

Woodturner

The Journal of the American Association of Woodturners
Winter 2006 Vol. 21, No. 4 woodturner.org

AAW's Permanent Collection

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Instant Gallery

More Louisville favorites

During the Instant Gallery critique in Louisville, Steve Loar, Betty Scarpino, and Hans Weissflog had the opportunity to comment on just 30 pieces—less than 3 percent—of more than 1,175 woodturnings on display. Here are three more pieces they critiqued.



"Turbulence #4" by John H. Williams of New Hope, Pennsylvania. Silver maple with ebony collar, pyrography and airbrushed acrylics; 4½×3½". Steve applauded John's ability to evoke nature with the surface. "The shape is very simple," Hans added. "Everything is put together so well."



"Hula Platter" by Ed Kelle of Glen Head, New York. Bleached and textured walnut; 8" diameter. Hans praised the way Ed's piece "shows the difference between polished and textured walnut." "He has engaged us with the contrast," Steve added.

"Fraternal Twins" by Ralph Watts of Knoxville, Tennessee. Cherry burl; both about 9" diameter and 3" and 5" tall. "I like how these similar forms fit together," Hans remarked. Steve noted that "this is delicate for the boldness of the grain. I like the sheen level." Ralph explained that "the burl was old and dry and had multiple cracks, checks, and worm holes. This condition prompted the tendrils around the base; a design opportunity exploited."

AAWWEB

For more Instant Gallery images, see woodturner.org/InstantGallery06



Photos: Nathan Mann and Robin Arkenberg



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Opening night at the San Luis Obispo Art Center drew a huge crowd, with visitors eyeing the work from California chapters.

20 Twisted Icicles

Bill Bowers puts a different spin on the popular icicle design by adding a double-barley twist. And just for added fun, there's a capture ring in his design.

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Now that the AAW has its own gallery, we're making an effort to collect signature pieces from members. Take a peek at our progress to date.

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When you're ready to take on another penturning challenge, Richard Kleinhenz has designed a closed-end pen that includes a custom sterling band.

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Tim Heil shows you how to turn the buttons that were so popular at the Instant Gallery in Louisville.

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46 20 Ways to Master Spindle Turning

Nick Cook wants you to succeed with your spindle-turning projects. And you will! Just follow his 20 tips.

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56 Battling Dust

Peter Fedrigon, an AAW member and consulting engineer on dust collection, offers advice on how to improve the dust collection in your shop.



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Don't be paralyzed by the fear getting a catch! To put the fun back in turning, Lyle Jamieson offers tips on how to grind your gouges and get that perfect bevel-supported cut.

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Set up for safer procedures by building a chainsaw platform that eliminates some of the risks.



woodturner.org

EDITORIAL

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A NOTE ABOUT SAFETY

An accident at the lathe can happen with blinding suddenness; respiratory problems can build over years.

Take appropriate precautions when you turn. Safety guidelines are published in the *AAW Resource Directory*. Following them will help ensure that you can continue to enjoy woodturning.

It had been a long time since I attended the local meetings at the South Shore Woodturners and the Central New England Woodturners. This past month we—my dad and I—made a concerted effort to make each of the meetings.

What struck me as obvious was that these chapter meetings felt as comfortable as one of our Italian-American family gatherings.

In both groups, my dad and I share the same level of passion that affects us all. I suspect that this sense of family and belonging is what keeps us so deeply involved in our crafts organization.

And just like my family, I can say with all honesty that I have never felt out of place when in a group of woodturners.

On pages 16–17, you will find comments from eight featured demonstrators who will highlight the Portland symposium.

In addition, we're finalizing details with four featured Japanese woodturners. I just cannot wait to witness these demonstrations as well as see the turned wonders they will exhibit at the symposium.

Ryozo Kawakita, one of the Japanese turners and urushi artists, is recognized in Japan as a "Living National Treasure."

Impressive title! I wonder what North American turner would fit that designation? That's an interesting question: Is there a woodturner among our ranks worthy of a similar title?

Don't write the obituary yet on high school shop programs! As the article beginning on page 50 details, members of the Bay Area Woodturners Association are making a difference in two high school programs they've adopted.

If this article doesn't make you ask yourself, "Gee, I wonder if I could help at my high school," then I suggest you read the article again. And maybe a third time. And don't say you're too busy!

Three years ago, Christian Burchard, a busy studio woodturner, started assisting at his children's high school in Ashland, Oregon. Be sure to read more about Christian's experiences on page 51. Below is the work of Dan Tilden, one of Christian's students.

Yes, you can make a difference. Pass along your turning passion.



Angelo Iafrate
iafrateturns@cox.net

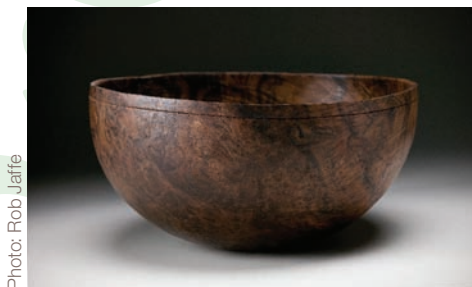


Photo: Rob Jaffe

Dan Tilden, a high school student in Ashland, Oregon, turned this 6x12" walnut bowl as part of his senior capstone project. For three years, AAW member Christian Burchard has mentored Dan and other students as a volunteer in the Ashland school's shop classes.

AAW News

Members elect 3 new board members

During fall elections, AAW members elected Frank Amigo, Larry Genender, and Jean LeGwin to serve three-year terms on the AAW board of directors. Congratulations to all who agreed to stand for office. In addition, Andy Barnum agreed to fill out the remaining two months of Jeff Jilg's term.



Frank Amigo



Larry Genender



Jean LeGwin

Renew now, avoid higher fee

Save yourself \$5 by renewing your 2007 AAW membership before December 31.

Here's why we instituted a price difference:

Renewals postmarked before January 1 are included in a large mailing of the Spring copy of the journal; the AAW takes advantage of a substantial postage discount. However, if you renew after January 1, delivery of the Spring issue must be handled at a higher postage rate, which also requires more office time for hourly employees.

You can help the office staff and save yourself \$5 by renewing promptly.

As a bonus for renewing, members will receive a DVD copy of Louisville symposium highlights. The DVD will be shipped in April along with your 2007 Resource Directory.

New Woodturning Studio Opens at John C. Campbell

When the calendar flips over to 2007, woodturning students at John C. Campbell Folk School will begin classes in the new \$250,000 Willard Baxter Woodturning Studio in Brasstown, North Carolina.

The 2,500-square-foot studio includes a tiered-seating demonstration area with a video monitor and separate wood preparation, turning, and finishing areas. There are 12 stations in the studio featuring Powermatic 3520B lathes.

"This will be a great place for woodturning students," said Nick Cook, Folk School board member and frequent instructor. "It's just great that the turning program has its own separate space now. The lighting is perfect, all the equipment is new, and the demo area is not to be believed."

Named in honor of Willard Baxter, the school's late woodturning resident artist, the building is the realization of Willard's vision for the Folk School's woodturning program. "Willard loved teaching the craft because of what it can do to uplift people," said Jan Davidson, Folk School director. "He understood the Folk School idea perfectly and brought its joy and transformative power to thousands of people."

The Folk School expects to offer 50 woodturning classes in 2007, including an expanded offering of weekend classes.

"I'm so proud of how the woodturning community stepped up to the plate with donations for this new studio," Nick added. "So much of the funding came from the AAW, AAW chapters, regional symposiums, and individuals who have taken classes at John C. Campbell."

For more details, see folkschool.com.



Deadline approaches for youth gallery

Remind all your favorite young woodturners of the February 15 entry deadline for the AAW's first juried youth exhibit. There are four age divisions: 10 and under, 11–14, 15–18, and 19–22. For more details: gallery@woodturner.org, subject line: Youth Exhibit.

Take a look at AAW website improvements

The AAW has completed the members-only updates to the organization's website. As revealed in the Fall issue of the journal, these updates provide password-protected access to a new area on the AAW website.

Your ID and password accompanied the renewal information you received with the Fall issue. Currently, all the new features are highlighted at the top of the AAW homepage: woodturner.org.

The new features include:

- update function for member profile and contact information
- online Resource Directory
- electronic voting for new board members
- AAW membership join/renewal form
- electronic shopping cart for AAW merchandise, publications, DVDs and videos
- online AAW symposium registration

A new web page provides an organized list of answers about the new features. We urge members to use this list of answers to save time in resolving questions or issues with the new software. The answers page is linked from the AAW homepage.

Western NY Woodturners are big Make-A-Wish contributors

Since 1999, the Western New York Woodturners 1 & 2 (two separate chapters meeting on different days) have donated more than \$43,000 to the local Make-A-Wish program. The chapters' big fund-raising event is an annual sale of chapter projects at the Erie County Fair.

This year's sale of turned items cleared \$7,756. The chapter organizers were Steve Imerese, Rich Mialki, Bob Ball, and Al Schultz.

For more details about the chapter events, see wnywoodturners.com.

EOG Deadline Approaching

The AAW Educational Opportunities Grant (EOG) fund has grown in recent years, and funds are available for worthy proposals. To be eligible, entries must be postmarked by January 15, 2007. You can obtain the application form and grant guidelines at the AAW website (woodturner.org) or by contacting the AAW office.

Every year, the committee rejects many applications that are incomplete, illegible, or vague. Here are a few tips to help you with your application submission:

- Download the application form in Microsoft Word format from the AAW website, then complete the form on your computer, print, and mail. If you must submit a handwritten application, it should be neatly hand printed.
- Provide sufficient information so the EOG committee members can clearly understand your needs and the intended use of the funds. Please be concise and make your point directly and clearly.
- Include details of how you will use the funds. Specific needs should be itemized. Funds will not be granted for miscellaneous or incidental unspecified expenses.
- Remember, these grants are for educational purposes. You must detail the benefits of the educational experience.

Grants are limited to \$1,000 for individuals and students and \$1,500 for chapters and others (schools and nonprofit organizations). Your budget may exceed these limits; however, your grant request should not exceed these limits.

