate these concepts with a lathe. I sent e-mails to several contacts listed in your publication, and Tom Gattis of the Savannah College of Art and Design responded. I explained to him what had been done and what I hoped for from him. Tom took up the challenge right away.

The students started out politely in their seats ready to listen. By the time the demonstration was over, they were crowded around Mr. Gattis and his lathe.

What transpired during his demonstration appears to be education at its finest. The students started out politely in their seats ready to listen. By the time the demonstration was over, they were crowded around Mr.

Turner's turn

Tom Gattis
Professor of Product Design for Savannah College of Art and Design.
President of the Low Country Turners, Savannah, GA

Anne Schlotterbeck provided me with a brief overview of what they had been learning about Newton's Law and gravitational force. I of course did a bit of brief research to refresh my basic understanding of physics and to figure out how I was going to tie turning into what they were learning.

I arrived at Ms. Schlotterbeck's school with a bit of anxiety and concern whether her students would find the craft I love so much as interesting as I do. The first students I met were Aaron and Anthony. They helped unload the gear with wide-eyed wonderment and that sense of curiosity that only a nine-year-old has. I knew from that point forward that this was going to be an enjoyable experience.

Two Savannah students watch closely as Tom Gattis turns a bowl.

The students started off quietly sitting in there seats watching. They had prepared an exhausting list of questions. After answering questions, we attached a pine blank to the lathe for turning a simple bowl. Slowly but surely the students migrated closer and closer to the lathe as their curiosity piqued.

Soon they wanted to touch and feel. We talked about the forces in action and related it to Isaac Newton. We also discussed how good chips were being made and the difference between "happy"

Gattis and his lathe, eagerly paying attention, asking questions, and actively engaged in what today is called authentic learning.

In the 90 minutes he spent with the class, they reinforced prior lessons in plant and tree growth, Newton's laws of motion, simple machines, and the history of the lathe.

The demonstration was interesting, highly engaging, fun, and definitely worth repeating in any school. I recommend to any of your members that they consider taking the time and trouble to do the same in their local school.

(good quality) chips and "sad" (poor quality) chips. We discussed the sound of turning wood when the smooth ribbons fly off the lathe. I even let them touch the turned bowl at several steps along the way from rough to finished.

The hour and a half flew by and my anxiety with it. I hope that I accomplished helping them better understand the lessons. I thoroughly enjoyed myself and left feeling good about my small contribution to elementary education. I also hope that they got a sense for how much fun woodturning can be and that there are even career opportunities for these young people beyond the imagination.

The Quizzical Woodturner

By Ernie Newman

Think you know something about woodturning? Test your woodturning IQ, then check answers below.

1. Are there more species of hardwoods or softwoods in the world?
2. Which Hollywood actor is a woodworker?
   A. Clint Eastwood
   B. William H. Macy
   C. Harrison Ford
3. What is the problem with turning a piece after it has been sanded?
4. Does a screw chuck (faceplate with central projecting screw) hold end grain work, for example a goblet, as effectively as side grain work, for example a platter?
5. Which woodturning club has required its members to attend church?

Ernie Newman (ernienewman@hotmail.com; http://ernienewman.cjb.net) lives in the Blue Mountains west of Sydney, Australia. He previously taught a 700-hour course for apprentice woodturners.

ANSWERS:

There is more than one way to turn and there isn't just one right answer to the questions in this quiz. Your comments and corrections are welcome.

1. There are about 750 species of softwoods and about 30,000 species of hardwoods. As Hippocrates said in 400 BC, "The life so short, the craft so long to learn."
2. Clint Eastwood is a woodturner. William H. Macy ("Fargo" and "Happy, Texas") showed his turned bowls on the David Letterman Show, and was mentioned in the Spring issue of *American Woodturner*. Harrison Ford not only demonstrated his carpentry skills in "Witness," but also worked as a professional carpenter before his acting career took off.
3. When a turning is sanded, tiny abrasive particles from the sandpaper become embedded in the wood and if the piece is then turned, these particles will blunt the tool.
4. Screw chucks have great holding power in side grain but far less in end grain. You can hold end grain work on a screw chuck, especially if the work is small and the screw is large. However, for most end grain projects, a screw chuck is inadequate. Another option would be to use a faceplate with several long, deep threaded screws. Scroll chucks have far greater holding power.
5. In the 17th century the Worshipful Company of Turners of London instructed turners to, "assemble in decent & comely manner at the Common Hall & from thence go to such Church as shall be assigned & there to hear a sermon & abide until the end thereof." Because the Worshipful Company controlled commercial woodturning in London, members had little choice but to obey. If they refused to attend church or if they left before the sermon was completed, they were fined.

Preserving History

AAW member Gordon Thomsen is all wrapped up in history.

In 1963, Gordon was elected the first village clerk of Port Jefferson, NY. During his first year of office, he oversaw a downtown beautification project that included planting 15 moraine locust trees to line the city's Main Street.

Now fast-forward nearly 40 years. Last fall, Gordon watched in dismay as the trees fell victim to a rejuvenation project that replaced sidewalks, curbs, and trees. What to do?

Gordon, who has turned for 20 years, had a plan to preserve a slice of history. Within a few weeks after salvaging some of locust limbs, Gordon presented an 8×4" bowl to the village where he served until his 1986 retirement. His natural-edge bowl preserved all 40-plus years of the tree's life.

Photograph: Ach © 2003 Newsday, Inc. Reprinted with permission.

Gordon holds one of the bowls he turned from locust trees planted under his supervision in 1963.

Turning classes Benefit both Club & Community

The AAW, the Bay Area Woodturners Association (BAWA) and the City of San Ramon, California, have partnered to create a community wood-turning teaching program.

Since incorporating in 1997, the the club debated how best to fulfill its educational charter. In early 2002, BAWA moved the

Bay Area Woodturners take chapter education to the next level with a community-based program in San Ramon.

location for its monthly membership meetings to San Ramon's Senior Center, a relatively new building with excellent meeting and classroom facilities. The city and BAWA held a series of discussions to explore how BAWA might team with San Ramon to fulfill its community outreach goals. These talks led to the concept of the club providing woodturning classes under the Community Recreation and Cultural Arts Program.

It has proven to be an ideal arrangement that takes advantage of both the city's and the club's strengths. San Ramon (with a population of 44,000) runs four seasonally based sessions that

A beginning student roughs out her bowl during a Saturday class.

attract over 15,000 participants annually. The city handles registration, collects fees and provides the facilities. In BAWA's case, the facility is a classroom at the Senior Center. The city also allowed BAWA to build an 8'-square storage shed at the center for its classroom equipment.

Chapter designs course

For its part, BAWA designs the courses and provides the equipment and instructors. The club serves as an independent contractor to the city and receives a percentage of the fees collected, which helps pay an instructor honorarium. The club charges a materials fee which varies by class project.

In April, the BAWA Board of Directors made the formal decision to proceed. A pro form a teaching plan was prepared covering goals, typical course design, financial analysis, required member participation,

Students proudly show off the green-turned bowls they turned in a February class sponsored by the Bay Area Woodturners.

and club benefits. BAWA prepared a detailed equipment list for eight work stations; each one to include a midi-lathe on a moveable stand, a set of basic turning tools and a variety of accessories. The budget for this initial equipment totaled $4,850. In June, 2002, BAWA submitted a $1,000 AAW Educational Opportunity Grant application to to help with the equipment purchases. In August, the AAW awarded BAWA its grant.

In the summer of 2002, the club began purchasing equipment. The club already owned two midi-lathes purchased with an earlier AAW grant. Lathe and turning tool acquisition was spread out over the remainder of 2002 to match the club's cash flow. By the time of this writing, the club owns seven of the eight lathes and about half of the chucks and turning tools. Club members loan items not yet owned by the club.

We get students!

The Saturday courses are targeted to first-time turners and intermediate turners who want to review the basics or learn a new technique. Classes, open to any one 14 years or older, are designed around take-home projects, such as pens, wine bottle stoppers and green bowls, and a specific set of turning skills.

Each class works under the supervision of a senior instructor and an assistant. This provides an opportunity to train instructors. The club intends to have 15 or more qualified instructors (currently there are six).

As of this writing, two days of classes have been taught (two half-day classes in January and one full-day bowl turning class in February). According to students and teachers, the classes have been successful.

To learn more about BAWA's program, contact Bill Small at williamsmall@comcast.net.

Gene Pozzesi

One of the early AAW members died late last year. Merryll Saylan wrote the tribute that follows.

Woodturner Gene Pozzesi created bowls that were classical; his forms were simple and elegant and pure. It was not surprising then that the man was of the same character.

I first met Gene in the 1980s when Del Stubbs suggested he call me. We easily became friends. We discussed the need for an association and community of woodturners locally. As our friendship grew, we decided to start a turning club in the Northern California area. The first meetings were held in my studio.

Shortly after we formed the group, I left for a year and a half residency in England. The hard work to get the club going was done by Gene. When I returned, I was amazed how large the group had grown, and from that small beginning at least three or four other clubs in the area are flourishing today.

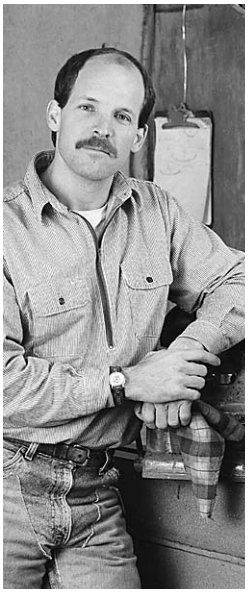
Gene had been especially proud to have been among the first members of AAW, having a membership card numbered 45. He attended several AAW symposiums and demonstrated at the one at Davis.

Gene had studied turning with Del Stubbs and he put into his work the same drive and energy that he put into Bay Area Woodturners. He perfected the curves of his form and his technical skills. del Mano represented him for many years, as did other galleries.

But most of all, on a personal level, Gene was an individual who was kind and gentle and giving. His wife, Eleanor, told me that he cherished his friendship with fellow woodturners. He will be missed.

Merryll Saylan
San Rafael, CA

Finishing Green Wood



I've had great success with a finishing process for green or unseasoned wood that I'd like to share with you.

by Luke Mann

Preparation

I generally turn, sand and begin finishing all on the same day. I sand to 320-grit for my functional, open forms and maybe 600- to 800-grit for my sculptural work. If the wood's moisture level is fairly high you may find that the sandpaper will become clogged. Clear the abrasive frequently with a brass brush; if you don't, you risk glazing the sandpaper.

Materials

I finish with Bioshield products manufactured by a German company (The Natural Choice; 800-621-2591). I now use Bioshield's Natural Resin Floor Finish #4, which is thicker than Hardwood Floor Finish and Sealer #6 that I recommended for several years. Because #4 product is thick, I recommend thinning with Bioshield's #24 thinner--a real pleasure to use as it is derived from citrus peels.

I only need a small amount of finish at a time, so I pour a little into a small dish or jar cap, then tear a small patch of cloth for applying the oil. A small collapsible dispensing bottle is helpful, as contact with air causes the finish to harden.

After filling the bottle from the manufacturer's can, I crush the can to eliminate air. Another option to retard skinning is Bloxygen (Craft Supplies; 800-551-8876), an inert gas sprayed into the can.

I prefer Bioshield's low-odor finishes because they are hard and clear when cured. One could substitute Watco, General Finishes, or a similar product and follow these guidelines.

The first coat

Immediately after removing a piece from the lathe, I begin applying finish. This helps drying to occur more uniformly and helps avoid staining. Each coat should just wet the surface.

Don't be stingy, but don't drown the piece either. Just wet it, being careful to contact all surfaces. I rub the bowl with a couple of rags to remove any excess, ensuring that there will not be any shiny spots when I check it the following day.

With hollow forms, I customarily do not finish the interior. If there are many or large voids, I often ebonize the inside, then seal with a single coat. This accentuates the void rather than leaving the interior distractingly lighter than the outside surface.

Successive coats

When tomorrow arrives, the piece will look "thirsty" and I apply a second coat. From here I give it a couple of days or even 4 or 6 days as the wood needs time to dry.

You may satisfy a thin turning with two applications; a thicker turning from an absorbent wood may "ask for" 5 or 6 applications. Avoid drafts in the drying area and attempt to keep your shop between 30 and 50 percent humidity throughout the year.

If cracks appear during this drying/finishing time, I place the bowl in a paper grocery bag with a clothespin seal to slow drying. Experience will be your best guide, as each shop and region is different from the next. With this finishing system, I rarely get surprised.

Bear in mind that as the number of these light applications increases, the hardened finish within the wood acts as a catalyst to accelerate the curing of the next coat. Thus, you'll need to quickly wipe off the excess finish as the oil gets tacky.

Thirsty? More finish!

A thirsty appearance to the wood indicates the need for another coat. My aim is to offer applications until the finish seems to just reach the wood surface. The finishing /seasoning time will vary depending upon wood density, thickness and humidity levels. I generally allow 4 weeks. When I am confident that the piece is through moving, I flatten the base against an abrasive disk mounted on the lathe.

The grain always raises somewhat during this finishing and drying process. I wet sand with the final application of oil using a 2" square of 600- or 800-grit wet or dry sandpaper, then carefully rub off any remaining oil to produce a silky smooth surface. A wax mixture is a good final step for a piece intended to be used with food. I recommend this wax for on-going surface maintenance, too.

Although this finishing process is not quick and easy, the result is a durable, sub-surface, wood supporting finish that will take years of abuse and come back beautifully with some simple maintenance.

Luke Mann (mann@madriver.com) is a full-time turner living in Waitsfield, VT. He is a featured demonstrator at the 2003 AAW Symposium.

Nothing Tops
a day with the kids

Oklahoma City children watch and wait patiently while members of the Central Oklahoma Woodturners chapter turn custom tops at an Oklahoma City event. The plastic shield is a demonstration requirement.

In February, the Central Oklahoma Woodturners took part in their fifth Our Kid's World, an event planned for the benefit of Oklahoma City kids. Donna Mills, event chairman for Our Kid's World explained the two purposes of the event: "To give kids an educational event to attend and then donate the proceeds back to organizations that benefit kids."

Bruce Smith, right, helps Sam Cretsinger, a youth chapter member, turn tops for children.

The kids come in droves. Most bring at least one parent. Some of the activities included a live fishing pond, a grocery store, model trains, an hourly Chinese street parade, live entertainment, finger printing, a live cow for milking, slides, and many other activities. Of course, the woodturners considered their booth the most educational and the most interesting.

The event, which grows in popularity annually, was held at the Oklahoma City Fairgrounds. A normal attendance is over 20,000 people for the two-day weekend event. Twenty-five club members worked in shifts to demonstrate at nine lathe stations.

And demonstrate they did. The members turned tops endlessly, which were given to the kids after the youngsters watched it being turned.

Bob Jarrett, chapter event chairman, explained the purpose of the event: "We want to support local kids, but we also want an opportunity for our members to develop their demonstration skills."

Each year, the kids vote on their favorite activity. The woodturning demonstrations have never been lower than third. A great showing.

Turning in the age of Vikings

By Alan Lacer

Dick Enstad turns at a bow lathe equipped with a mandrel, two points, and a rest. Similar lathes were the portable Viking version of mini-lathes for turning small objects. On the lathes shown, cutting is performed when work moves towards the turner.

When one thinks of the Vikings one hardly thinks of woodturning. Thanks to Hollywood and popular literature, about all that comes to mind are tusked helmets, raids of destruction and plunder, and ships with dragonhead prowls. However, did you know that the helmets were a myth, and that the Vikings were also colonists, incredible boat builders, accomplished sailors and navigators, skilled traders and artisans? Maybe that carved dragonhead points to their prowess as woodworkers. And woodturning appears to be one of their significant activities, based on finds at several Viking era sites.

9th-century woodshop

In conjunction with the Smithsonian's touring exhibition, *Vikings: The North Atlantic Saga,* a Viking era village was constructed this year at the Science Museum of Minnesota in downtown St. Paul. In this village, visitors viewed an active woodshop with two types of lathes, textile production, examples of metal work, period kitchen, and a large replica of a Viking ship. Much of the information for the lathes is based on the excavations in York, England of Viking era settlements. Essentially these were thriving communities in the 9th through 11th centuries.

Perhaps most astounding from these excavations is that turning was a dominate trade. Of more than 1,500 wooden artifacts found at the York locations, more than half were related to woodturning.

At York's Coppergate site—the name itself may be translated "street of the cup makers"—there may have been more than 22 turners active at the height of the trade. And I do mean, "trade." This was not recreational turning or making objects at home from necessity, but represented a true trade of skilled craftsmen, making objects for everyday use as well as possible trade goods. By one archeological estimate, there may have been as many as two million bowls turned in this area over a 200-year period.

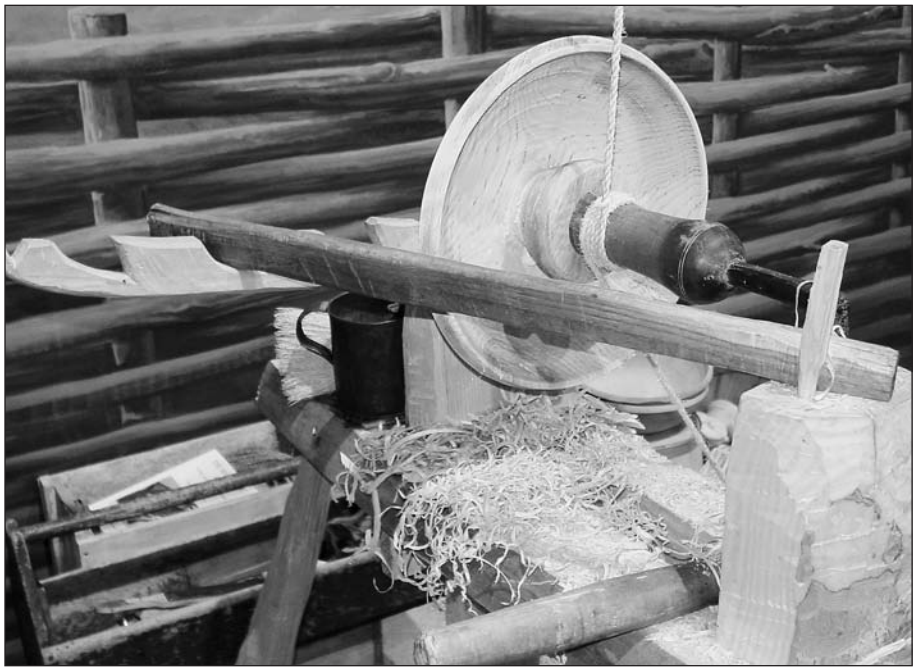
Bowls and cups aplenty

From this one site there are examples of bowls, cups, lidded boxes, lids for ceramic pieces, tool handles, spinning tops, game pieces, bobbins, yarn spinning whorls, musical instruments, and small jewelry items. Clearly though, bowls and cups dominate. Of 94 bowls found at this site, there were 65 variations in profiles and 51 different rim treatments. Some rims could adorn contemporary turning or pottery and be considered quite elegant. Other pieces incorporated paint.

Turner-powered lathes

Lathes used by the Vikings were probably close to what you see in the photographs. Because the original lathes were primarily

Roger Abrahamson operates a foot-powered pole lathe. Carbon-steel bent gouges or hook tools were common.



Bowls were turned between centers, with a spiked mandrel providing the transfer of power from the rope. The notched tool rest was patterned after a similar one found at the Coppergate archeological site. It required a strong leg to power a pole lathe.

made from wood, little evidence has been found other than metal centers, mandrels used to drive the work, and one notched tool rest. Probably the Vikings used the bow lathe for small objects such as game pieces, jewelry, small and shallow bowls and cups, handles and the like. The spring-pole lathe was well suited for bowl work.

Viking bowl turning had some dominate features. The bowl would usually be from a green half log, shaped roughly with an axe, then turned on the face-grain, with the center of the tree at the rim and with the pith removed. Other than the axe work (their version of the bandsaw), this all sounds too contemporary, does it not? The average size of such bowls was around 7 to 8 inches in diameter. In contrast, most of the cups—which could have been done on either type of lathe, but somewhat more efficient on the spring-pole lathe—averaged around 4 to 5 inches in diameter.

Tools were in some way much as they are today: flat chisels and straight gouges for spindle work, gouges for the outside and inside of bowls. There were important differences, especially for spring-pole turning: the tools were bent gouges or hooked tools, with long handles that approached the turner's shoulder. Cutting always was below center.

From metal analysis testing of tools from the site, we know the Vikings used steel-edged tools. However, the carbon content was about half of a modern day high-carbon steel tool—which meant more time spent sharpening and honing, but yet the Vikings still had reasonably good tools for woodworking. And one side note: Many honing stones were found at the York site.

Next time you hear of the Vikings, don't just think of them as raiders from the North, but as serious woodworkers and skilled turners.

To discover more about Viking woodturning and woodworking see *Wood and Woodworking in Anglo-Scandinavian and Medieval York* by Carole A. Morris.

Alan Lacer (www.woodturninglearn.net) is an *American Woodturner* contributing editor. Alan is also a turner, turning instructor, writer and past president of AAW. He lives near River Falls, WI.

Simple & portable Gallery Pedestals

by Bill Small

Here's how the Bay Area (San Francisco) Woodturners Association created 40 pedestals for a recent exhibit. Cost? About $5 for each reusable pedestal.

The pedestal core is a 12" square cardboard box, a standard size available from distributors nationwide. (We bought ours from Uline; 800-295-5510 or uline.com. The 12×12×60" box is item S-4692). You'll find the boxes in 2' to 6' lengths and in brown or white. The tallest pedestals in the photo are made from 5'-long boxes.

Begin by cutting a box to the desired length (height). Leave the flaps on one end that will become the pedestal bottom. For the Bottom Support, cut plywood or MDF to fit snugly (about 12"×12") inside the box bottom. The Pedestal Top is cut from plywood or MDF large enough to overhang the box edges.

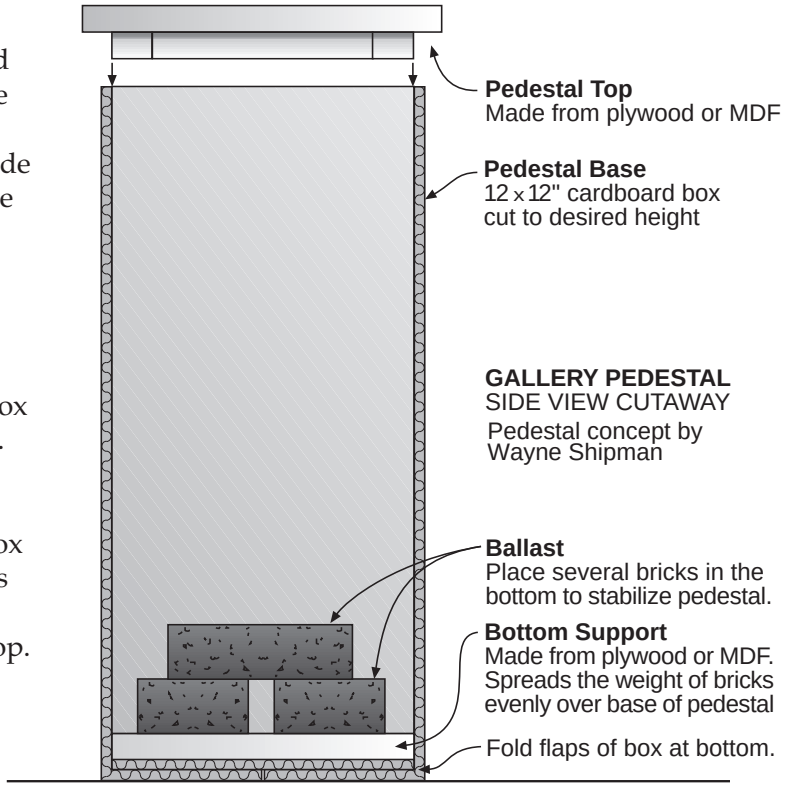
Attach 3/4×3/4" strips to the underside of the Pedestal Top to fit snugly inside the box. Then paint the top. We sponged the brown boxes with white paint, creating a marbling effect. This technique tends to mask dirt and damage, too.

To assemble the pedestal, lay the box on its side and open the bottom flaps. Insert two to four brick in the box bottom. Insert the Bottom Support. Close the box flaps, then tip up the box so that it sits on its bottom. The bricks will fall over and compress the flaps and bottom spacer. Then insert the top.

Since the pedestal uses no glue or tape, you can dismantle and store them for future use.

Photo by Harry Levin

Using cardboard boxes, the Bay Area Woodturners arranged attractive islands of 2-, 3-, 4-, and 5-foot pedestals as shown at a recent exhibit.

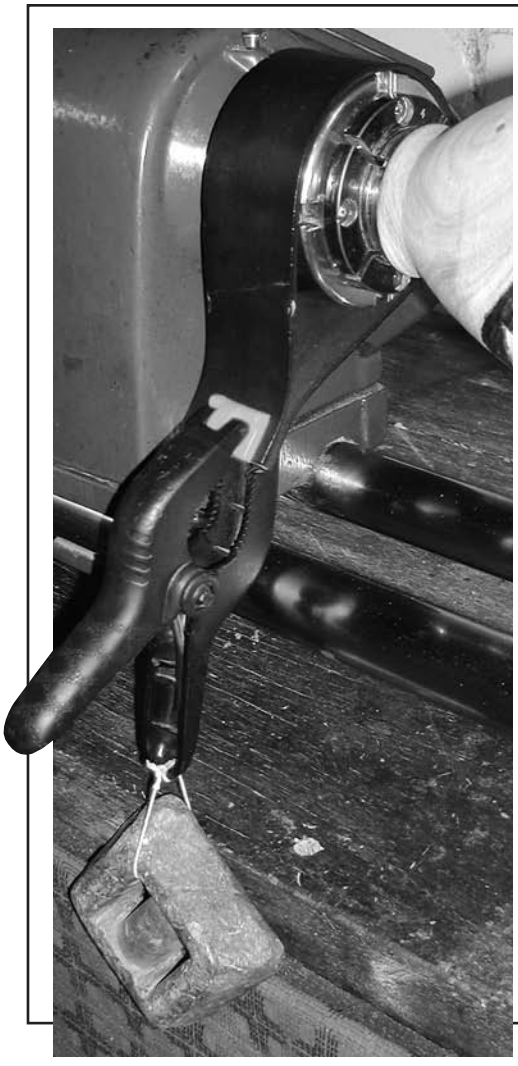


Tips

Got a Great Idea?

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

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



Spindle brake for lathes that lack indexing devices

If you have a lathe and chuck combination like mine (a Record CL3 and Nova series 2 respectively) there is no indexing or spindle-locking device to lock the head-stock spindle. This is particularly irritating when you need to power-sand the wings of natural-edge bowls that can't rotate—freely or under power—during the process. After much thought and a couple of less-than-satisfactory solutions, I came up with a solution that I consider is worth sharing. Cut a piece of flat rubber strip about 50 mm wide. Switch off and unplug the lathe motor at this stage. Hang the strap over your chuck and clip the ends together using a well-sprung hand clamp weighted with an attached lead weight or similar heavy piece of scrap metal. Watch your toes if the hand clamp is not adequately sprung! Unlike the short strap in the accompanying picture that I used to create a relatively compact photograph, the strap I use in practice is somewhat longer. It is actually an appropriate length to keep the weighted clamp just clear of the floor. You will find that with the strap in place, the turning is held firmly enough to proceed with hand- or power-sanding the delicate bits of your turning. To reposition the piece for further sanding, it's easy enough to ease the tension by lifting the strap with one hand while rotating the turning with the other.