If you have questions about the process, contact the EOG committee chairperson as listed on the AAW website or contact the AAW office.

The AAW board encourages you to make the most of this membership benefit.

—Malcolm Tibbetts, 2006 EOG chair

WEBSITE WINNER: Boxes with finials



First Place:
Travis Stinson,
Brookhaven, Mississippi

Second Place:
Keith Burns, Collierville, Tennessee

Third Place:
Bob Davis, Prairie Village, Kansas

Judge: Cindy Drozda

NEXT CONTEST: ICICLE ORNAMENTS

Deadline: January 10
For more details, see woodturner.org,
then follow the links to the AAW
online forum.

More to Write Home About

Here are some more outstanding examples of custom pens on display at the Utah Woodturning Symposium in Provo and the AAW National Symposium in Louisville.

Chris Hendley's inspirations come from growing up in the American Southwest and visiting the plazas in Albuquerque and Santa Fe. He recalls watching Native Americans lay out all their copper and sterling silver jewelry under the covered patios constructed of rich-colored wood and adobe. This pen is based on a 7mm Euro kit and is turned from ironwood. Chris constructed the accent pieces in the upper barrel from copper and stainless-steel plating, turquoise-dyed burl, and white acrylic. Chris lives in Keller, Texas.



Bob Altig created this fountain pen with Geronimo's image laser-engraved into antler. Bob turned the main body from African blackwood, then polished the surface to mirror-like brilliance. He used a Baron pen kit. Bob lives in Salinas, California.



Jay Pickens was one of the early developers of the now-popular rattlesnake skin pen. Jay makes his own castings by gluing rattlesnake skin onto brass tubes and casting the skin in clear polyester resin. He then turns and polishes his custom pens. What is not immediately obvious to the casual observer is that Jay makes all his pen parts from aluminum. He lives in Fort Worth, Texas.



Newsletter editors, webmasters recognized for outstanding work

During the Louisville symposium banquet ceremonies, six chapters were recognized for outstanding chapter newsletters and websites.

Newsletter Winners

Thanks to the 27 chapters that entered this year's newsletter competition.

First Place: *The Chip Pile*, Central Texas Woodturners, Charlie Kay, editor

Second Place: *North Carolina Woodturner*, North Carolina Woodturners, John Uteck, editor

Third Place: *North Coast Woodturners Newsletter*, North Coast Woodturners, Brian Becker, editor

Philip Roybal, Silicon Valley Woodturners and last year's winning editor, was the newsletter judge.

Website Winners

Thanks to the 19 chapters that entered the AAW's third chapter website contest.

First Place: Woodturners of North Texas (www.wntx.org), Billy R. Boehme, webmaster

Second Place: Alabama Woodturners Association (alabamawoodturners.com), Harold Jones, webmaster

Third Place: Central Indiana Chapter of the AAW (cicaaw.org), James Purciful, webmaster

Congratulations to the winners and thanks to all that entered.

For ideas on how to improve your chapter communications, visit the winning websites and request exchange copies of the top newsletters.

AAW MEMBER TAKES METAL-TURNING TO EVEREST HEIGHTS

I joined the Maine woodturners about 10 years ago and found them to be a great bunch of guys. Everyone was so helpful and informative. Turners like Jacques Vesery, David Lancaster, and many less-famous guys helped me develop my skills and gave so freely of themselves.



"Bells from Everest" by Jeff Clapp

Your publication has also inspired me to become a better turner and the symposiums have brought me great pieces of wood, insights into many options for woodturning, and great friends. The woodturning community has opened my eyes to the endless possibilities in turning—from simple salad bowls to complex off-center turning and elaborate texturing.

At one AAW symposium, I watched Myron Curtis turn tool-handle ferrules from brass compression nuts. I went home and mounted an aluminum CO₂ cylinder on my lathe and started going at it with a $\frac{3}{16}$ " piece of square tool stock. I created a nice bell with a rich tone. But, I didn't find it very exciting. Wood is so beautiful, and this was just a piece of metal, so I went back to turning wood.

Years later, I decided to create a lawn ornament with three bells of different sizes. I went to the local hospitals and nursing homes to get some of the old oxygen bottles. However, no one would give me the bottles due to federal laws regulating the collection of a partially hazardous material.

Three years ago, I saw a National Geographic special on Mt. Everest and the trash left there for the last century. I was amazed by what I saw. Besides the mess of water bottles, paper, and plastic were piles of oxygen cylinders lying about. Long story short, I went to Nepal last year and trekked into the Kumbu Valley to recover trash from Mt. Everest. I ended up getting 132 oxygen bottles and shipping them back to the U.S.

And now I create environmental art sculptures turned from oxygen cylinders abandoned by Mt. Everest climbers. Our work generates income for Himalayan Sherpas, removes and recycles waste from what should be one of the planet's most pristine environments, and graces the homes of environmentally conscious art lovers everywhere.

Thanks to all in the AAW who inspired me.

Jeff Clapp
Brunswick, Maine
bellsfromeverest.com

POP
Fellowships
recognize

Professional Achievements

The Professional Outreach Program (POP) Committee is pleased to announce Giles Gilson, Stephen Hogbin, and Mark Lindquist as winners of the first POP Fellowship Awards.

This new award recognizes the lifetime careers of professionals and the influence their work has had on other artists in the field of woodturning. The eight POP committee members selected the fellowship winners.

The award winners have been invited to attend the Portland symposium. A special exhibit of pieces by POP Fellowship Award winners will be on display at the symposium and later travel to the AAW Gallery in St. Paul.

—David Ellsworth,
POP chair

"Cammy-Oh-9-Highlights
From the Muse" (2002).
Walnut, blue interior;
16×63½".



POP Fellowship
Giles Gilson

Schenectady, New York

Giles' answering machine message used to say: "Hi. This is Giles. Leave your credit card number and expiration date and I'll get back to you real quick!"

Undaunted, Giles has provided a level of personal humor to our field that is both rare and often much needed. He also brings an artist's eye to his work, plus a level of skill in craftsmanship that is unsurpassed. Combine the two and you have someone who is affectionately known as "the madman of woodturning." Did he really cover that walnut vase with wood glue and then sprinkle on the shavings from the floor when someone from the workshop asked how he intended to "finish" it? Yup! And was it he who flocked the interior surfaces of his vases so that when woodturners put their fingers inside they got a soft surprise? Yup again—I own one.

Seriously, Giles was the first contemporary artist to break the mold of traditional woodturning by introducing color into his work,



"Lighting the Way" (2001). Lacquered basswood; approximately 30" tall.



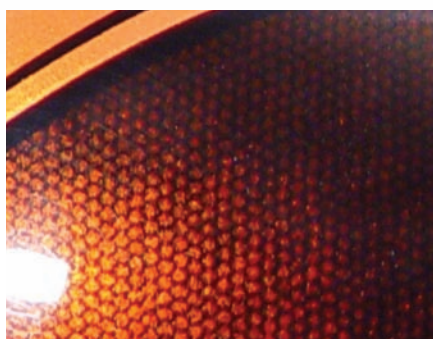
"Sunset Piece" (1987). Lacquered wood; 24" diameter.



"Figurines in Color and Light" (2006). Lacquered basswood; 7½x13".

more specifically automotive lacquers. It began in the mid-1970s when he recognized that the colors in the woods he had been using—particularly padauk and purpleheart—were unstable. The answer, of course, was to use paint. And with his background interests including fast airplanes, fast cars, and hot licks on his clarinet, it was a natural fit. The only problem was that traditional woodworkers of the time didn't appreciate someone "covering the beauty of the wood."

What they hadn't considered was that a new definition of the term *beauty* was emerging, and that Giles' approach was simply a new way of looking at objects that



Detail from "Figurines in Color and Light."

emerged from the lathe.

Giles is obviously not the first artist to use color with wood. But he is the first person in woodturning brave enough to push the concept to a level that almost defies imagination. His

use of color both magnifies and clarifies his forms, including when we walk around them and discover that the colors often change! Moreover, he is integrating the oldest of traditions with the most modern of technologies through free expression in some of the most labor-intensive work possible.

Come closer. There is magic here.

To view more of Giles' work, see gilesgilson.com.

—David Ellsworth



"Bird Table" (1976). Yellow walnut;
30½x10⅝".

POP Fellowship

Stephen Hogbin

Warton, Ontario

Stephen Hogbin's approach to turning began in the early 1970s and is particularly unique because of his emphasis on manipulating the material as a means of achieving the overall design. The results draw the viewer's attention to the cross section of the work as an integral part of the whole. Many turners certainly used to draw the cross section of the piece they were trying to achieve, but the drawing would only show the maker's intent. Stephen celebrates the cross section by emphasizing the wall thickness variation and then showing it to the viewer as part of the finished form.

There are also the gymnastics that he has achieved by cutting things up and reassembling them. This produces a result that on the one hand seems like it must be turned, but on the other hand has a way of totally confusing the viewer as to how the object was made. This technique was the first

use of intentional design illusion in woodturning. Stephen's "Egg Cup" is one of those confounding pieces. Stephen made this piece as a study for his laminated chair that was featured in the exhibition and book, *Woodturning in North America Since 1930*.

Stephen's one-year artist-in-residency at Melbourne State College in Australia in 1975 is documented in his 1980 book, *Woodturning: The Purpose of the Object*. His subsequent influence as a designer in woodturning has had a major affect on many Australian turners, most notably Vic Wood, plus a host of others throughout the Western world, including Michael Brolly, Michael Hosaluk, and myself. The book was clearly 20 years ahead of its time when written, and it's still 20 years ahead of its time today. By 2020, I'll probably have to give it yet another 20-year extension.

To view more of Stephen's work, see makersgallery.com/hogbin.

—Mark Sfirri

"Fragments" (2005). Wood, glass,
and paint; 35x18".



"Walking Bowl" (1978).
Zebrawood, 11x8x11".



“Inside-Out Newel Post and Railings” (2003). Ebonized ash. Private collection.



“Side Table” (2004). Ash. Private collection.