Dennis Laidler, Cape Town, South Africa

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

Avoid shattered face shield

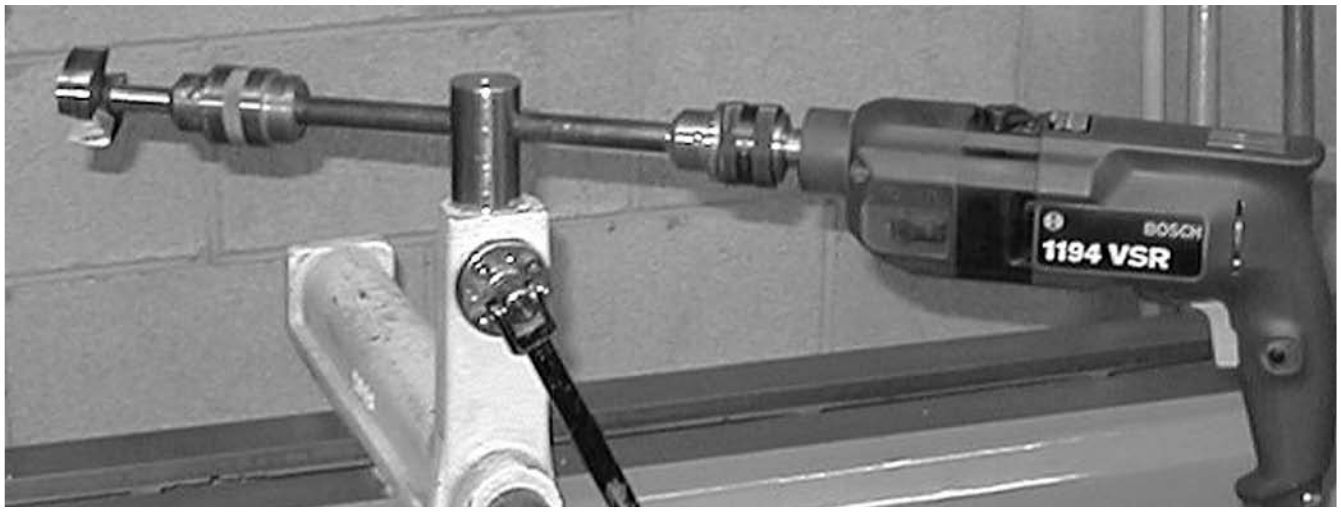
If you're a turner, sooner or later you will get cyanoacrylate adhesive (CA) on your face shield. I made the mistake of trying to clean it off with CA glue remover. As soon as I put a drop on the plastic, it began shattering. I also tried acetone with the same results. Instead of ruining your shield, let the glue dry thoroughly before turning on the lathe. Or squirt the CA squeeze-out with accelerator, which prevents it from hitting your shield or glasses. A third choice: place a layer of plastic wrap over the face shield when turning projects with CA glue.

Bill Westerbeck, Crossville, TN

Masking tape chuck guard saves fingers

I use masking tape flappers on my chuck to warn me to stay clear. Stick 1" tape on the chuck so it hangs out. If you get too close to the chuck, the l" "flapper" will hit you first and you'll instinctively move away.

Bob Tripp, Charleoix, MI



Lathe drilling jig shines in versatility

I have designed a jig for drilling pieces attached on the lathe. The jig is comprised of a guide to hold the shaft of the jig, a shaft to hold a drill chuck and a 1/2" drill chuck to hold the drill. The guide is a piece of round stock with a 5/8" hole drilled through it. Ream the hole a couple thousandth larger for clearance. The guide is made to fit in the banjo on the lathe. The shaft is 5/8" diameter with a flat milled on the end to accommodate the drill chuck mounted on the shaft with a set screw. Then chuck the shaft into a hand-held electric drill with your drill bit of choice installed in the drill chuck. I used heat-treated steel for all of the jig components and I purchased the drill chuck from ShopSmith. The advantage of this jig is that you are not restricted to using one type of drill. You can use any drilling device that will chuck into the 1/2" drill chuck. You also can change to different drills without changing the setting of the jig.

Basil Kelsey, Ypsilanti, Michigan

Have a ball turning Spheres

by Bob Rosand

I always liked turning spheres, but was never very good at it. About eight years ago, I read an American Woodturner article by Christian Burchard and tried to master his sphere technique. Unfortunately, my results were slightly lopsided.

Later, I watched Brian Simmons turn a perfect sphere using a PVC ring. Cool! But hard as I tried, I was not much better at making spheres.Recently though, I was forced to take another turn at spheres when a friend asked me to make several spheres for gifts. I hadn't turned a sphere in a couple of years and really didn't want the job, but I agreed to do it.

To make the first sphere, I drew a paper template for the size sphere I wanted, then placed my stock between centers and tried to cut away everything that didn't look round. That method worked, but not very well and it certainly wasn't very efficient. Finally, I went back to old issues of the *American Woodturner* and reread everything written on the subject. When I went back to the lathe, I finally turned out some fairly decent globes!

I spent the next few days turning nothing but spheres and actually enjoyed the process. I'm not sure whether I had become a better reader or a better turner over the years. Regardless, my results improved. And taking several days to

practice and master the technique helped.

What follows is the method that I came up with to make spheres. Trust me, I didn't discover anything new. The only possibly new twist is using a vacuum chuck to hold the globes for sanding. You don't have a vacuum chuck? No worry! You really don't need it: It just makes the sanding process go faster.

One of the nice things about making spheres is that you don't need many tools. You'll need calipers, a small spindle/bowl gouge (3/8" or 1/2" spindle or 1/4" bowl gouge), and a 1/2" skew. Some woods also require a roughing-out gouge. This project requires a simple cup chuck (see box at *right*), if you don't already have one.

Several options for cup centers

Choose one of these affordable cup center options for your spheres: conventional live tail center, left; custom machined larger version, center, and cup center turned from 2" oak stock, right.

If you don't want to sacrifice a tail center for this job, you might review the Christian Burchard article (*American Woodturner*, June 1995). Christian used a piece of dowel stock drilled to fit his tail center, with a cup on the other end. If you don't have access to a copy of the article, send $1 and an SASE to the AAW office (see the address on Page 1).

First, make a blank with two tenons

To make a 4 1/2" in diameter sphere like the one shown here requires rough stock about 4 1/2" square by about 5 1/2" inches long (Photo A). The extra 1/2" on each end allows you to leave small tenons on the globe that you'll later remove using a handsaw. The tenons are necessary because they give you a little room to work as well as preventing the spurs on the drive and tail centers from marring the finished piece.

Place the sphere stock between centers and use your roughing-out gouge to turn it to a cylinder. Then take your calipers and determine the thickness of the

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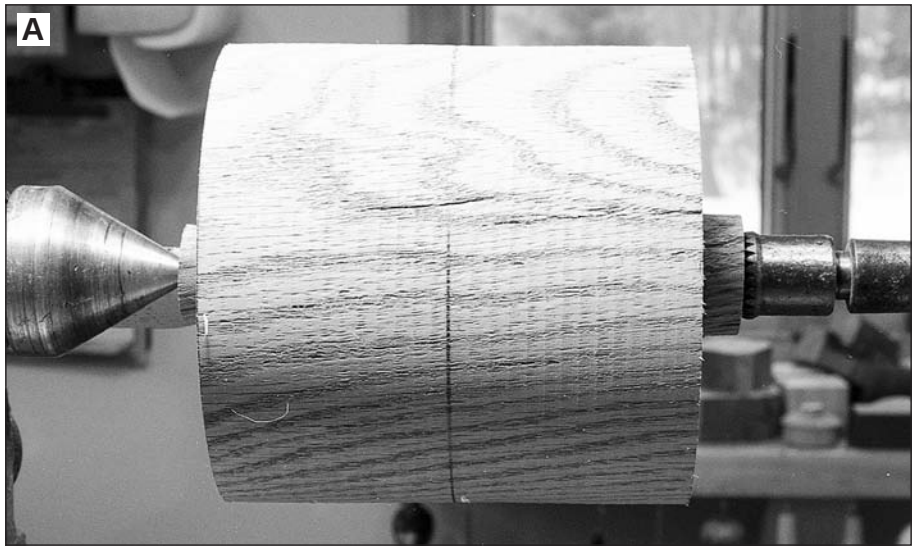


With a rough-out gouge, shape the cylinder. Note the 1" diameter tenons at both ends of the stock.

soon-to-be globe, in this case 4 1/2". Mark two pencil lines on the sphere to indicate the maximum diameter of the globe. You should have about 1/2" of waste material beyond the pencil lines. Now, use your 1/2" skew as a peeling tool to remove the material beyond the two outer lines that marked the maximum sphere diameter. You'll have two tenons about 1" in diameter.

As shown in Photo B, use a small bowl gouge (my choice) or 1/2" spindle gouge to remove everything that does not look like a globe. At this point, the sphere does not have to be perfect—just approximate. With practice, your skills will improve.

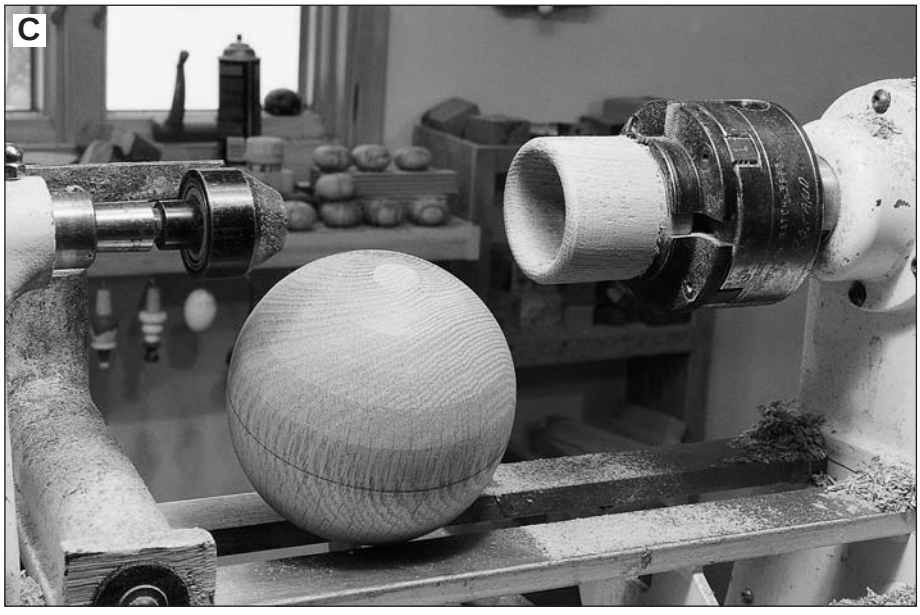
As I wrote this, I recalled a David Ellsworth course. We needed to turn approximate spheres in preparation for hollow turning. I could never do any better than an oval shape, which significantly reduced the size of my hollow form when I finally got it round. The look on David's face as he observed my "masterpieces" was priceless.

Once you've roughed out the sphere, take it off the lathe and cut off the tenons with a small handsaw (Photo C).

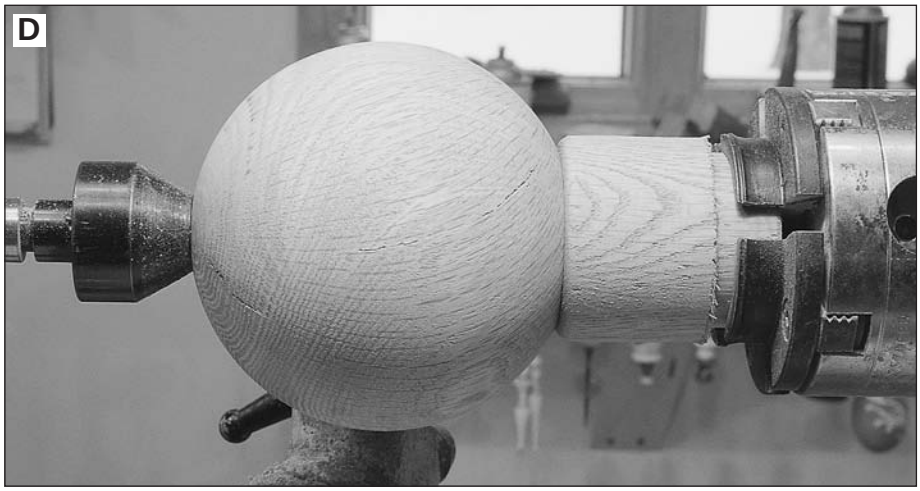
Watch your sphere take shape

Now the fun part begins. You need to rotate the piece 90° and place it between two cup centers for turning. My cup center is about 2" in diameter and is held in my Talon chuck (Photo D). I drilled out most of the interior of the oak cup with a Forstner bit,

Begin to shape the globe with a small bowl gouge or 1/2" spindle gouge.



The sphere with tenons removed is ready for mounting between the cup centers.



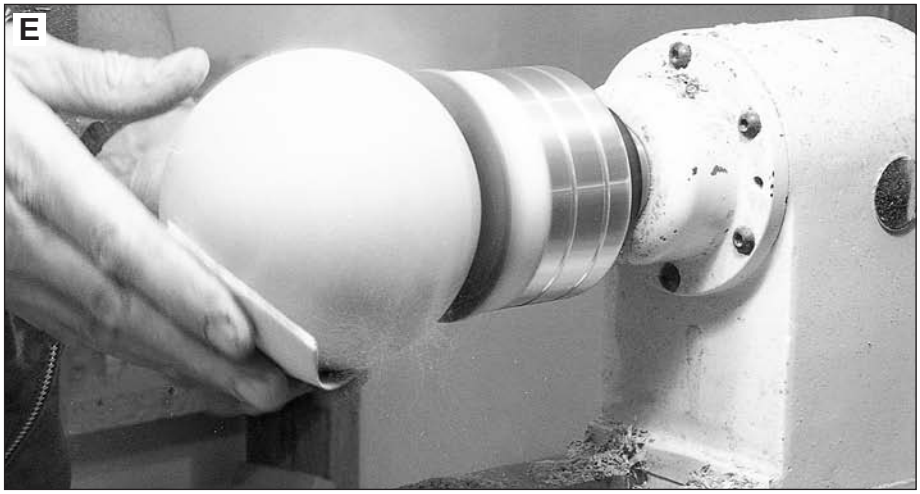
Rotate the sphere 90° to the tenons, then turn away the shadow to work the sphere to perfect the shape.

removed more of the interior and rounded over the cup with a square-nosed scraper (see box, page 19). The cup center on the tail stock side is a conventional live tail center that a machinist friend modified into a cup center. It works beautifully.

Remount the piece on the lathe between the cup centers, turned 90° from the direction it was held between centers for roughing. Turn on the lathe at a slow speed just to make sure that the sphere doesn't fly away on you, then slowly increase the speed. You'll see the out-of-round areas create a shadow effect.