POP Fellowship

Mark Lindquist

Quincy, Florida

The first exposure of Mark Lindquist's turned objects dates back to the early 1970s. And while much of his work focuses on the bowl form, his approach to the medium of wood has always been from a sculptor's perspective with a heavy emphasis on surface, form, and scale.

Mark and his father, Melvin, were the first contemporary turners to fully explore the use of burls, spalted wood, and wood with deformities such as bark inclusions and natural edges within their bowl and vase forms. Mark then began altering his traditional two-dimensional sanded and polished "beauty of the wood surface" pieces by using both standard turning tools and chainsaw techniques. He thus developed surfaces that provided the three-dimensional motif that became integral to his work.

Mark was the first to explore making totems and to develop the use of robotics in making his work. Along with his wife, Kathy, Mark was also the first to refine techniques in photographing his work, which have now become the standard methods we all use today. Equally important, he had an extraordinary impact on developing the marketing techniques that opened doors



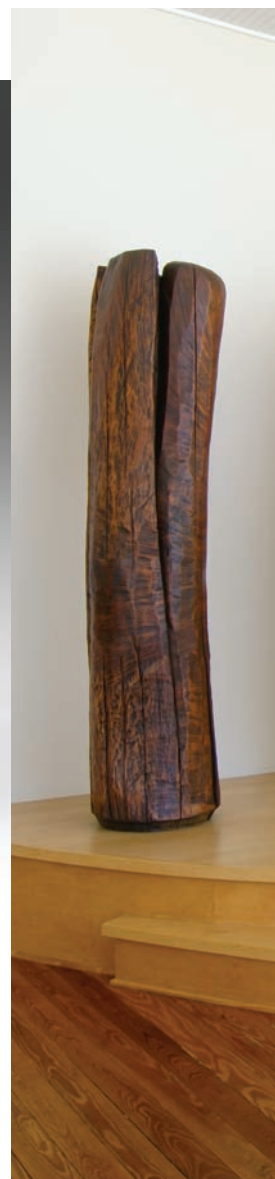
"Rockin' Magnum Sawtooth Opus #1" (1997-2000). Maple burl; 15½×13½×9".

into the permanent collections of museums like the Smithsonian and the Metropolitan Museum of Art. In addition, he was foremost in establishing a pricing structure for his own work that woke up the woodturning world by saying, "Look, this work is art and it has a value."

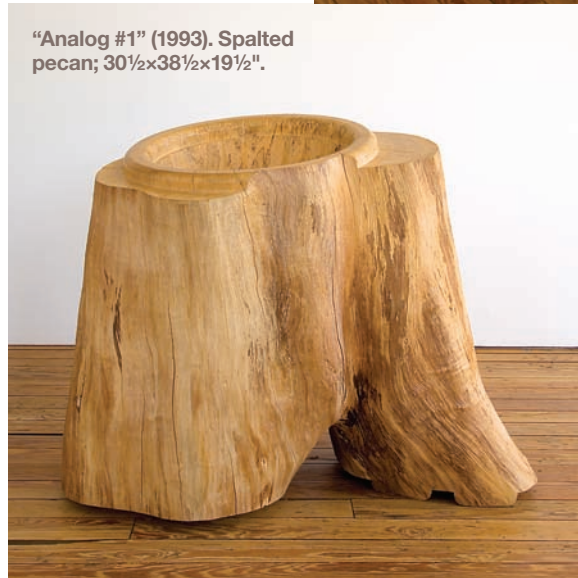
In the early 1980s, Mark helped create the turning program at Arrowmont and then worked directly with Sandy Blain, then-director of Arrowmont, and me in organizing the Vision and Concept Conference in 1985, which was the start of the AAW.

To view more of Mark's work, visit lindquiststudios.com.

—David Ellsworth



"Analog #1" (1993). Spalted pecan; 30½×38½×19½".





"Ichiboku Sculptures" (late 1980s). Cherry; each about 6' tall.
On loan to Gadsen Arts Center, Quincy, Florida.



"Tranquil Form #1" (2005).
Black ash burl; 8½x18½x16".



"Chambered Captive" (1992).
Spalted yellow birch burl;
14¼x30x15".



"DaVinci Bowl" (2005).
Maple burl; 13½x24x16".
William Torres collection.

Sail on into

The AAW symposium committee has rounded up another great lineup of demonstrators for the 21st Annual National Symposium in Portland, Oregon. Be sure to read comments from the eight featured demonstrators on these pages. Then look for a complete list of more than 20 demonstrators in the Spring 2007 issue.

As part of the schedule of more than 120 rotations, four woodturners from Yamanaka, Japan, will demonstrate in 12 rotations. A master woodturner will be paired with a young turner for demonstrations on the Japanese style of woodturning plus the secrets of urushi finishes.

Trent Bosch

Fort Collins, Colorado
Vessels of Illusion
Decorative Utility Bowls
Sculpting on Turnings



"I am excited to be presenting some techniques that I have refined over the years as well as some recent discoveries. In my rotations, I will cover information from basic use of tools to advanced techniques

for bowls, hollow forms, and sculpting on turnings. I have a passion for teaching and enjoy sharing the knowledge and techniques that I have developed and stumbled upon in hopes that others may take a portion of what is shared and apply it to their own creative work.

"The AAW symposium is a fantastic place to gather technical information as well as energize your creative engines. It is always fun to rekindle old friendships as well as create new ones. I am honored to be a part of this very exciting event."

Michael Brolly

New Bedford, Massachusetts
Turning Heads
Thoughts on Design



"I think that symposiums are so powerful because they are a place where you can ask those questions you

always wanted to ask, and perhaps more importantly, you can hear the answers to the questions of others that you might not have thought to ask."

Christian Burchard

Ashland, Oregon
From Turning Spheres to Decorated Spherical Vessels
The Pleasure of Green Wood: Madrone Baskets and Hollow Forms
Creativity and the Marketplace (panel)



"I pity the poor fool who misses my demonstrations! I want to show you that woodturning can be a real pleasure and does not necessarily have to result in round objects. You might even discover that turning does not

always require sanding—unless you really enjoy that kinda thing."

Jimmy Clewes

Auckland, United Kingdom
Oriental Lidded Box
Colored Platter
Lidded Box With Moroccan-Style Finial



"Why would you want to color beautifully figured maple? What makes a curve look aesthetically pleasing? How do you combine catenary and natural curves

and what should be the proportions?

"Attend my demos and find out the above answers—with some humour thrown in for good measure!

"See you in Portland!"

Melvyn Firmager

Wedmore, United Kingdom
Side-Grain Hollow Forms
End-Grain Hollow Forms
Multiple-Rim Creations



"Hey, this is one of the best woodturning events, so we will see you there, won't we? Regardless, I will be playing with my tools. That will

look pretty silly if I am doing it all by myself!

"I'll demonstrate specially ground gouges developed for bowl and hollowing work and shear cuts with no scraping inside. You'll learn about two-prong angle tools—no torsion problems, sneaking around corners, feeling without cutting, and cuts from fine to heavy, just by rotating the tool. Definitely not white-knuckle work.

"There will be two 'Sea Flower' presentations. I will show you how to work between the rims and through very small openings. I will include a little on how to remain cool at

Portland

June 29–July 1

the lathe and how to work efficiently at the lathe with good body movement.

"Then there are all those other hot demonstrators, too. They're good friends of mine, and can be yours as well."

Alain Mailland

Uzes, France

Inspiration, Visualization, and Realization
Off-Center Turning
Turning and Carving a Tree



"I hope to take you on a journey through my dreams, inspirations, and techniques, including how I give life to circular forms, off-centering techniques,

flower shapes, crossed shapes, carving, bending, and texturing.

"This will be my first demo of off-center turning with the Escoulen chuck, used the Mailland way. I have updated my slide show with long and huge off-center turnings impossible to realize in demos."

Frank Sudol

Paddockwood, Saskatchewan

Boring-Bar Update
Realistic Fur and Feathers
Start Your Creative Engines



"I want members to get acquainted with the vast advantages of boring bars and how to use them, as well as how to up their skills. And I want to teach how to add realistic-looking animals and birds on

their vessels. Don't miss 'Start Your Engines,' an entertaining and thought-provoking—if not controversial—session."

Al Stirt

Enosburg Falls, Vermont

Turned and Carved Square Platter
Turned, Painted, and Carved
Sgraffito Platter
Open-Bowl Turning/Balancing
the Grain



"In all my demonstrations, I try to convey the why as well as the how. I'll show some of the techniques I've developed to make my work over the last 35 years. The creative process is often a back-and-

forth between technique and aesthetics. Certain techniques lead to the type of feel I want a piece to have. Other techniques—though perhaps more efficient—lead to results that leave me cold. I expect people to use my demonstrations as another tool they can use in developing their own work."

AAWWEB

For more details on the AAW symposium, see woodturner.org/sym/sym2007.



Keiki bowl by Butch Smuts of Johannesburg, South Africa. Includes ebony and round-leaved kiaat lid; 4 1/4 x 4 3/4".

Woodturning Exhibits in Portland

Portland will overflow with special woodturning exhibits during the AAW symposium. Be sure to allow extra time beyond your symposium sessions to visit these shows.

Turning Green, the AAW's newest juried and invited exhibit, will explore how members interpreted variations on this theme—particularly environmental sensitivity. The work will be on display at the Oregon College of Arts and Crafts Gallery.

The Japanese Bowl—A Western Perspective will be displayed at the symposium site. This exhibit will include more than 40 bowls originally rough-turned by a Japanese turner and then given to AAW studio artists for finishing in new ways. These bowls will be auctioned at the symposium. See Butch Smuts' example above.

POP Fellowship Exhibit will be on display at the symposium site. The exhibit will feature work by the first fellowship winners: Giles Gilson, Stephen Hogbin, and Mark Lindquist. For more details, see page 10.

reTURN to the Land of Oz, the 2005 juried and invited exhibit, has been reconstituted upon request and will be shown at the World Forestry Center.

Accommodations

Doubletree Hotel & Executive Meeting Center, Lloyd Center

will host the AAW symposium. Room rates are \$104 for a single/double. Be sure to mention the AAW when you call for reservations at 503-281-6111.

Overflow hotel: Red Lion Portland Convention Center (503-820-4256); \$104 for a single/double.

California Contours 2006

15 AAW chapters participated in the first show highlighting California lathe-turned art. Can your region duplicate the success?



"Sequences" by Bill Kandler, Central Woodturners of California. Yellowheart, purpleheart, and maple; 7×10". First Runner-up.



Photo: Gene Sasse

"Untitled" by Mike Jackofsky, San Diego Woodturners. California buckeye; 14×18". Best in Show.

Sometimes, all you have to do is ask the question.

George Paes, Central Coast Woodturners of California, planted the seed for a woodturning exhibit during a meeting in 2004. George directed his question to Tim Anderson, curator of the San Luis Obispo Art Center: "What would be the chances of having a lathe-turned art show?"

Bingo! With Tim's positive response, all 15 California AAW chapters were invited to an initial

meeting at the art center, located midway between Los Angeles and San Jose. At the meeting, the participants quickly moved to the planning stage, setting a May 2006 opening for the newly titled exhibit: *California Contours 2006*.

General planning was sprinkled throughout the next 18 months before the entry forms and digital images began arriving in December 2005.

After the entry deadline, volunteers consolidated



"Firewood" by Michael Kane, Glendale Woodturners Guild. Air-brushed carob; 10x4".

registration information and sent off photos to juror Kevin Wallace. Kevin selected 70 of the 110 entries for the show. Entry fees underwrote the \$800 in cash prizes.

On May 13, the show opened with more than 280 visitors, many traveling from out of town. The excitement carried on for hours, topped off with the sale of several pieces (20 were sold by the end of the exhibit).

The success of this show motivated the San Luis Obispo



"Serenity" by Rollie Bowns, Nor-Cal Woodturners. Black walnut; 6½x9½".



"Friar Tuck" by Bill Hrnjak, Central Coast Woodturners of California. Big-leaf maple and ebony; 6x15". Second Runner-up.



"Untitled" by Hugh Buttrum, Wine Country Woodturners. Osage orange; 3½x6".



Art Center staff to organize another woodturning exhibit, which is scheduled for 2008. The high quality of the exhibit pieces pleased the Art Center. "We enjoyed the fine workmanship and the artful design, and even whimsy, in the pieces," noted Karen Kile of the Art Center. "Visitors raved about the exhibit and bought many fine pieces for their collections."

We encourage other states or regions to adapt this template for a woodturning exhibit of their own.

—George Paes & Bill Haskell,
exhibit co-chairs

"Windows" by Bill Haskell, Glendale Woodturners Guild. Madrone burl; 6x7". Curator's Choice.



Twisted Icicles

Christmas ornaments with a different twist

Turning Christmas ornaments is a fun-filled fall project. Here's a variation that adds the challenge of a double-barley twist to the popular icicle design.

Get started

For lathe tools, you will need a 1¼" spindle roughing gouge, ⅛" parting tool, ⅜" spindle gouge or ½" skew chisel, and ¼"-square scraper. To hollow out the globe, use a small bent- or curved-angle hollow tool.

The twists on the icicle require a lathe index system or an externally applied index system. You'll also need a ⅞" cup drive, a 4-jaw scroll chuck with 2"-deep jaws, a 4-jaw scroll chuck with 1" jaws for small-diameter work, and a Jacobs chuck.

For detail on the captured ring, a curved dental pick is ideal. (The next time you visit your dentist, ask the hygienist for worn-out dental picks—they make great mini tools for projects like this.)

To cut the icicle twists, you'll need a ⅛" tungsten carbide rasp; Dixie Industrial Supply (dixiepins.com) is one source of 80-grit rasps.

For turning stock, select 3×3×6" stock for the globe. I turned several globes from the seasoned trunk of my family's Christmas tree from the previous year. Select the trunk area where many branches exit, and then bandsaw a 6" segment to be turned between centers. The icicle requires 1×1×6½" stock in a contrasting species. For this project, I used Honduran redheart, which

By Bill Bowers



1
With a spindle roughing gouge, turn the globe stock to about a 2½" diameter.



2
Mount a ¾" brad-point bit in a Jacobs chuck, then drill through the globe.



3
With micro hollowing tools, reduce the globe wall thickness to ⅛".

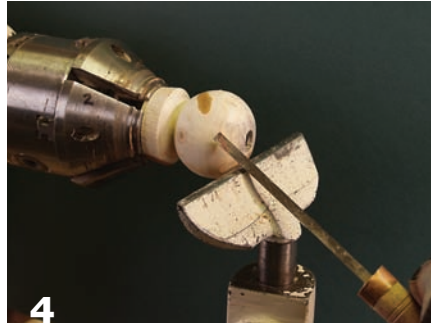
turns easily and details well.

When turning the globe, wear a face shield and a throw-away shirt, as a lot of pine sap will stick to your clothing and tools.

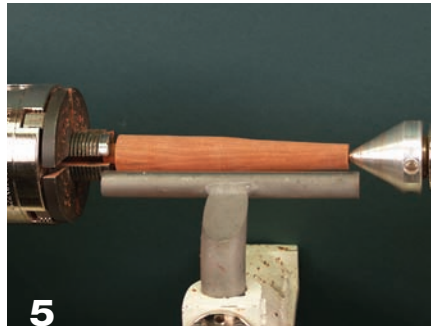
Turn the globe

Mount the 3×3×6" turning stock in spigot jaws at one end. Then, bring up the tailstock. With a 1¼" spindle roughing gouge, turn the stock round. Note the pleasant appearance of the numerous branch knots as shown in **Photo 1**.

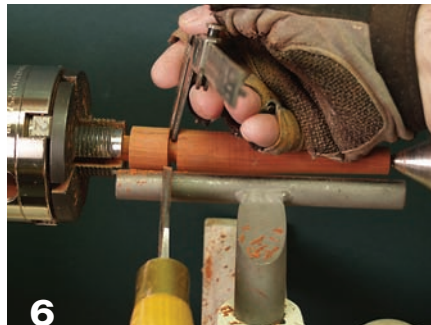
Turn a 2½"-diameter sphere, being sure to leave enough stock



4
With a ¼"-square scraper, square the opening of the globe bottom.



5
After turning the stock round, reduce the icicle diameter at the headstock to ⅞".



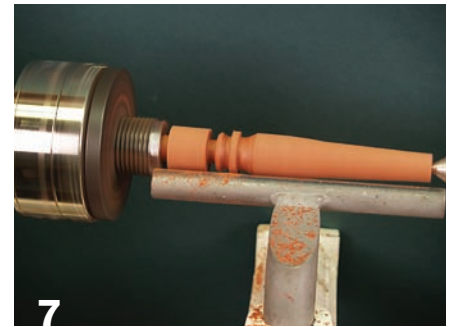
6
With a thin parting tool, reduce the icicle diameter to fit the globe's bottom opening.

near the spigot jaws to support drilling. Mount a Jacobs chuck and ¾" brad-point bit in your tailstock. After dialing down the lathe speed to about 200 rpm, drill through the sphere as shown in **Photo 2**.

Using small hollowing tools, as shown in **Photo 3**, reduce the interior of the globe to about ⅛" thick. Use compressed air to frequently remove small chips from the interior of the globe.

Check the wall thickness with a feeler gauge bent from a coat hanger. Then clean up and square the globe opening with a ¼"-square

"I turn the seasoned trunk from the previous year's Christmas tree."



7
For a captive ring, use a cove cut to create the center band.

scraper, as shown in **Photo 4**.

With a parting tool, bring up the tailstock and reduce the tenon to about ⅝" diameter. Sand the sphere with progressively finer grits, moving from 180 grit to 400 grit. With a ⅛" parting tool, part off the globe.

Turn the icicle

Mount the icicle stock between centers and turn the stock round. With a skew, turn a slight taper at the tailstock. At the headstock, turn the dowel to about a ⅞" diameter to fit #1 Talon or comparable jaws, as shown in **Photo 5**.

With calipers, measure the globe's largest opening. Then use a parting tool to turn a matching spigot about 1½" from the end stock, as shown in **Photo 6**.

Use a ¾" spindle gouge to turn a cove as shown in **Photo 7**. Leave a ⅜" rim for what will become the captive ring.

With a sharpened dental pick,



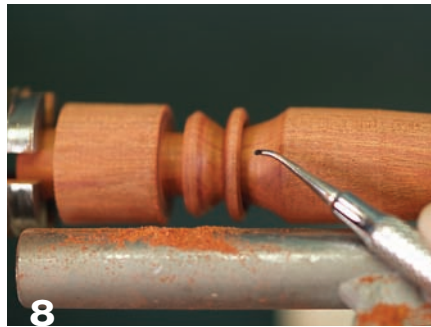
round over the ring, slightly undercutting the ring on each side, as shown in **Photo 8**.

Delicately sand the ring with 180- to 400-grit sandpaper, as shown in **Photo 9**. Before sanding, apply stick wax to your sandpaper. The wax will act as a lubricant, cooling agent, dust suppressant, and sanding sealer for non-oil finishes.

Part off the ring with the dental tool, as shown in **Photo 10**.