Carefully, turn away the shadow, then stop the lathe. Rotate the piece 90° again and again turn away the shadow. After doing this a few times, the piece should be perfectly round.

I am in perfect agreement with Christian that some pieces seem to forever resist going round. What I have discovered is that after sanding, a sphere that is not absolutely round cannot be distinguished from one that went round a little easier.



With a vacuum chuck, hand-sand the sphere, rotating the sphere 90° each time you change grits.

If you power-sand, work up to 600-grit smoothness before applying finish.

Watch your sphere take shape

If you have a vacuum chuck, sanding these spheres can be an absolute joy–or at least as much legal fun as you can have sanding. For my sanding procedure, I place the sphere in the vacuum chuck, sand, rotate the piece, sand and so forth until I reach about 320- grit smoothness. (Photo E). Because power-sanding (Photo F) is so superior to hand-sanding, I generally drop down to 220 grit, then power-sand to 600-grit smoothness. Follow this up with a sanding sealer, two coats of an oil finish, and then wax.

If you don't have a vacuum chuck, a simple jamb chuck will suffice. Another solution is to sand the piece between the cup centers, rotating it as needed.

That's the basic sphere. Where you take it from there is up to you. Once you get the basic technique down, spheres can be a lot of fun. Give it a try, and as usual, if I can help, contact me.

Bob Rosand (rrosand@ptdprolog.net) lives, works and teaches woodturning in Bloomsburg, PA. Bob, an AAW board member, frequently contributes to *American Woodturner*.

Turn a bowl of balls from Green Branches overnight!

by Cliff Hill

How many times have you wished you could make something other than firewood using the small limbs trimmed from trees in your area? Since the "Return to the Community" theme of the 2003 AAW symposium is "Have a Ball," I thought it might be appropriate to share my experiences with turning and drying green wood balls.

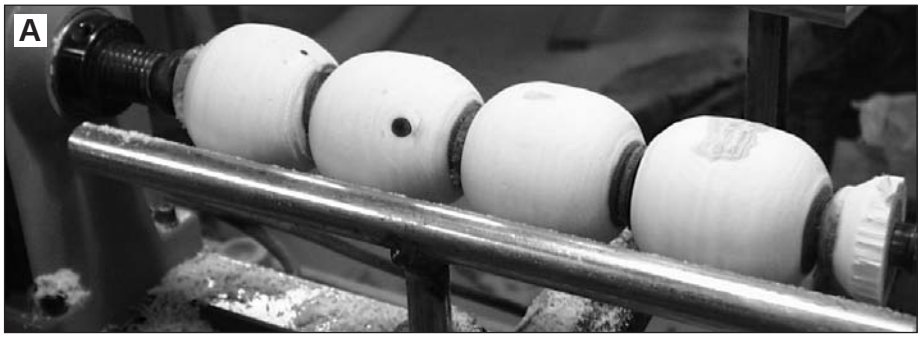
Christian Burchard planted the seeds of turning balls during a 2001 symposium that my brother and I attended in Cincinnati. Since I love to turn green wood, I decided to develop my skills of turning balls using a readily available and free supply of branches in the 2" to 4" range.

I adapted Christian's technique to rough out the ball with a 1/2" spindle gouge and a 1/2" detail gouge (Photo A). I don't spend a lot of effort with the spindle turning since the final shape comes out when turning between the cup centers.

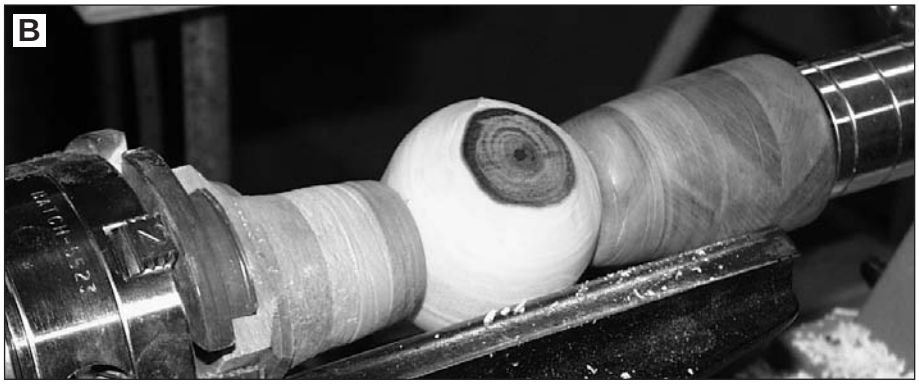
Mark the center of the ball while it is still a spindle turning; this helps position the balls between cup centers in following steps. Part the balls down to approximately 1/2", saw apart the rough turned balls, and then chuck them between cup centers.

To turn the parted ends, you should set up your first cut with the ball between the cup centers (Photo B). Just turn off the bumps or shadows with a 1/2" detail gouge; by virtue of the ball spinning between cup centers, the spherical shape shows through the shadows (Photo C).

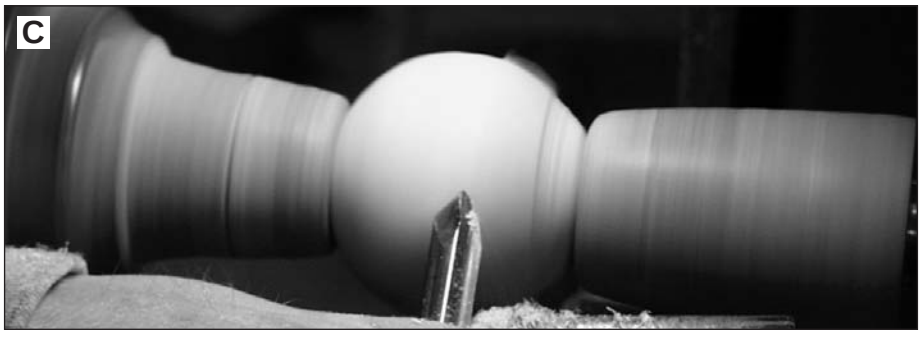
Next, rotate the ball by approximately 45° and repeat the process. Never turn to the point where you remove wood in a complete circular cut. When the bumping stops or the shadow or ghost disappears, rotate the ball in the centers and repeat the process. If you are working with green wood, it isn't necessary to make the shape perfect, as it will distort during the drying process.



In what begins as a spindle-turning, rough-turn the branch stock to about 2" diameter.



After parting off the balls, turn the pieces between center.



As you turn the ball to shape, remove the ghost, as shown above, to get closer to a true shape.

Round 1: First attempts

For my first efforts, I let the balls air-dry and the usual thing happened: Major cracks started in the pith and inevitably the distorted and cracked balls ended up in my firewood pile.

Then I remembered a comment that Christian made during his presentation. Christian said that he was experimenting with extremely high-temperature drying of wood objects. With that, I started to experiment and eventually developed a process that consistently works for me.

In Round 1, I put a green maple ball approximately 2 1/2" in diameter in our kitchen oven, then set the temperature for 555˚F and the timer for 30 minutes. When I opened the door, oxygen hit the dry maple ball, which immediately ignited. I put out the fire, cleared the house of smoke

Continued

and then examined the ball.

Much to my amazement, it had no major cracks. It did have tiny cracks that looked like the crazing cracks that you would see if you dropped cold water on hot glass.

Round 2: more control

With that behind me, I decided to try a controlled experiment that would not set off every smoke detector in the house. I then rough-turned balls 2 to 2 1/2" in diameter from maple, oak, locust, and walnut and kept them immersed in water until I started the drying process.

For Round 2, it was obvious that I needed to reduce the exposure time. This time I placed a couple of the balls directly on the oven rack. I also placed a cookie sheet on the oven rack immediately below the balls to minimize the effects of hot spots caused by the electric heating element. After much experimentation, I finalized on the following drying process.

A process that works

The first exposure was at 550°F for a 20-minute time period; I checked occasionally to ensure the balls didn't get too "toasty." Then I removed the balls and allowed them to cool to room temperature. I repeated this process two more times, reducing the exposure time to 10 and 5 minutes respectively. To ensure the drying process was complete, I baked the balls overnight at approximately 200°F.

The results were amazing. After completing the oven-drying process, the balls will have distorted to an egg shape and you'll need to true them in the cone centers. Don't worry about having your turnings absolutely spherical because for most purposes, no one will know the difference.

I learned that if I turned too deeply, I broke open large sub-surface cracks that form during the drying process.

At this point, you can add other details by offsetting the ball in the cone chucks.

Most balls I turn display small crazing cracks in and around their pith ends. Some of the balls—especially from walnut and crab apple—develop between one and three larger cracks approximately 1/4 to 3/8" long radiating from the pith.

Pith is no problem for green turning these balls from limb logs.

Crazing adds character

I feel that the minor craze cracks and pith cracks add a lot of character and the extreme temperature enhances the patina of the finished product.

I have used this process successfully on balls in 2 to 2 1/2" in diameter. If you turn larger or smaller diameters, experiment with different exposure times. For safety, be sure to open the oven occasionally to check on the drying process. If they look too toasty, reduce the exposure time.

One down side is that after the drying process, the finished ball is no longer homogeneous. Large cracks that normally propagate from the pith and destroy the ball when air-dried are now contained within the ball. For some reason, the large internal cracks seem to stop just under the surface.

My success rate using this method has been in the 95 percent range. If you need to turn balls that roll true without wobble, this process is not for you. With this process, you can turn freshly cut branches into balls in less than one day. Experiment, and have a ball!

Oven Update

We recently purchased a small countertop convection toaster oven that I have tried for drying green wood. In the convection mode, a fan circulates the air around the spheres and creates a uniform drying process. The oven has a high temperature limit of 500°F, but the even heating makes it unnecessary to dry at a higher temperature.Since our oven has a glass door, it is easy to observe the drying process by using a flashlight. The convection oven seems to give me more control over the oven-drying process.

Cliff Hill (chill6@neo.rr.com) is a retired engineer living in Malvern, OH.

Member's Gallery

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

Bill King

Bill King, of San Angelo, TX, turned this replica of a century-old leather helmet owned Mikel Watts, another Concho Valley Woodturners member and firefighter.

Members collaborate for EOG auction

Andi Wolfe, one of the 2003 Symposium demonstrators, collaborated with three AAW members to create pieces for this year's benefit auction. After Bob Rosand turned the three lidded maple boxes, *above*, Andi add her distinctive accents through pyrography (wood burning) and coloring with Prismacolor markers. One box will be donated for the auction.

Andi and J. Paul Fennell worked back and forth on Paul's 4" citrus vessel, *left*. Paul, also a Symposium demonstrator, completed the carving and piercing. Andi added pyrography and coloring.

Andi and Art Liestman also callaborated on a piece for the Saturday evening auction. The benefit raises about $30,000 annually for the EOG fund.

Stephen Hatcher

"Vase with Finial" The vase is made from quilted big leaf maple turned 3/16" thick and has a foot of African blackwood. Stephen's carved African blackwood finial consists of a forward and a reverse 4-bine open twist design and is attached with hand-chased threads. The vase plus finial is 11 x 9".

"Falling Blossoms," turned from big leaf maple, is part of a series on seasons. Stephen routed the tree and blossoms with a Dremel tool, then inlaid calcite (translucent green) and dolomite (pink and white). The platter is 15 x 21/2".

Bonnie Klein
Educator, Innovator, & Respected Turner

"Bonnie has as good a reputation around the world as any demonstrator. "

—Dale Nish

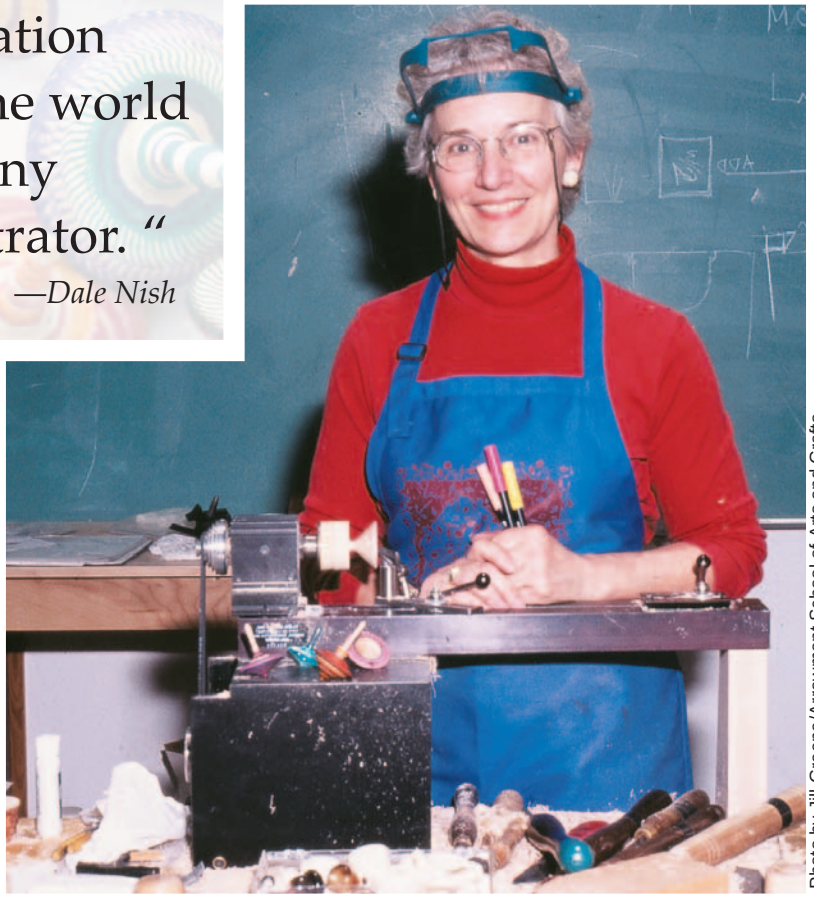


Photo by Jill Greene/Arrowmont School of Arts and Crafts

"It's like scooping sand out of a sandbox."

There's hardly a kid alive who wouldn't understand Bonnie Klein's description of turning coves. This world traveler from Renton, Washington, has a passion for teaching turning—and especially to the kids.