Add the twists

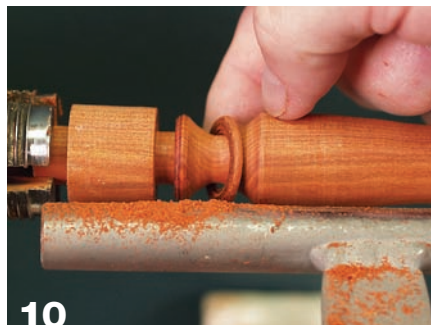
Shape the remainder of the icicle at the tailstock end. Lay out a thin double-barley twist as shown in



8
A used dental pick (sharpened with a hook) is ideal for undercutting the captive ring.



9
Before parting off the captive ring, smooth the surfaces with wax-loaded sandpaper.



10
After sanding the captive ring, part off the ring with the dental tool.

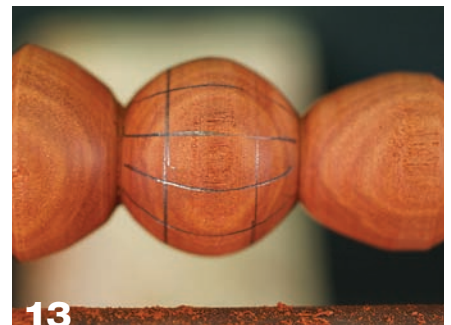
Photo 11. On a 24-point lathe index system, mark horizontal pencil lines with the tool rest dead center at 6, 12, 18, and 24. These are the start lines. Next, mark circumferential lines every 4 mm, then divide the spaces in half. These are the pitch (degree of slope steepness) lines. For a right-handed twist, start at the tailstock end and draw a diagonal pencil line from the lower right-hand corner to the upper left-hand corner of the rectangle. Follow sequentially into the adjacent forward rectangle until you reach the headstock.



11
At the tailstock end, lay out start and pitch lines for the double-barley twist.



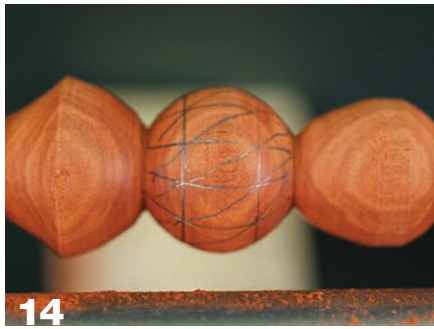
12
Lay out the two cut lines for the right-handed double-barley twist.



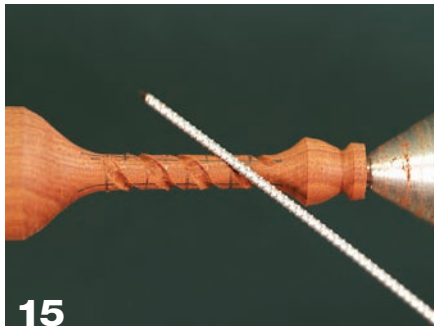
13
Lay out 12 horizontal start lines and two circumferential pitch lines.

Skip a rectangle at the tailstock end and draw another line yielding two cut lines, as shown in **Photo 12**. Next, draw the layout for spirals on the sphere. Spirals that are about 25–33 percent of the circumference are most appealing. To give a smooth curve to the surface of the sphere, space pitches narrower at the poles.

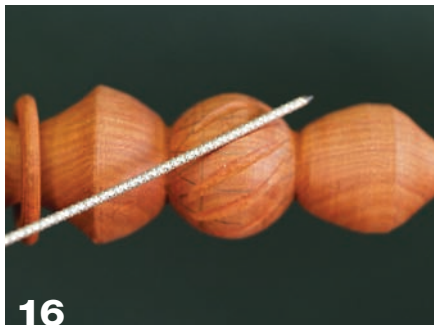
Mark 12 equidistant horizontal lines utilizing the 24-point index on the lathe. Then add two pitch lines, one at the Tropic of Cancer and one at the Tropic of Capricorn, as shown in **Photo 13**.



14
The section of the sphere shows 12 cut lines for a left-handed twist.



15
With a $\frac{1}{16}$ " rasp, cut the coves for the barley twist. Between cuts, lock the lathe spindle.



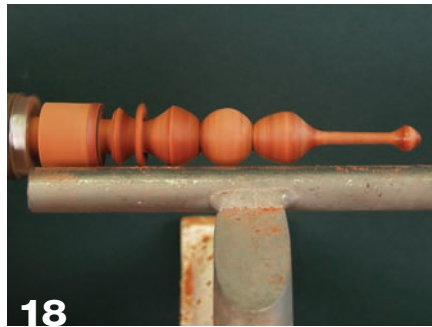
16
Use the rasp and lathe index to cut the 12 coves on the sphere.

Starting at the headstock end, draw a pencil line from the lower left-hand corner of one trapezoid to the upper right-hand corner. Continue the pencil line into the next trapezoid until you reach the tailstock end. Do the same for the other 11 trapezoids to yield 12 left-handed cut lines, as shown in **Photo 14**.

Cut the twist lines with a $\frac{1}{16}$ " rasp, as shown in **Photo 15**. Lock the spindle and carefully rasp one twist, unlock the spindle, rotate the icicle, and continue the cuts. Remember to use a delicate touch



17
Use ropes of twisted sandpaper to smooth the twists in the icicles.



18
Turn a delicate ball on the tip of the icicle. Sand the tip carefully.

on this thin, fragile icicle.

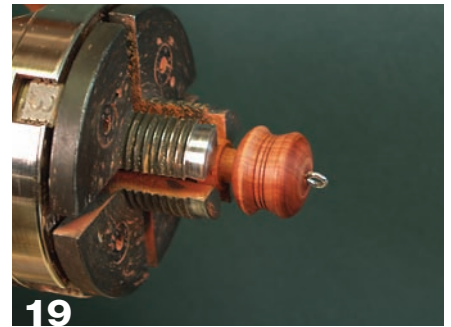
Use the same technique to rasp the 12 cut lines on the sphere as shown in **Photo 16**.

After establishing all the cut lines, sand the grooves with sandpaper twisted into $\frac{1}{16}$ " ropes, as shown in **Photo 17**. For a smooth appearance, use 80, 120, 150, 240, and 320 grits on all surfaces of the cut coves. Sand with a delicate hand. Use waxed sandpaper for a final sanding of the icicle. (Because wax will clog the coves, avoid applying on the twists.) Be sure to remove all pencil marks.

After the sanding is complete, fashion the icicle tip, as shown in **Photo 18**, and sand it carefully. Part off the icicle. Verify the fit between the sphere and globe, then join the two pieces with thick cyanoacrylate (CA) glue.

Turn the ornament cap

With calipers, measure the diameter of the opening in the



19
With the lathe running at about 200 rpm, thread the screw into the ornament cap.

globe top. Turn a tenon to the diameter of the opening, then shape the cap. Sand through the grits listed earlier.

With a $\frac{1}{16}$ " bit, drill a small hole for a brass eyelet. Dial down the lathe speed to about 200 rpm and allow the lathe to turn the eyelet into the cap, as shown in **Photo 19**. With CA glue, adhere the cap to the globe.

Apply a finish of your choice, being careful to avoid drips around the captured ring. On these turned ornaments, most buyers prefer a gloss finish over a satin finish.

Bill Bowers (turningsbb.com) lives in Anchorage and is a member of the Alaskan Woodturners Association.

AAW Permanent Collection



Secret box by Allan Batty of Buxton, United Kingdom. Man-made ivory; 2x2".



Natural-edge bowl by Bob Stocksdale (deceased). Black acacia; 4½x7".

When the AAW moved into larger offices in the historic Landmark Center in St. Paul in 2004, the association added a much-anticipated 2,400-square-foot gallery. Once the gallery was in place, the plans to collect and house a world-class woodturning collection began to take shape.

Phil Brennion, AAW president at the time, undertook the task of contacting turners of note to ask them to make and provide signature pieces for the AAW permanent collection. To date, pieces from the estates of Rude

Osolnik and Bob Stocksdale as well as a number of noted contemporary studio turners have been donated. Shown here is some of the work acquired.

"My goal is to get the AAW the finest collection in the world," Phil said. With Phil's effort, progress is being made, and there is little doubt that his objective will be attained.

Having a collection of this caliber will be a tremendous asset to the AAW and provide quality work for galleries and museums seeking a woodturning exhibition. The first such exhibit took place in early 2006 at the Dairy Barn

Cultural Arts Center in Athens, Ohio. Shows like this and many future ones will become a vital part of the AAW program. In addition, the exhibits will provide good public exposure for both woodturning in general and the AAW specifically.

When the AAW holds its 25th-anniversary symposium in St. Paul in 2011, the AAW permanent collection will be on display in all its glory at the AAW Gallery.

For more information, contact Phil Brennion at philb@northlink.com.



Ornamental-turned lidded box by Gorst duPlessis of New Orleans. Red jarrah and ebony; 7¼x3¾".



"Winged Vessel #377" by Melvyn Firmager of Wedmore, United Kingdom. Madrone; 7½x5".



Lidded box by Bonnie Klein of Renton, Washington. Boxwood and ebony; 1¾x2½".

Photos: Tib Shaw/AAW staff

Seven-piece set of nested bowls by Mike Mahoney of Orem, Utah. Western maple; sizes range from 11x9½" to 1x2¾".



Puzzle motif vessel by Art Liestman of Coquitlam, British Columbia. Maple burl and ebony; 6¾x5¾".

Closed-end pen

Sterling Instrument

If you're ready to depart from the kit routine, here's a distinctive fountain pen with a classy sterling-silver band.

By Richard Kleinhenz

In the last few years, closed-end pens have become popular with penturners.

The techniques are not new, but they are not widely known in the penturning community. The 7mm closed-end pens (desk pens) have been around for decades, but you can't turn today's popular larger pens with the same methods.

This style of pen provides an additional challenge of mounting the blank on the lathe. Today, fixtures for turning closed-end pens are easy to acquire. See additional details in the sidebar on *page 31*.

The project shown here offers the additional challenge of incorporating a sterling-silver ring as a centerband, as detailed in the sidebar *opposite*.

Design from the inside

The Little Havana uses a short main body tube. To turn a full-size pen, you'll need to order replacement tubes that fit its cousin,

the Havana (or the El Presidente from Arizona Silhouette), which is a rollerball. (Of course, you can complete the pen as a rollerball.) Alternatively, you can use the short Little Havana tube up front, a smaller tube further down, or even no tube. Incorporating the long rollerball tube is the least complex design plan.

Because you will not use the stock finial, you have to make room inside the pen body to accommodate a spare cartridge or a conversion pump. For the most flexibility, design a pen compatible with the larger and popular Waterman cartridge.