But it's not all kids in Bonnie's world. She's recognized for her turning skills, instructing the young and not-so-young, developing the mini-lathe, and dedicating time to the AAW.

For all her turning accomplishments, Bonnie has earned AAW's Lifetime Honorary Member status. She joins a prestigious fraternity including James Prestini, Bob Stocksdale, Rude Osolnik, Dale Nish, Al Stirt, Palmer Sharpless, David Ellworth, Gary Roberts, Alan Lacer, Robyn Horn, Ray Key, and Nick Cook.

Bonnie served two three-year terms on the AAW board, including five years as vice president and Symposium chairman during years of rapid growth in the association.

Bonnie is generally recognized for reinventing the present-day mini-lathe. A former dental technician accustomed to working in small scale, she felt comfortable attempting to turn doll furniture for her daughter on a Dremel toy lathe. "It had a 1"-long tool rest, 12'-long bed, and one speed," Bonnie recalls.

She then tried woodturning on a metal lathe. After several years of design work, Bonnie introduced her own mini-lathe in 1986 and followed up with her custom threading jig in 1992. Several USA machinists continue to manufacture parts for these tools to her specifications. Bonnie and her husband, Robert Purdy, still assemble the lathes in their workshop.

To complement the small-scale turnings, Bonnie introduced her own turning tools. She also has produced five videos.

The reluctant teacher

What has the mini-lathe meant to teaching? She's packed up as many as a 10 lathes and tools in her "Bonnie-on-the go" van. She's taught in classrooms with as many as 18 mini-lathes—try that with full-size lathes.

But the leap to teaching wasn't an easy one. Bonnie credits Dale Nish for the push into a teaching environment.

"When Bonnie first came to Provo," Dale Nish recalls, "she was quiet, shy, and reluctant to say or do much. But, she has a reservoir of talent. Then she started to warm up. It took a number of years to get her out in front of a crowd. Gradually, we worked her into a six-rotation schedule. And now she has as good a reputation around the world as any demonstrator."

Dale's compliments and respect continue. "One reason is her personality. There's no pretext, no hidden agenda. Just a solid person. She doesn't rock any boats or antagonize anyone. She's just being Bonnie."

It's a small world

What has Bonnie's small-scale turning meant to the turning world? "I think it has opened up a huge new arena of interest," Bonnie says. "It's also an entry point to woodturning for some. Retirement people travel with a lathe. One college student bought a mini-lathe and turns pens in his dorm room.

"The mini-lathe is great for teaching children. Mistakes don't

Continued

The threaded box incorporates mopane, blackwood and bone. Below is a top turned for the step-by-step instructions beginning on page 28.

Bonnie Klein

seem so big or so expensive," Bonnie adds.

And don't forget the social aspect of turning. Although full-size turning often is a solitary hobby or vocation, it's easy to take a lathe with you to turn and talk with a group of friends.

Oh, yes, the women, too. "It's not a flag I wave around," Bonnie adds modestly, "but yes, small-scale turning is less intimidating for beginners--men or women.

"Actually, all the cutting theory on a small lathe is applicable to large-scale turning. So some people do start out on a small lathe to develop skills. It's a good way to get handy with the tools and understand how they work."

The eternal student

You wouldn't think that a proficient woodturner would have the interest in branching out, but she's also turned Corian, aluminum, cow horn, cow bone, plastics, tauga nuts, ivory—"anything you can stick on a lathe," Bonnie admits. She's completed a couple of metal-spinning classes, too.

She and Robert are building a forge behind their home to spark their blacksmithing interests. She's even completed three Arrowmont jewelry classes and enjoys all she's learned about metal-smithing. "I love going into something right from the bottom and experience the sense of accomplishment."

Small turnings gain recognition

Bonnie, a regular contributor to del Mano Gallery's "Small Treasures" exhibit, is pleased with the recognition galleries and collectors have given to small turnings. Some of the validation, she suspects, is that many collectors simply don't have additional space for larger pieces.

One of Bonnie's regrets is that she doesn't turn as often as she'd like. "I've been so involved in developing the mini-lathe and threading jig, plus teaching, that I haven't produced the volume of work I'd like to."

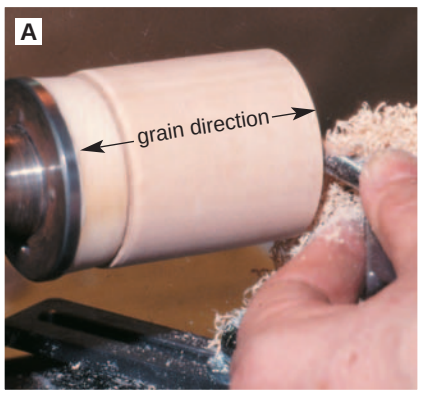
But there's always next year.

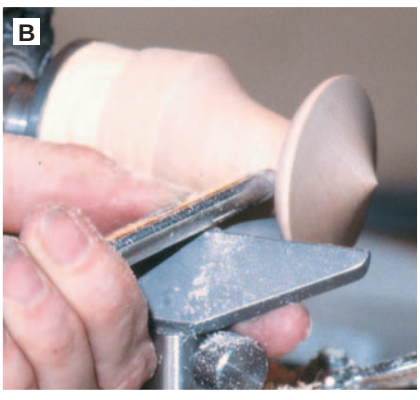
You can contact Bonnie Klein at BLKlein96@aol.com or at her website BonnieKlein.com.

At Arrowmont this spring, Bonnie demonstrates turning a lidded box to her class of 14.

Bonnie's colorful tops

A. After mounting a 2x2" maple block to a faceplate, true the sides and face.
B. With a fingernail gouge, shape the tip. Then begin removing stock for the handle, turning to about 3/4" diameter.
C. Pull a chatter tool along a line to 7:30, pressing hard enough to create chatter. Experiemnt to get the feel of how lathe speed and pressure affect chatter.
D. With colored pens (Bonnie prefers Tombow or Staedtler pens), decorate the top with color.
E. Finally, turn down the handle to about 3/16" diameter, then separate off top.





For her in-law's 50th anniversary, Bonnie turned this set for the avid chess players.

Bonnie signs and dates all her work.Above is the inside lid of the mopane box shown on page 27.

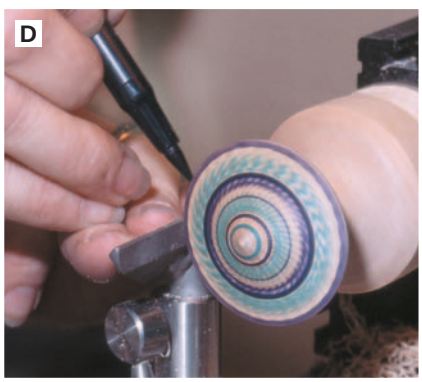
Share the woodturning joy with the next generation

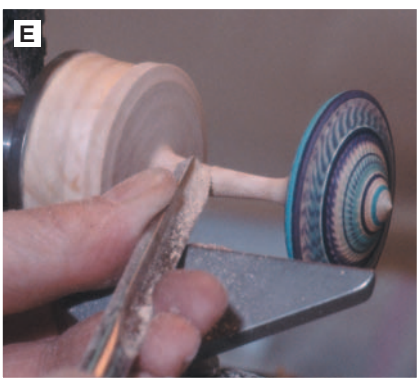
Bonnie Klein has been teaching kids how to turn for nearly 20 years in settings as large as 12 and 14 kids. "When my mom sees me teaching kids," Bonnie says, "she describes it as three hours of bedlam."

Over the last two decades, she has heard and seen just about everything. One recent example: a young boy couldn't grasp her concept of pulling the chatter tool to 7:30 to decorate the surface of a top. "I have a digital watch," he reported. Okay, time to update the message.

Bonnie encourages woodturners to share their joy of turning with kids. Here are her top tips the next time you work with kids—your grandkids, the neighbors, the local scout troop or 4-H club:

- Keep each project short—under one hour—to hold their attention.
- Stress safety in two key areas: goggles and hair. Insist that girls and boys tuck in their ponytails.
- Unlike adults (who can work at their own pace following your demonstration), kids learn quickest if you guide their hands and tool as you describe the technique. "Talk to them while you show them how to rub the bevel. "
- You'll need at least one other parent or assistant to keep the kids busy while you move about with one-on-one instruction.
- Be alert to the kids who aren't interested in listening. These turners have already made their mind up to chart their own course—and they may succeed.
- Don't get hung up with techniques—keep it fun.
- Turn with a minimum of tools--just a gouge and one parting tool.
- The very young can safely turn with a roundnose scraper. "A 5-year-old had fun turning tops with just a 1/4" roundnose scraper and colored pens," Bonnie reports.
- Select a project with play value (a top or yo-yo), show-off value (something for their room) or an incentive for completion (a pen as a parent's gift).
- Aim for easy surface decoration—colored pens and chatter tools are successful.





The Three Turners

by Nick Cook

Atlanta museum celebrates 3 Moulthrop generations

A new exhibit in Atlanta celebrates a well-known name in turning circles. *Turning, The Moulthrop Legacy: Three Generations of Innovation in Wood* highlights the work of the Moulthrop woodturners at the Atlanta International Museum of Art and Design through July 3.

The Moulthrop name has been synonymous with woodturning for more than 40 years.

Ed Moulthrop, now 86, has turned wood most of his life. Self-taught, he bought his first lathe when he was only 15.

His son **Philip**, now 55, has been turning professionally since 1977.

Philip's son, 25-year-old **Matt**, has been helping in the shop as far back as anyone can remember.

An innovator

Ed Moulthrop was an innovator and pioneer in the field of woodturning. He developed his own technique for curing wood with polyethylene glycol (PEG). A slow, tedious process, it allowed him to turn his signature large scale bowls and vessels. Ed stabilized the wood with PEG by replacing the water within the cells of the wood. This made it possible to turn end grain without having to worry about the wood checking or splitting at the pith.

Unable to find tools for his large-scale pieces, the elder Moulthrop learned blacksmithing

Ed Moulthrop,
Figured Tulipwood Ellipsoid,
10"x18"

so he could hand-forge his own turning tools. He also designed and built his own lathes to accommodate huge logs. A custom-designed overhead lift in his shop allows him to handle the enormous logs.

Some of Ed's pieces are as large as 30" diameter by more than 40" tall. They have sold for thousands of dollars and are in the collections of many of the most prestigious museums in the world. Not bad for someone who sold his first bowl at the Signature Shop and Gallery in Atlanta for $25 in the early 1960s.

Trained as an architect, Ed worked with one of Atlanta's largest firms designing buildings throughout the southeast. The carillon bells at Stone Mountain Park, the chapel at Callaway Gardens and the Atlanta Civic Center are among the many structures that bear his name. He also taught architecture at Georgia Institute of Technology in Atlanta.

Ed Moulthrop, Ash Leaf Maple Chalice, 22"x12"

Philip Moulthrop graduated from law school and worked as an attorney while turning part-time in his father's shop. There he learned the complicated process of using PEG and how to hand-forge his own tools. In 1977, Philip started turning professionally, building on Ed's tradition.

Working with the spherical and elliptical shapes that had been his father's trademark, Philip started developing his own forms and shapes. His most recent work involves the use of smaller log sections to create mosaic bowls. Philip glues slices of end grain with epoxy to a bowl-shaped form. He then mixes epoxy and wood dust to cover the entire form before turning, sanding, and finishing the piece.

Philip's work is included in the collections of George H. Bush and Nelson Mandella. He is also included in the permanent collections of General Electric, the Coca-Cola Company, the High Museum, the Renwick Gallery, and the Mint Museum of Craft Plus Design. Philip's son Matt started out sweeping the floor of his grandfather's shop. He has a degree in finance from the University of Georgia and is currently working on his MBA at Georgia Institute of Technology. Matt began getting more seriously involved in woodturning at about 16 and has been helping his grandfather for the last 10 years. He has been trained by both Ed and Philip and is now developing his own woodturning style.

Matt recently began showing his work at the Signature Shop and Gallery in Atlanta–the same gallery that first exhibited his grandfather's work. Matt plans to work full-time as a woodturner and continue the Moulthrop woodturninglegacy.

The exhibit continues through July 3. For more information call 404-688-2467.

Nick Cook (NickCook@earthlink.net) is a former AAW board member and lifetime honorary member who lives in Marietta, GA.

Philip Moulthrop, Streaked Pine Bowl, 10 3/4"x15"

Philip Moulthrop, Mixed Mosaic Bowl, 8"x9 3/4"

Matt Moulthrop, Fiddleback Maple Platter, 1 3/4" x 14"

The Clean Lines of Bill Luce

ONE

Photo:
Richard Nicol

When David Ellsworth buys one of your bowls for his collection and describes it as "heavenly," the turning community takes notice.

So is the case for Bill Luce of Renton, WA. Since Ellsworth's recognition of his work at the 2002 AAW Symposium in Providence, RI, Bill's stock has continued to rise.

Bill (www.BillLuce.com) often creates series of similar work from the same tree to explore and study nuances of form and wood movement. For some work he prefers wood that is less dramatic, as that plainness can enhance the power of certain forms.

"A truly successful turning gives quiet joy and delight every time it is experienced," Bill added, "with the shape and balance speaking softly, yet firmly."

TWO

Photo: Richard Nicol

THREE

Photo: Roger Schrieber

FOUR

Photo: Mustafa Balil

FIVE

Photo: Richard Nicol

SEVEN

Photo: Mustafa Balil

SIX

Photo: Roger Schrieber

ONE: Untitled, 6 x 8", cherry. "The grain orientation here enhances the swooping form of this round-bottomed bowl."

TWO: Untitled pot, 6 x 6½", red maple. "This piece was the only solid wood I found in a two-ton tree trunk."

THREE: Untitled bowl, 7¼ x 16", apple. "This came from the largest Gravenstein apple tree I've ever seen."

FOUR: "Lunar Landscapes In Holly Series #3", 6½ x 11", holly. "In this series, I endeavored to learn to read the knarly outside surface of the tree in order to predict the kind of movement I would get once the finished piece dried."

FIVE: Untitled bowls, 7 x 15", 3½ x 4", Pacific Madrone, pear. "I'm thrilled that the larger bowl is in the 2002 AAW symposium Instant Gallery Critique video as a good example of pure form in a bowl, and that it now resides in the Wendy and David Ellsworth collection."