Be sure to dry-assemble the parts and take a measurement, as shown in **Photo 1**. For length, the longer Schmidt premium conversion pump is used (see **Resources** on *page 31*). Here, the required drill depth is 2.75". For the diameter, the 0.300" cartridge requires a #N or $\frac{15}{64}$ " bit.

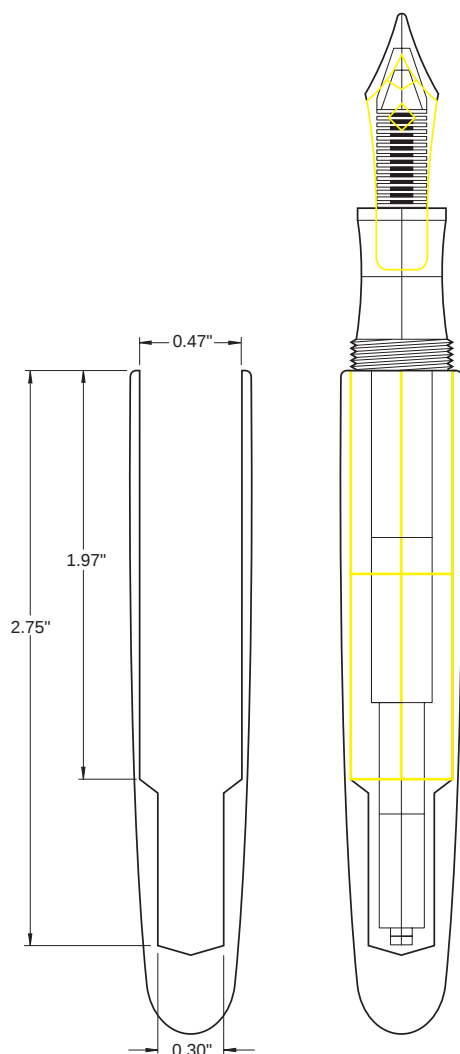


Prepare the blanks

For the main body, you need a 3"-long blank. This allows for a minimal $\frac{1}{4}$ " space to terminate the main barrel. The cap requires 1.97", so a standard pen blank works fine. I mark the center of the pen on the blank.

Don't get totally hung up on grain matching—often, with two diameters coming together at the pen center, it is not easy to recognize the grain match.

If you also want to turn the cap finial as shown *above*, you need an extra $1\frac{1}{2}$ "-long piece of matching stock. (Tip: It's a good idea to have an additional $1\frac{1}{2}$ " around just in case something goes wrong.) As a last resort, you can always revert to the stock finial. The pen shown *above* uses Bethlehem olive wood—one of my favorite hardwoods for expressive grain.



Search for a sterling ring

In searching the web for sterling-silver rings, I found that although there is a uniform sizing system for rings, not all sizes are commonly available. U.S. size 4 is on the large side for a pen (nominally 0.586") but is easily found (see **Resources**). After I received my order of size 4 rings, I was surprised that none of them exactly fit the size specification—they were all larger! Most were around 0.610".

The ring size must match the pen kit hardware. I chose a pen kit that has a fitting close to the ring ID. The Little Havana fountain pen kit (see **Resources**) has a fitting at the finial end.

You also could eliminate the metal fitting and transition the wood to the grip section, but I prefer metal because the cap thread will stop on the little ledge and the metal wears better. Arizona Silhouette has a similar kit (the El Toro) that also will work. Be aware that kit parts are not 100 percent interchangeable.



A conical steel round will allow you to slightly expand a sterling-silver ring.

If the sterling ring is slightly too small, it is possible to expand it a little by driving a gently tapered steel round into it, as shown *above*. If you have a metal lathe, it is easy to turn such a tool from a piece of scrap. You can purchase a similar tool at widgetsupply.com (item BCZ36).



To determine the drill depth, assemble the pump on the front section.



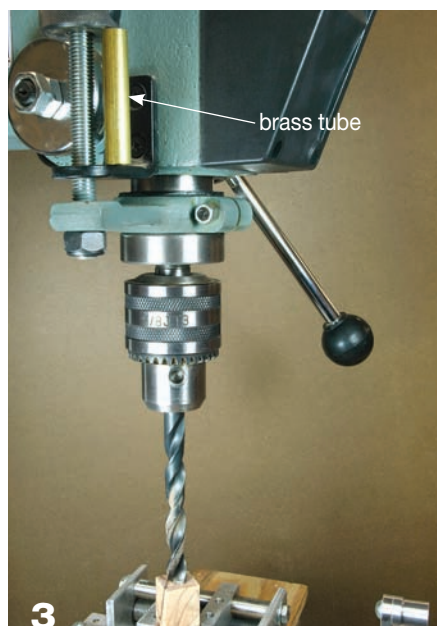
Square the blank before turning.

Drill the blanks

Cut a 2¼" blank for the cap—¼" longer than required. That way, you can stop the ¾" bit before it exits and avoid chipping the end or cracking the blank as the drill bit breaks through. Then cut the blank to a smidgen longer than the brass tube. Square the ends of the blank

using a pen mill and shim barrel that centers the 7mm shaft.

The pen mill should cut just to the brass tube, as shown in **Photo 2**. After squaring, remove any burrs from the inside of the brass tube that may interfere later with assembly.



Use the brass tube to set the drill depth.

For the main body, drill exactly to the length of the brass tube, 1.97", using a $31/64$ " drill bit. If you have a drill press with a rod-type depth stop, you can use the brass tube to set the depth, as shown in **Photo 3**. Start to drill until the corner of the cutting edge is even with the top of the blank, lock the quill, and set the depth to the brass tube.

After drilling the first hole (and without removing the blank from the vise), switch to a #N bit (or $15/64$ " if you use the mandrel-tap method). Again, lock the quill with the bit even with the top of the blank, set the depth stop to 2.75", and drill to that depth. Refer to the illustration on *page 27*.

Glue in the brass tube with epoxy, square the face of the blank using a pen mill, and remove burrs. Test the blank by inserting the brass tube (it should fit in completely) and use the dry-assembled front assembly with conversion pump inserted (without brass tube) to test that it can be completely inserted into the blank, as shown in **Photo 4**.

If everything checks out, glue

in the brass tubes using 5-minute epoxy. You can turn the blank after 30 minutes of curing time.

Chuck your pen

Refer to "Specialty Chucks for Closed-End Pens" on *page 31* for three options for chucking the pen blank. These instructions include an expansion chuck that just came on the market. (Because I chose the larger trim ring that is usually at the other end of the body, the sizing ring packaged with the chuck wasn't usable.)

Whichever method you choose to hold the pen blank, you still must attach the blank to your lathe. Some penturners use a Jacobs drill chuck; others prefer a 4-jaw scroll chuck with #1 jaws. I like a Beall collet chuck with appropriate ER32 collet. Any method that produces a runout of less than 0.003" is acceptable for penturning.

Turn the body

You can turn a bushing to fit on either the expansion mandrel or the pin chuck. I prefer to use calipers. The diameter of 0.610" is taken off the trim ring. Make sure you choose and then measure the larger of the trim rings in the kit.

You need to mark the end of the internal brass tube and make sure you leave sufficient wood at that spot for strength. I like to leave around 0.040" so the diameter needs to be no less than 0.550".



Dry-fit the pen parts to test the drill depth.



Measure the thickness at the end of the internal brass tube to avoid breaking through on the blank.

Put a spare tube lined up with the open end on the tool rest to find the end of the internal brass tube, as shown in **Photo 5**. Use a skew on the final cuts to produce a surface requiring little sanding.

Turn your favorite pen shape. I favor a classic slightly tapered, rounded-over shape.

The simplest, most forgiving way to round the end is using a diamond-point tool. I like the ability to swing the tool through the arc without repositioning the tool rest, as shown in **Photo 6**. A spindle gouge or skew also works for this cut.



Using a diamond-point tool is an easy way to round over the end of the main body.

Finish the body

Check the body over carefully for blemishes that require filling. If there are no defects, sand with appropriate grits to 400.

With the lathe running at about its slowest speed, rub thin cyanoacrylate (CA) into the grain as a filler using the same sheet of 400-grit

sandpaper—the dust embedded in the sandpaper mixes with the CA to fill tiny cracks or open grain.

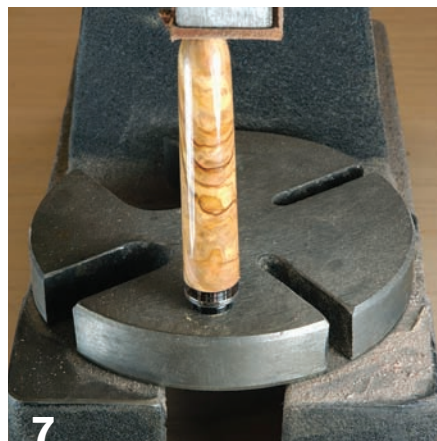
Accelerator sets the CA quickly.

Using a fresh sheet of 400-grit sandpaper, sand back the first CA application to bare wood. This produces a hard, smooth surface that is an excellent base for finish.

Spread thin CA on with a poly-bag covering your finger and hit it with accelerator; repeat three more times. Then smooth the surface, scraping with a skew laid flat on the tool rest. Look for nearly the entire shiny surface to disappear—the pen surface should be a uniform gray.

With 400-grit sandpaper, sand until all shiny spots disappear. Follow this with Micro-Mesh 1500, 1800, 2400, 3200, and 4000. Finally, take the mandrel to the polishing wheel charged with white diamond, and polish to a beautiful shine.

With a $\frac{1}{16}$ " parting tool, square up the shoulder of the body that the trim ring sits against.



Assemble the main body using soft leather to protect the finish.

Assemble the pen

Use extra care because you will apply clamping force directly on wood, not a metal fitting.

As shown in **Photo 7**, a piece of leather covers the anvil of the press.

Make sure there is no burr on the brass tube or glue inside that may interfere with the fit. It is much better to have a loose fitting in the brass tube and use a little epoxy than to have to apply excessive force and risk damage to the pen.