SIX: "Selene," 4¾ x 6½", holly. "Selene was a goddess of the moon. The color reminds me of something lunar."

SEVEN: "Cosmos," 7 x 8½", spalted big leaf maple. "I got the title from the definition of the word in the dictionary. 'Complex yet highly organized self-inclusive system.' "

Gerrit Van Ness

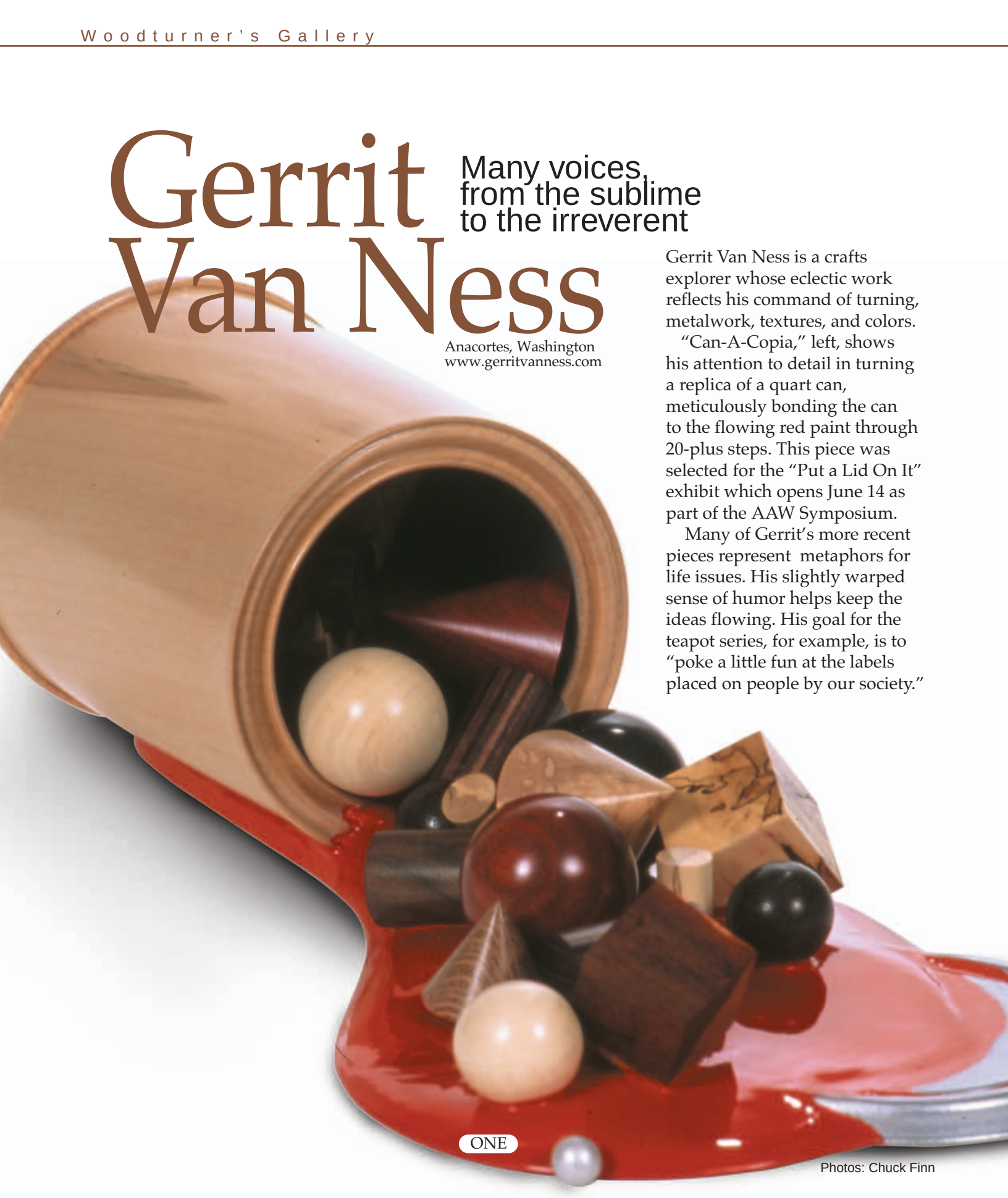
Many voices, from the sublime to the irreverent

Anacortes, Washington
www.gerritvanness.com

Gerrit Van Ness is a crafts explorer whose eclectic work reflects his command of turning, metalwork, textures, and colors.

"Can-A-Copia," left, shows his attention to detail in turning a replica of a quart can, meticulously bonding the can to the flowing red paint through 20-plus steps. This piece was selected for the "Put a Lid On It" exhibit which opens June 14 as part of the AAW Symposium.

Many of Gerrit's more recent pieces represent metaphors for life issues. His slightly warped sense of humor helps keep the ideas flowing. His goal for the teapot series, for example, is to "poke a little fun at the labels placed on people by our society."



Photos: Chuck Finn

TWO

THREE

ONE: “Can-A-Copia,” 4½ x 3½ x 6½". “This expresses that creativity should not be bottled up.”

TWO: “Flower Form Vase,” 10 x 4½". Lathe-turned cascara wood, with hand sculpted rim. The form is colored with dye and acrylic paint.

THREE: “There’s Still Hope,” 10½ x 13½". A lacquered maple paint can is suspended 22" by a frozen ribbon of wood painted with acrylic.”

FOUR: “Troubled Waters,” 6½ x 9½". This offers a view into Gerrit’s thoughts of man’s effects on the environment. The urn is textured and dyed spalted maple; the top is carved and painted with acrylics.

FIVE: “Bad Teapot” left, is maple painted with acrylics. “Queenie,” center, is maple, poplar, and ebony. “Bubba,” right, painted poplar and ebony lid.

FOUR

FIVE

Top it Off In Style
Olive Oil Dispenser

by Jerry Hubschman

Match the wood to your favorite salad bowl, add an attractive bottle, and you have a useful item for dinner time.

With the current elevated interest in nutrition or eating right, the use of olive oil has extended well beyond ethnic cooking. In many restaurants, a bottle of olive oil (often lightly flavored) accompanies the bread tray. In our house, we keep one or more with a sprig of rosemary, a clove of garlic, or a couple of chile peppers for table use. In this project, the turning is simple and straight forward, but the assembly can be a bit more challenging (See Cutaway Diagram *opposite*). My suggestions here are based upon my experience of making about a dozen dispensers at one time. If you plan this as a one-off project, omit some of my procedures and jigs. Part of the fun will be how to do it your way in your shop.

The dispenser body

Start by ripping your stock to 1"-square billets. Cut these into 2 1/2" sections and mount in a four-jaw chuck. With a 15/64" bit mounted in the tailstock, bore through the blank (Photo A). I do this for two reasons. First, you can turn the body of the dispenser using a friction drive in the headstock and a live center in the tailstock. I use a short section of the 1/4" tubing in a Jacobs chuck for the jam fit when turning (Photo B).This provides automatic centering of the hole in the finished turning. This method requires no extra material at the ends, should that be important with exotic wood.

Second, the 15/64" bit is needed when boring the corks and caps in later steps. For boring, use the best quality bit obtainable. I found that a high speed brad-point with lips designed for clean entry work well (Lee Valley; 800-871-8158). This bit will not wander and won't produce tearout. These qualities are important when boring the corks and the close-fit hole for the relief tube.

Mount the bored blank between centers, rough to a cylinder, and turn to desired shape. Be careful to allow enough diameter for both the delivery tube and twice the size of the relief tube. Otherwise, your second boring will break through a slim-waisted turning. Off the lathe, rebore the original 15/64" center hole to the full 1/4" for the delivery tube. I use a conventional 1/4" bit in a drill press and hand-

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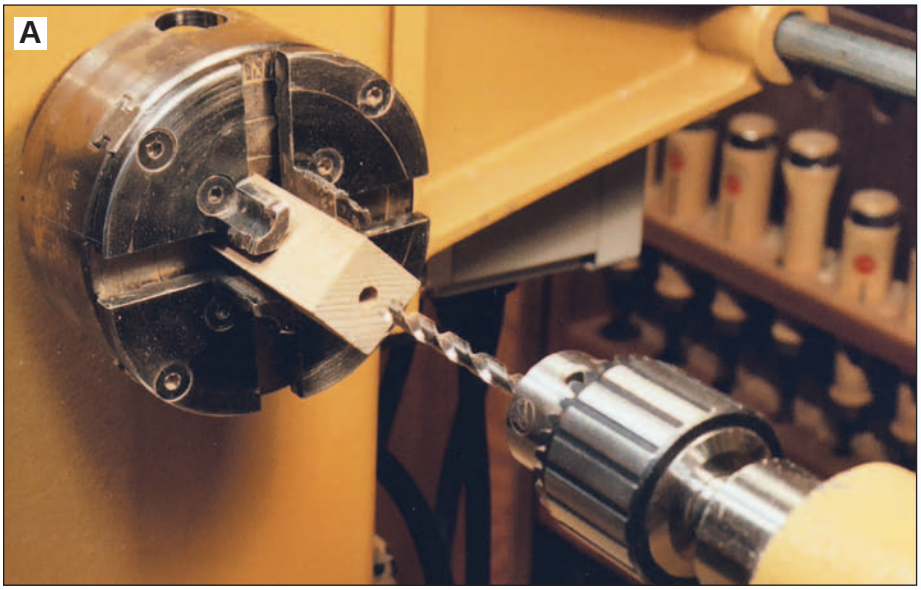
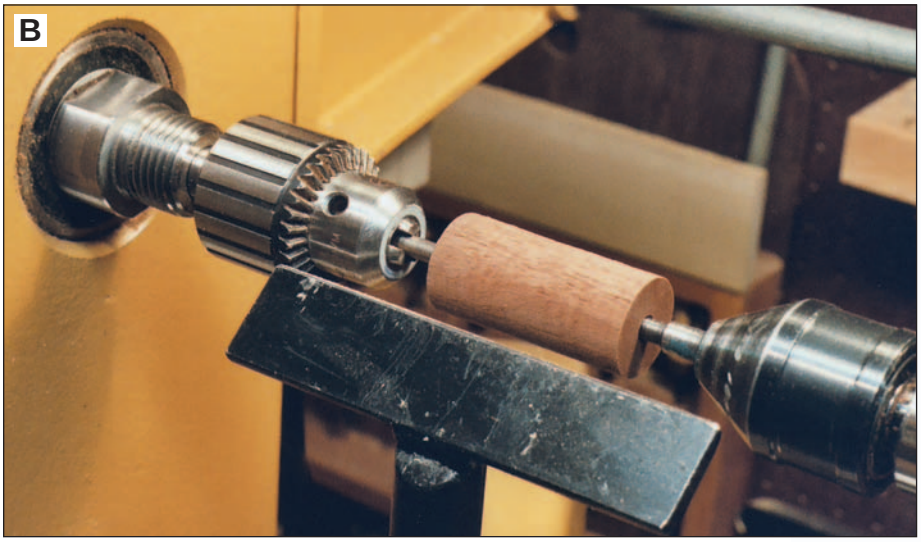
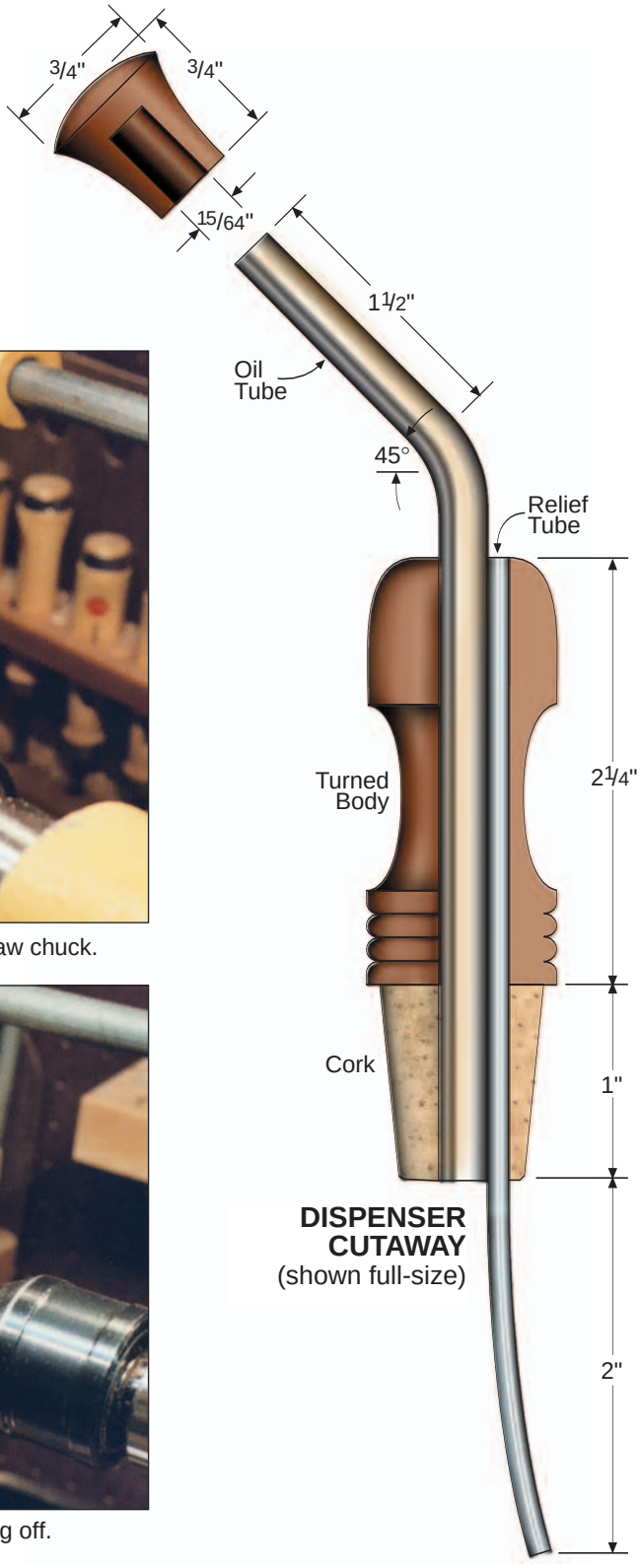


Bore the 1"-square body with a 15/64" bit. Note the secure hold with a 4-jaw chuck.