Screw the grip section into the center coupling and push it on by hand, aligning the nib with the pen's best grain. Carefully remove the grip section without disturbing the center coupling and press the fitting home.

Turn the cap

Turn the cap on a mandrel, using bushings. Turn the clip end of the barrel to the bushing; turn the centerband end to the outside diameter of the sterling ring.

The ring will sit on a tenon. To meet the square shoulder without a gap, sand the face of the ring carefully on a flat surface, as shown in **Photo 8**. If the thickness of the ring is not entirely uniform, roll over the wood at the shoulder, and create a "V" at the joint to hide the imperfection.

The width of the tenon accepting the ring is important. The ring should protrude beyond the wood



For a seamless transition, square the ring on a piece of sandpaper.

just enough to cover the trim ring when the pen is closed. This is 0.080", so subtract that from the width of the ring to arrive at the tenon width.

Specialty tools



Some tools specific to penturning are essential, and some just streamline tasks. The photo above shows several. An **insertion tool** (1) is optional but nice to have—it keeps glue off your fingers when adhering the brass tube into the pen blank. A **deburring tool** (2) removes the burrs from the brass tube edge, which are often present after squaring. It also creates a little chamfer that helps during assembly. **Shim tubes** (3) turned from scrap stock guide the pen mill's centering shaft, assuring a square face. Each tube size requires its own shim tube. The **pen mill** (4) allows you to get the face of the pen barrel absolutely square to the axis of the pen.

Centerband variations

The centerband does not have to be a sterling-silver ring—you can find other suitable centerbands in many catalogs. You also can turn your own from aluminum or wood using any number of decorative techniques. Or, turn both barrels closed-end, omitting the clip. There are other pen models that lend themselves to this variation; it works best when there is a separate, internal plastic cap thread.



9 With a skew, turn a gentle curve.

Begin turning the barrel to match the ring diameter. Use your calipers to size the tenon for a slip-fit. Leave the tenon just a little short so you can square the cut after applying finish.

Add a gentle curve down to the clip-end bushing, as shown in **Photo 9**. Sand and finish, making sure to preserve the shoulder. After sanding with 2400 Micro-Mesh, square the final cut on the tenon.

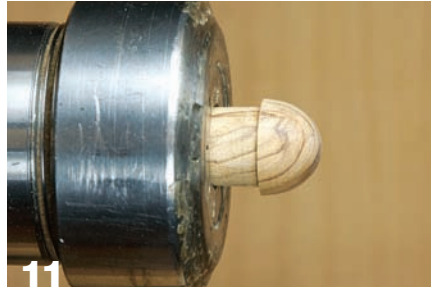
Turn a wood finial

The wood finial is optional. Mount the 1½" long cutoff in a scroll chuck with spigot jaws. The idea is to turn a ⅜"-long tenon to insert into the cap's brass tube plus a ½" waste piece for holding the finial after it is reversed.

First, drill a hole to make room for the pen nib. Determine the depth by dry-fitting the cap onto the pen. Drill a ⅜" hole the same depth as the tenon (⅞" deep here), as shown in **Photo 10**. Use the brass tube to size the tenon diameter.



10 Drill and turn a wood tube for the finial.



11 Chuck the tube and turn the finial to shape.

Now, switch to the Beall chuck with an appropriate collet and hold the finial reversed. Shape it, using calipers for sizing, as shown in **Photo 11**. Try to match the slope of the cap tube for a continuous look, sand, and finish. End with a squaring cut at the shoulder. Then part off the ½" waste piece, leaving a ⅜" section to glue into the tube.

Assemble the cap

Slip the clip onto the tenon, then glue the finial into the cap tube using epoxy. It's a good idea to bend the clip-mounting ring a little so the clip just touches the body without tension. A quick-grip clamp applies gentle pressure while the glue cures without marring the finish.

Next, glue the sterling-silver ring onto the tenon with epoxy.

Finally, glue the internal threads into place. Note that one of the differences between the Little Havana and El Toro models is the cap thread: The Little Havana uses a 4-lead thread (four possible rotational alignments between cap and main body); the El Toro uses a single-lead thread. If grain alignment matters a lot—such as in a glued-up blank with a pattern that goes through both blanks—the El Toro is a better choice because the single-lead thread will always align the same way.

Apply a small amount of epoxy to the inside of the cap's brass



12 Assemble the cap threads.

tube. Screw the black cap threads tube onto the pen (the grip section and nib may be removed to avoid getting glue on them). The reduced-diameter end faces the cap, as shown in **Photo 12**. Apply a small amount of epoxy to it also. I try to make sure I have some glue in the circular grooves, too, since surface glue will likely be pushed off. Align the cap to the pen where you want it and push the two together. If the inside of the brass tube was clean, hand pressure should suffice.

You may be able to make a correction by turning the cap clockwise to improve alignment. Carefully unscrew the pen and wipe off any epoxy that may have been squeezed out.

Resources

- Little Havana pen kit (woodturnerscatalog.com, item 050-0320) or El Toro pen kit (arizonasilhouette.com, item BHW-512)
- Havana brass tube (woodturnerscatalog.com, item 050-9181) or El Presidente brass tube, item BHWT-526)
- deburring tool: machine-shop supply houses or use-enco.com
- Ring sizer (widgetsupply.com, item BCZ36)
- Schmidt premium conversion pump (arizonasilhouette.com, item BHW-710)

Penturner Richard Kleinhenz (richk@beautifulhandmadepens.com) lives in Wappingers Falls, New York.

Specialty Chucks for Closed-End Pens

The primary challenge in producing closed-end pens is securing the parts for turning. With a standard pen blank, bushings at each end of the mandrel keep the blank centered. Tighten the mandrel nuts and presto! You have friction and drive.

But that won't work when turning a closed-end pen, which requires an internal drive.

Here are three ways to mount a closed-end pen. The fixtures are shown in the photo *above right*: pin chuck and pin, tap mandrel, and homemade and purchased expansion chucks.

Whichever method you choose, light cuts with a sharp tool allow you to work without a support on the outboard end. You can support the outboard end with a revolving center. However, this creates a dimple you'll have to remove later.

Pin chuck

The pin chuck is not new, but it was introduced to penturning enthusiasts just a few years ago. A few sizes are commercially available from pen suppliers, but it is easy to make your own.

A pin chuck consists of a piece of steel rod with a machined flat. The diameter of the rod must fit the brass tube exactly. Drill rod is available in many sizes but often needs to be reduced a little to fit the brass tube exactly. You can accomplish this on your lathe with a file or sandpaper; the rod shouldn't be too loose or it will not hold well. Create the flat spot with a grinder and file.

For the pin, a piece cut from a nail will do the trick. The depth of the slot needs to match the diameter of the pin. The pin can be around 1/8" in diameter and 3/4" long, with the slot 1/2" from the end of the chuck. None of these dimensions are critical.

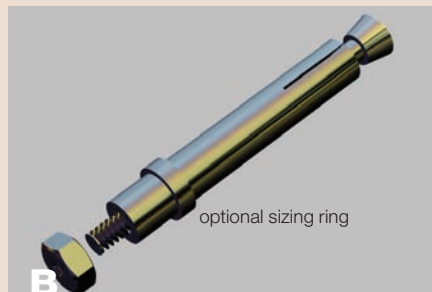
When you slip a brass tube over the pin and chuck, and twist the brass tube, the pin acts as a cam and locks the tube in place, as shown in **Drawing A**.



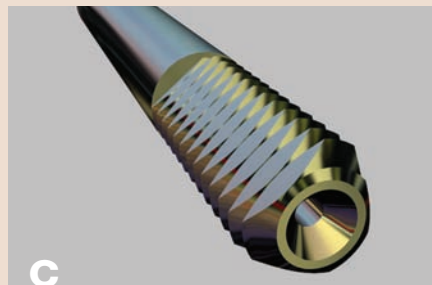
Fixtures for turning closed-end pens: pin chuck (1), home-made expansion chuck (2), tap mandrel (3), and commercial expansion chuck (4).



Pin chuck



Expansion chuck



A standard pen mandrel converted into a tap mandrel



Tap mandrel

Expansion chuck

A few months ago, expansion chucks became available for popular pen parts, including the Havana kit used for this project. You simply slip the glued-up pen blank onto the mandrel and tighten the nut, which draws a cone into the far end and expands the diameter slightly. This action solidly locks the pen blank into place.

Drawing B illustrates an expansion chuck.

This is by far the most secure method of mounting, and I recommend it for the several kit models available (\$18–\$20).

Modified pen mandrel

For this application, the Berea B mandrel works better than other commercial mandrels because it uses a coarser thread (1/4-20) than most other mandrels. Given a choice, I prefer the Berea B for all pen projects because it has a larger diameter and is therefore a little stiffer.

To modify the mandrel for closed-end pens, grind three flats on the threaded end, creating a tap, as shown in **Drawing C**.

Start by drilling for the brass tube as required by the pen kit. Without removing the blank from the vise, drill the extension hole required for a fountain-pen conversion pump or a rollerball refill; a 15/64" bit is ideal. Then screw the mandrel into the extension hole. Support the open end of the tube with a bushing and thread the tap mandrel directly into the drilled hole, as shown in **Drawing D**. Chuck the parts and begin turning. The mandrel, threaded into the pen blank, drives it securely.

The nice thing about this method is that it's universal—all you need is one bushing of the right size for the pen kit and a 15/64" blind hole to thread into. I use this method to get turning quickly with a new pen setup.

Because of the smaller (15/64") diameter of the extension hole, you will have to enlarge the hole slightly after turning to make room for the spare cartridge.

—Richard Kleinhenz

Resources

- Drill rod to make your own pin chuck: use-enco.com
- Commercial pin chucks: mannmadecreations.com
- Expansion chucks: arizonasilhouette.com

A better way to sharpen gouges

Sharpening

demystified

By Kirk DeHeer

Quite possibly, you've given up on your grinding jig for producing consistent bevels on your gouges. Here's a reliable method that will get you back to the lathe—with tools you can control.

I've been fortunate enough to meet many of the world's best-known woodturners when they've passed through Provo. Because I'm a self-proclaimed tool freak, I've examined their tools and watched their every move at the lathe.