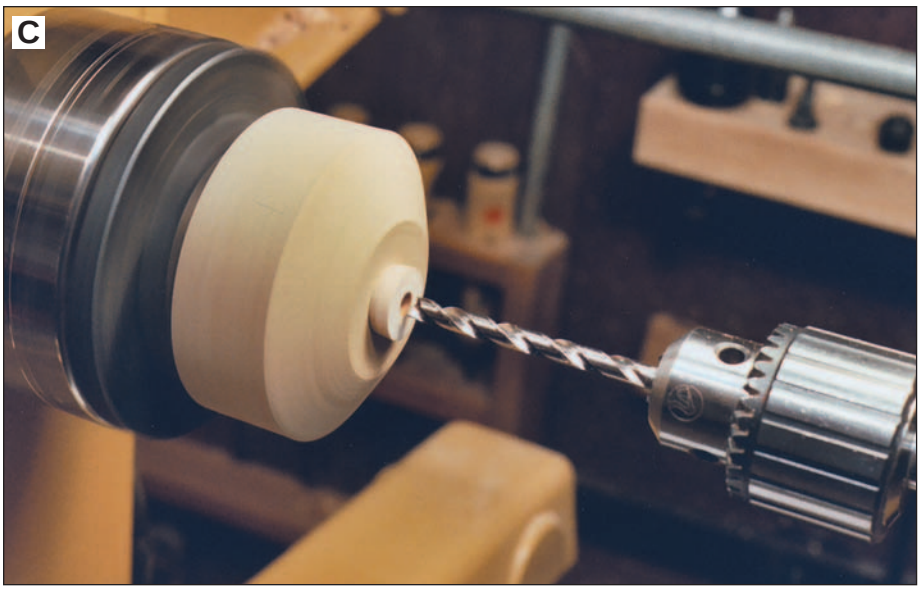
Friction drive between 1/4" spindles eliminates waste and need for parting off.



hold the body, entering from the base. The body is now ready for finishing.

Corks: quality challenge

Corks presented a special problem for me. Those available from turners supply houses come prebored with a 3/8" hole. You may wish to go this route, but I consider a 3/8" delivery tube clumsy both in function and appearance. I prefer standard No. 7 tapered corks available in stores that sell wine-making supplies. Unfortunately, all the shops in my area carry the same brand of corks which are uniformly of poor quality. You will have to pick carefully. To bore your own corks, use a shop-made jam chuck mounted on a faceplate (Photo C) or held in a four jaw chuck . Now bore a tapered hole to fit the cork.

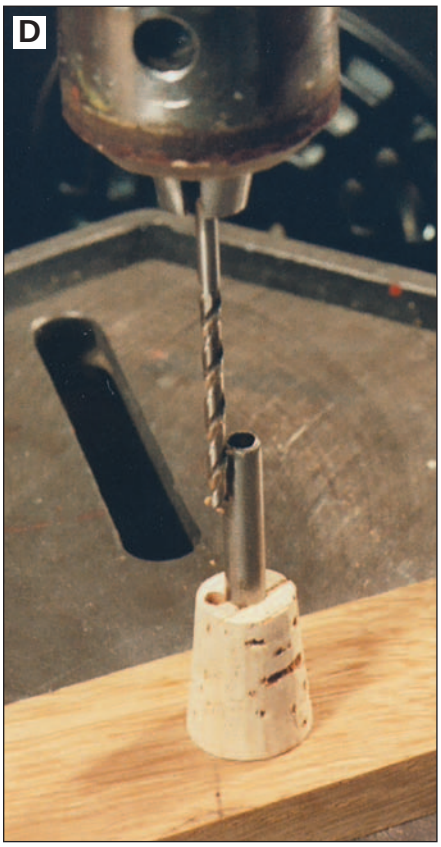


A simple jam chuck simplifies the boring of corks.

If your faceplate has a center opening, bore your pilot hole all the way through the jam block, then taper the walls. This will allow you to push out the cork with a blunt dowel. Otherwise, fit the cork proud of the block face to facilitate removal. Since cork tends to compress and distort, use a high quality 1/4" brad-point bit with rounded spurs. Bore at high speed with slow advance to avoid tearout.

Bending the delivery tube

The delivery tube is 1/4" OD stainless steel purchased locally. I use #304 seamless tubing because it is less likely to split when bending. While my constitutional bias is to buy the best tool available, an economy-grade tube bender (Harbor Freight; 800-423-2567) works just fine for the next step. Cut the tubing about 5" long and bend one end about 45° as shown in



A short section of steel tubing helps guide the drill bit when boring for the relief tube. Use the same technique when boring the dispenser body.

the Cutaway Diagram.

Whether you cut it with a hacksaw or a tubing cutter, the ends will require de-burring. I do it with a H.S. steel countersink.

The challenging relief tube

I use 1/8" OD polyethelene tubing purchased locally. Unlike dispensers intended for liquor bottles, the relief tube should extend well beyond the base of the stopper. Due to the viscosity of olive oil, the incoming air needs a head start. It also provides better control of oil flow for table use. Boring the holes (both body and cork) may be the most challenging step.

In order to drill an 1/8" hole parallel with and tangent to the oil tube, I built a simple jig (Photo D). This consists of a wooden base that supports a small section of the same stainless steel tubing used in the dispenser. Again, use a high quality 1/8" brad-point bit with curved spurs (it won't wander).

Mount the jig on a drill press table and guide the drill bit down the side of the support tube. For my jig, I lightly sanded the tubing to reduce the diameter slightly. This allows both the body and the cork to slip on and off with ease.

The tiny but important cap

The cap is not intended to provide a seal, but simply to keep out dust and critters between uses. Start with a cylinder of stock about 3/4" in diameter. Mount this in a chuck and end-bore a hole about 1/2" deep with the 15/64" spur bit (Photo E).

Tape wrapped around the drill bit helps you limit the depth of the hole in the cap stock.

For the 3/4"-diameter cap, friction-fit the stock then turn with a 3/8" spindle gouge.

Smooth the end grain around the bored opening and part off about 3/4" long. For turning, jam-fit this piece on a short section of stainless steel tubing mounted in a Jacobs chuck (Photo F). For use, the cap will not need to be rebored to 1/4", but will have a nice snug fit. Sand and finish as you do the body.

Now, apply the finish

I make my dispensers from native hardwoods. Some species such as cherry and walnut require staining. (Since most people keep their olive oil out of direct sunlight, the wood won't have 10 years to develop a mellow color). I follow with a light coat of thinned satin polyethylene. I found that some finishes such as lacquer or rub-on finishes applied on the lathe don't hold up well. (Eventual creep by the oil softens these finishes; the cap is the first victim.) To allow a good glue bond with the cork during assembly, be sure to leave an area on the bottom of the

Jerry Hubschman is a retired biologist and amateur woodturner who lives in Yellow Springs and Put In Bay, OH. He is a member of the Central Ohio Woodturners.

Raw Beauty

From a basic 2x4

By Dave Ramsey

It has been said that you can't make a silk purse out of a sow's ear. Join Arizona turner Dave Ramsey as he describes how he transformed $3.94 in 2×4s into a $500 bowl.

Lumberyard treasure

It has been said that you can't make a silk purse out of a sow's ear. Applying this concept to wood turning, most bowl turners would agree that they want only selected wood for their creations. This writer seeks to prove that you can make a good vessel from one of man's most lowly wood sources–the common eight foot 2×4" fir stud.

My source was a local lumberyard where I selected two eight-foot 2×4s. The cost: $1.87 each. My bowl stock was green, filled with knots and somewhat bowed. After a month in my Arizona garage to dry out, the 2x4s were even more curved than when I bought them, but at least they weren't twisted.

Design a 2×4 masterpiece

After several design ideas, I decided to glue the bowl's pieces together with the four-inch

surfaces together. (See the Glue-Up Diagram page 43.) In laying out this form, I was able to make a bowl blank about 16" in diameter. The studs had a round chamfered edge, which would make the finished piece about 1/8" less than the widest dimension when they were turned out of the blank. (As you probably know, "two by fours" measure only 1 1/2 × 3 1/2".)

Before you begin this project, you'll need four 20"-long clamps, four 10"-long clamps and about 12 ounces of glue (I used Tite Bond Red Label glue).

Get out the glue

I started the blank by gluing two 7 1/4" pieces to a solid 16" segment as shown in Photo A. Next, I glued two shorter pieces to the long members as shown in Photo B. Determine the length by referencing the page 43 drawing.

Notice that pressure is applied by two sets of clamps at right angles to eliminate gaps from surfaces. Allow the glue to dry for two hours under clamped pressure before moving to the next step.

In this manner, additional pairs of the stud were cut and glued until all pieces were in place as shown in Photo C.

On to the lathe

The finished 16"-diameter blank (Photo D) weighed seven pounds. To avoid the possibility of the blank breaking away from the face plate wood connector, I used a 6" face plate with a hard

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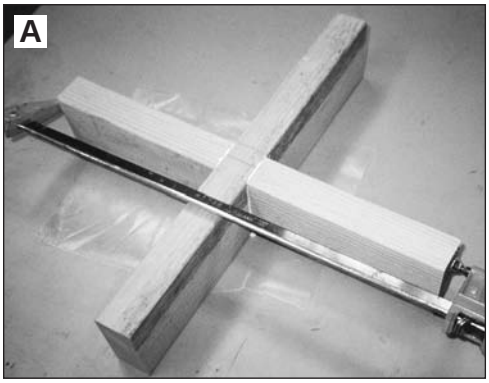
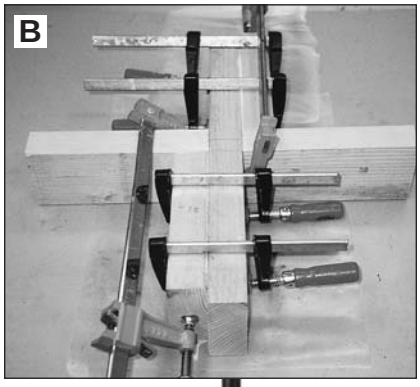
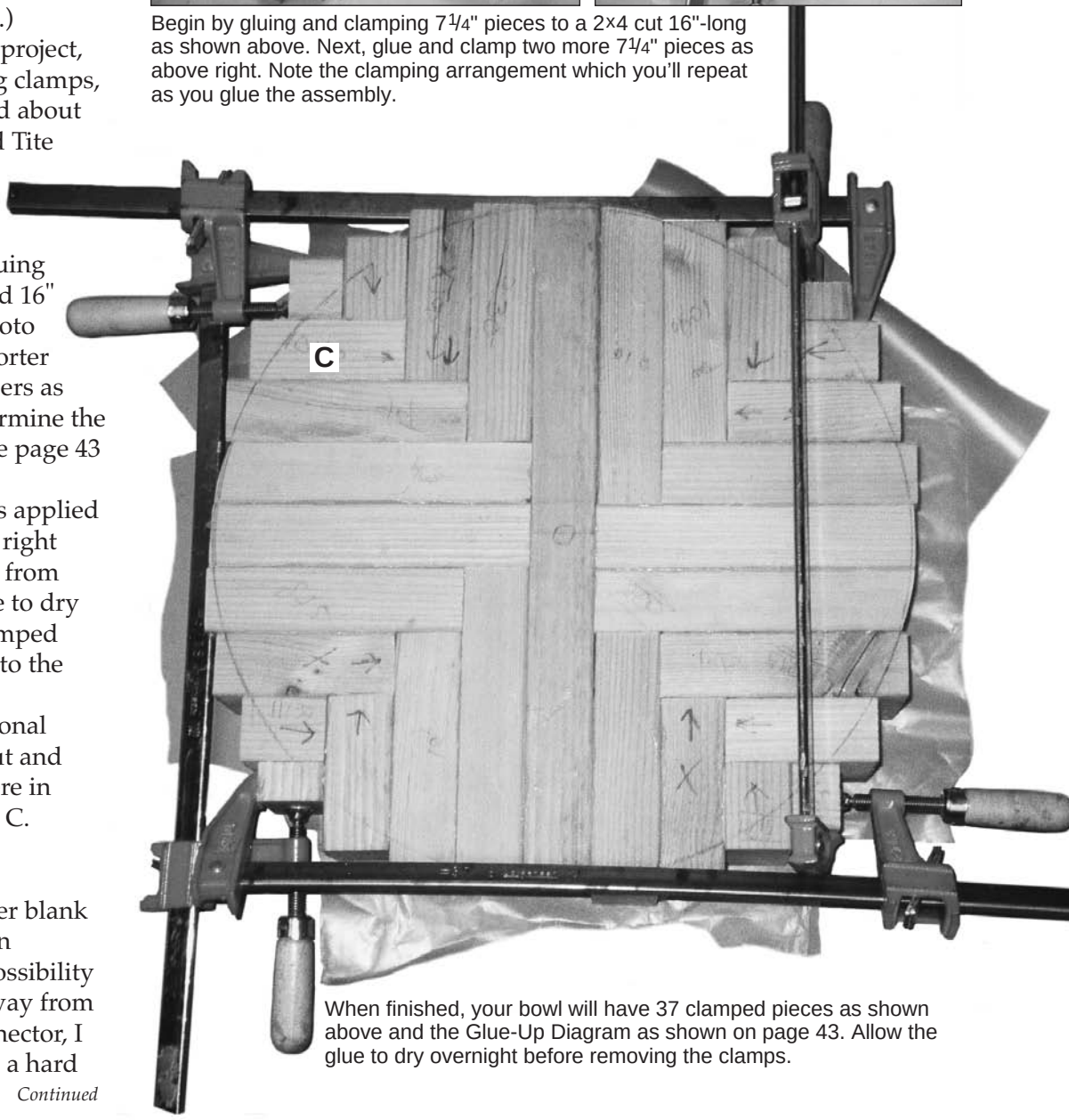




Begin by gluing and clamping 7¼" pieces to a 2×4 cut 16"-long as shown above. Next, glue and clamp two more 7¼" pieces as above right. Note the clamping arrangement which you'll repeat as you glue the assembly.



When finished, your bowl will have 37 clamped pieces as shown above and the Glue-Up Diagram as shown on page 43. Allow the glue to dry overnight before removing the clamps.

maple disc (A) fastened with 1" lag screws and glued to a similar sized poplar "sacrificial" disc (B), as shown in Photo E. This strong attachment provided a lot of glue surface. Before gluing the face plate to the blank, I turned a flat spot on the blank to eliminate the chamfered edges of the stud. This was done by wedging the blank against a 14" flat plate attached to the head stock using a live center in the tail stock as shown in Photo F. After gluing the 6" face plate to the newly flattened blank, I allowed the assembly to dry for 24 hours to attain maximum glue strength.

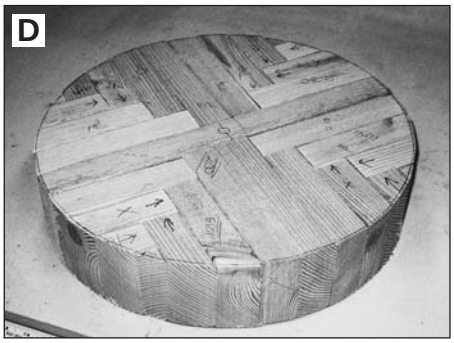
Final touches

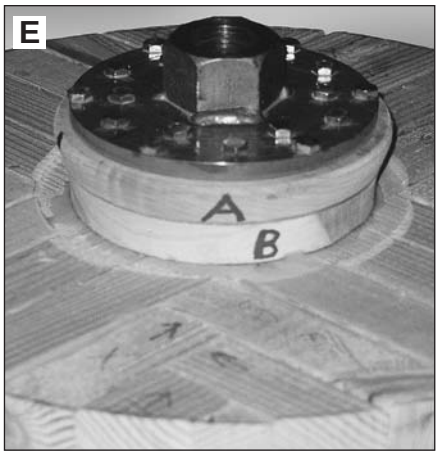
The resulting blank produced a low profile bowl 16×2¾". The knots did not present a problem as long as my scrapers were sharp. There were only a few cracks requiring cyanoacrilate filler to mend. The rough turning was sanded with a 3" disc sander (available from Craft Supplies USA; 800-551-8876) starting with 60-grit and progressing to 80-, then 100-, 120-, 150- and finally 220-grit. I colored the flat edge of the bowl with red mahogany stain before applying 15 coats of water-base urethane.

During lively bidding at a charity auction, the finished bowl from $3.94 worth of 2×4 studs fetched a handsome $500 price.

My conclusion was that it is possible to make a silk purse out of a sow's ear if you devote enough patience and time.

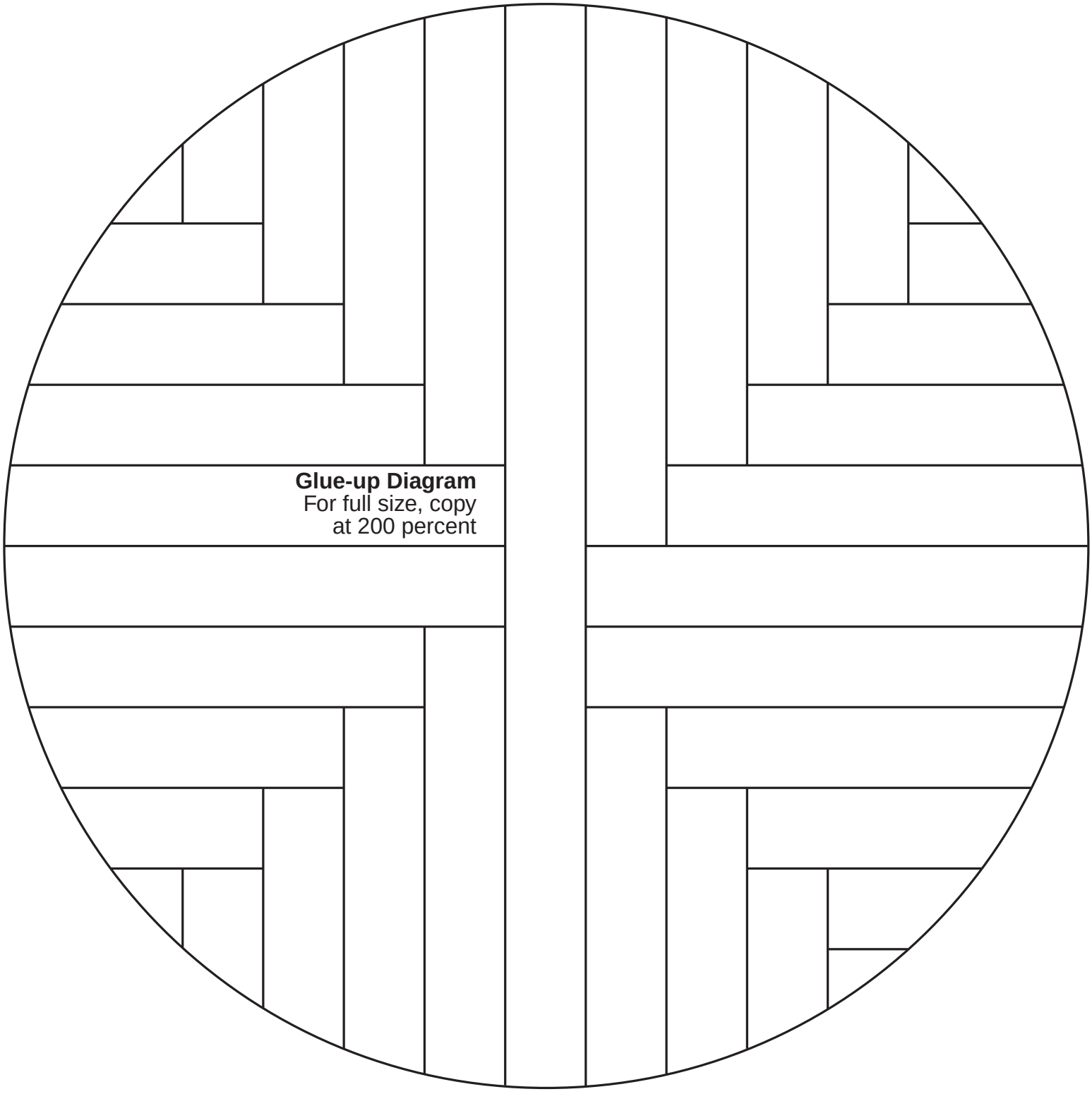
Dave Ramsey (dvewood@aol.com) didn't stay retired long after he moved to Phoenix. Dave has fine-tuned his stave bowl skills, and now four galleries exhibit his work.





Pencil directional arrows in your blank to help guide your blank assembly, above. Maple (A) and poplar (B) discs, right, are key to the bowl preparation.

To ensure a solid mounting surface, turn a 6"-diameter flat spot in the assembly with a scraper as shown above. For this step, wedge the blank against a 14" flat plate attached to the head stock using a live center in the tail stock.



Glue-up Diagram
For full size, copy
at 200 percent

Rededicating the Totem

The AAW totem poles have returned to the Arrowmont landscape.

Twelve years of weather wrecked havoc on the totem pieces originally donated by 24 chapters as part of the 1990AAW Symposium held at the Arrowmont School of Arts and Crafts in Gatlinburg, TN. Pieces were literally falling off the totem poles, which had served as guideposts for Arrowmont students: "When you see the totem poles, turn right...."

The AAW board invited the 24 chapters involved in the original

AAW board member Mark St. Leger, left, eases the Minnesota Woodturners totem piece into place.

AAW Board members gather before topping out one totem pole with the Nutmeg Woodturners totem. From left: Lee Carter, Phil Brennion, Administrator Mary Lacer, Bob Rosand, Dave Hout, Mark St. Leger, Linda Everett, Bobby Clemons, and Linda Van Gehuchten. Willard Baxter was absent for the ceremony.

There's room for more! Fifteen totem pieces from the original 24 chapters are in place, with room on the second totem for contributions from the remaining chapters.

totem poles to submit new pieces. Following an AAW board meeting at Arrowmont in late March, board members dedicated the new totem pieces.

Thirteen of the original 24 chapters sent new pieces: Central Oklahoma, Ohio Valley, Bucks (Pennsylvania), Bay Area (California), Blue Ridge (Virginia), North Coast (Ohio), Northwestern Michigan, Minnesota, Tidewater (Virginia), South Florida, Central Indiana, Mountaineer (West Virginia), and North Texas.

Only the Seattle Chapter totem piece survived Tennessee's weather. The Nutmeg Woodturners League of Connecticut refurbished its totem piece, which again caps one of two poles.

The Arizona Woodturners totem piece arrived in April; the Arrowmont staff has promised to install all late-arriving pieces.

Bobby Clemons removes eye bolts from the top of a totem piece, making room for another section.

Texas Ingenuity

By Lynn Blanchard

The Arrowmont totem contribution from the Woodturners of North Texas (WNT) is ALL Texas ingenuity.

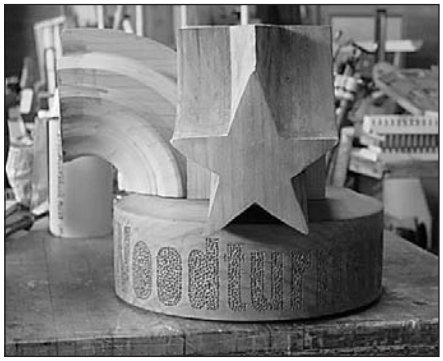
WNT members wanted to create something that would leave viewers of the finished product wondering; "How did they do that?" The chapter accomplished its goal by engineering a totem piece that would be both movable and represent the state of Texas.

Thinking big, Texas style

With these concepts in mind, Paul Tiefel produced a computer-assisted design (CAD) which would make the project as flexible as possible. Combining the CAD program with an old German toy-making technique called hoop turning, Paul returned to the next chapter meeting and showed members his precision drawings. Paul's design looked like a complicated task, but with their combined efforts enthusiastic volunteers decided to go for it.

Texas icons

To further enhance the design, members decided to mount four Texas icons on a carousel that could be rotated by hand. The distinctive Texas totem incorporates a cowboy boot, Longhorn steer, a Texas star and the outline of Texas.



The Texas star, above, is one of the four images spinning in the Woodturners of North Texas totem piece. Below, precision plastic parts allow the totem pieces to rotate.

The icon pieces needed to be 8 to 9" tall, which meant starting the turnings with a massive cylinder of about 20" diameter–few of us had ever turned anything that large. In addition, only a few of the volunteers had ever done a hoop turning.

And more challenges. Since this was only a section of the final totem pole, we had to provide structural support for the weight of all of the sections that would be mounted above ours. This was accomplished by designing a fixed base and a fixed crown that were

Continued

connected by a 4" section of PVC pipe to support the weight above our section.

The rotating carousel consists of turned lower and upper sections connected by a central square column. The square column hides the PVC and provides a flat surface to which the four icons are mounted. To ensure a smooth rotation, the carousel rides on precision bearings that were milled from ultra-high-molecular-weight plastic.

Elevating turning skills

There was some concern about the complexity of the project. Also, turning-bearing surfaces is not a typical practice of woodturners. Totem designer Paul Tiefel challenged members, "We are going to have to elevate standard woodturning techniques to the level of a machinist."

Difficulties occurred when pieces came apart, or were too wet to turn. There were more than a few days when volunteers pondered about finishing on time. To Paul's credit, what looked like an exacting and complicated task turned into a flexible and eye-catching piece of turning.

Club members with little experience in turning worked right along with the more confident and experienced members to produce a piece of work of which they were all satisfied. The final coat of protective sealant was applied and the piece arrived via over-night delivery–and not a minute too late.

John Horn, past-president of the WNT, said, "Individual talents are not always immediately recognized in club meetings. But when projects like this come along, a wellspring of hidden talents come forth.

"Important aspects of this project on the local level included not only the production of an exciting piece of woodturning but also the sharing of knowledge, time, and camaraderie of the volunteers."

Dr. Alan Siebanthal was part of the team that turned the 1990 TNT contribution, "Ten-plus years ago, we could not have put things into a computer and see a completed, rotating view of a completed segment for the totem."

For more information, see the WNT chapter website at woodturnersofnorthtexas.org.

AAW Annual Financial Statement for 2002

Revenues and Expenses

Income

Annual Dues	$ 412,062
Contributions	38,433
Publications & Products	120,925
Symposium & Exhibitions	235,758
Interest	9,294
Other Income	3,138
Total Income	**$ 819,610**

Expense

Publications & Products	$ 257,932
Symposium & Exhibitions	227,29
Scholarship Grants	24,170
Other Programs	18,195
Administrative	198,563
Member Development	16,087
Total Expenses	**$ 742,240**

Net Income $ 77,370

Balance Sheet
(as of 12/31/02)

Assets

Checking & Savings	$ 220,235
CDs	273,605
Osolnik & Memorial Endowments	43,421
Interest Receivable	2,784
Inventory	79,899
Prepaid Expenses	11,975
Equip & Furniture-Net	8,456
Total Assets	**$ 640,375**

Liabilities

Accounts Payable	$ 4,325
Accrued Expenses	7,752
Deferred Revenue	32,940
Total Liabilities	**$ 45,017**

Net Assets

Unrestricted	$ 414,508
Temporarily Restricted	137,429
Permanently Restricted	43,421
Total Net Assets	**$ 595,358**

Total Liabilities & Net Assets $ 640,375

Artwork in the Round

Precise measurements, correct grain orientation and accurate sanding jigs are just three key elements pored into Curt Theobald's segmented bowls. Oh yes, great designs and forms, too! The 7½ x 5½" "Lightning Snake," left, contains more than 500 pieces of European pear, holly, ebony, bloodwood, and lacewood.

At the AAW Symposium June 27 to 29 in Pasadena, Curt will demonstrate designing segmented patterns, creating bowls, and building sanding jigs (see page 53 for more details).

Curt, a former cabinet shop owner, now explores his turning passion one segment at a time as a full-time studio artist in Pine Bluffs, WY.

cwtheobald@wyoming.com

"Dance of the Bison," 7½ x 6"
Holly, wenge, pernambuco, ebonized veneer

"Wind River Series," 5 x 3¾"
Masur birch, jarrah, imbuya, holly