Most of the turners I've met are freehand sharpeners, as I was when I started assisting them at workshops and demonstrations.

That all changed when Dale Nish asked me to assist him in a beginner's class. Because Dale is a freehand sharpener, he asked me to demonstrate sharpening jigs. And he gave me 30 minutes' notice!

Oh my gosh—that was all new to me. I could quickly see that the bowl gouge would be the hardest tool to sharpen with a jig. So I grabbed my bowl gouge and started to set up the jig.

As I remember, the demonstration went well, but

there were questions from the class. Many of them had tried to follow the instructions that accompanied the jig, but my setup wasn't anything like their instruction sheets recommended.

Adjust your thinking

As I researched sharpening jigs, I realized that the control leg did not set the bevel angle like I thought but adjusted the *angle* of the grind on the gouge wing.

The first major hurdle is that the instructions packaged with the Wolverine jig and similar systems confuse new woodturners and experienced turners alike. The side grind is not the *length* of the wing (how far the grinding extended), as the packaged instructions lead you to believe. Rather, the side grind is the *angle* at which the wing is ground.

Although the great turners have different preferences for the bevel angle, there is one common denominator: The bevel of the tool follows around the side to the wing. Unfortunately, if you follow the directions packaged with the sharpening jigs, the wing angles are much steeper than the nose angle. It's no wonder great instructors direct students away from sharpening jigs.



What goes wrong

I bet this has happened to you: You introduce a straight and extremely steep side grind to the work without any support (steel in contact with wood), and the piece grabs the wing and pulls it into the wood. Almost instantly, the gouge rolls over, allowing the edge to dig deeper into the wood and “Bang!” Another catch. Then you put the tool on the shelf because it’s hard to control.

Don’t quit—there’s a way to get comfortable with grinding your turning tools—and a better way to grind your gouges.

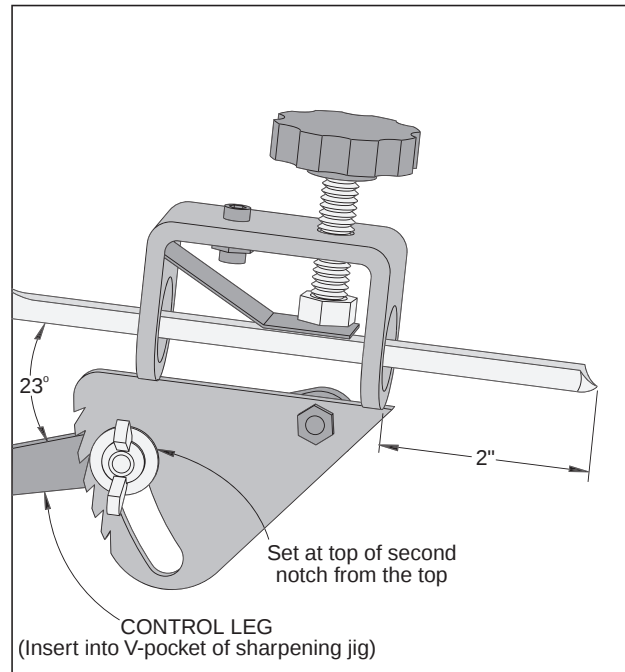
To be sure, freehand grinding is faster. But until you acquire keen grinding skills, the method I’ll outline here will help you reduce the variables at the grinder and help you produce a wing (side grind) that matches the nose.

The process *below* works with all of the popular sharpening jigs I’ve found on the market, including the Wolverine sharpening jig and the Tru-Grind jig.

A proven method

Place the flute of the gouge against your grinding wheel and get the shape (profile) that you want. Remember that a straight edge on your flute is more aggressive than a curved edge (convex), which is less aggressive and easier to control.

Now you’re ready to set the control leg on the tool holder. The farther you move the control leg forward (toward the wheel), the more side grind you remove and the steeper the angle. The farther back you move the control leg (away from the wheel), the less side grind you remove.



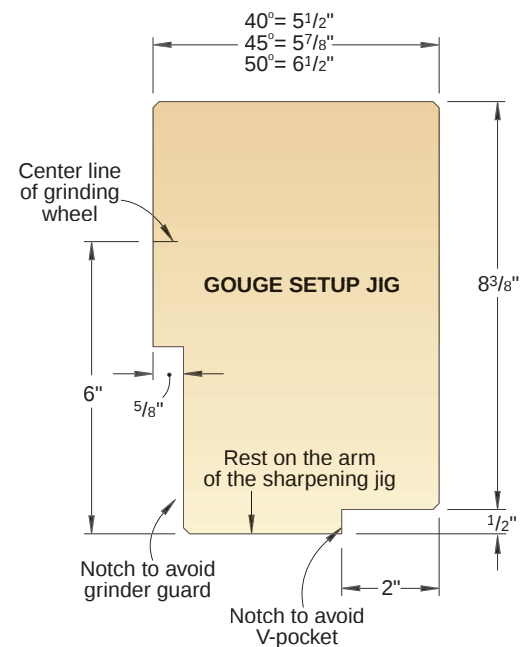
This was the hardest concept for me to grasp and is how most woodturners stray off course with sharpening jigs.

Set the side grind

I believe the control leg should be set at 23 degrees from the bottom of the gouge flute to the top of the second notch on the Wolverine Vari-Grind jig, as shown *above*. You can set this angle and never have to move it again.

Now, slide your gouge into the jig, as shown *above*. To quickly set the jig to 2", use the notch on the **Gouge Setup Jig**, shown at *right*, or mount a 2" set block on your grinder base.

This 2" setting is key so you can get consistent sharpening. If your control leg and the length of the tool are the same, you’ve set two sides of a triangle. You’re on your way! Now you just need to set the third side (the cutting edge) and sharpen without wasting time or steel.



Photos: John Hetherington
Illustrations: Roxanne LeMoine

Set the bevel angle

To set the bevel angle, make a **Gouge Setup Jig** from $\frac{3}{4}$ " plywood, as shown on *page 33*. Then use this jig to set the V-arm at the proper distance from the wheel (6" from the V-pocket to the centerline of the wheel), as shown in **Photo 1**. You may have to elevate your grinder. You can rely on this jig regardless of the size of your gouge or the diameter of your grinding wheel.

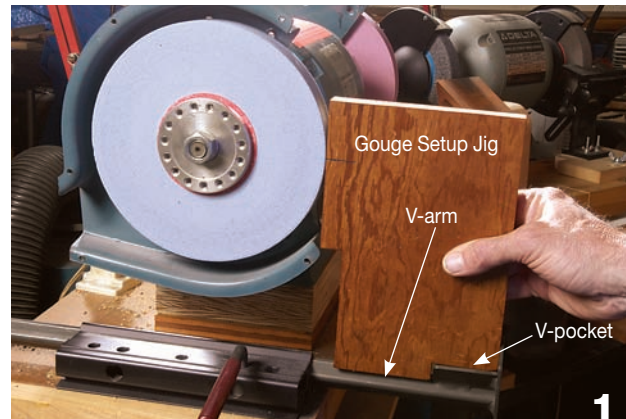
The setup jig quickly locks your grinding into a consistent bevel angle. You may wish to make three of these jigs—one each for 40, 45, and 50 degrees (40 degrees is the most aggressive; 50 degrees gives you the most control).

Now, place the control leg in the V-pocket, as shown in **Photo 2**. Start grinding one wing, then pull the tool away from the wheel and grind the other wing. Finally, blend the wings with the nose.

In the turning classes I teach in Provo, I recommend a 50-degree angle as the best starting point for tool control, as shown in **Photo 3**. If you get confused about sharpening angles, think of 90 degrees as no sharpened angle and a really steep angle as 30 degrees. A metal protractor like the General model shown at *right* sells for about \$11. It's a good investment.

Common mistakes

- **Not setting up the jig the same way each time.** The quicker you learn to produce a consistent grind, the faster you'll advance your skills. This method will get you back to the lathe quickly.
- **Over-grinding the nose of the tool.** Most new turners start grinding at the nose of the tool, then grind one wing, hit the nose again,



The Gouge Setup Jig will help you set the V-pocket at the proper distance from the grinding wheel for consistent bevels.



For best control of sharpening, hold the Vari-Grind in your hand. Avoid attempting to control by gripping the tool handle.



An inexpensive metal protractor will help you measure your tool bevels.

grind the other wing, and finally return to the nose. This means you spend too much time on the nose and end up changing the profile. Don't do that! Follow the step-by-step instructions *above*.

- **Grinding in one sweep.** When you do this, you have a tendency to hesitate as you transition from the wing to the nose and from the nose to the wing. This causes a bird-beak grind, which is challeng-

ing to control.

- **Failure to keep the tool moving.** You will create flat or straight spots if you over-grind in one area.
- **Gripping the tool handle.** For better control, grip the tool at the grinding jig when you sharpen, as shown in **Photo 2**.

Kirk DeHeer (kdeheer@cs.com) lives in Provo, Utah. He is a full-time woodturner and demonstrator.

The turned salt box

Memories of the Past

By Phil Brennon



From Dickens characters to architectural styles, salt boxes are lasting references to bygone days. In the 1800s, salt boxes could be found in the kitchens of most every home in America. That's where you got that "pinch of salt" to flavor a stew, or rub on a roast.

Today, these quaint relics are found in antique stores and copies are reproduced for kitchen specialty shops. Most salt boxes were rectangular in design, as the turned salt boxes required more skill. But, this reproduction of the salt box my grandmother brought from Germany will give you the opportunity to create your own family heirloom.

Although these boxes aren't difficult to make, they'll challenge your turning skills. And you'll certainly know if you're worth your salt when it's all said and done.

Get started

For lathe tools, you will need a $\frac{3}{4}$ " spindle roughing gouge, $\frac{3}{8}$ " bowl gouge, $\frac{1}{2}$ " skew or $\frac{1}{2}$ " pyramid (point) tool, $\frac{1}{2}$ " roundnose scraper, and parting tool. For the lathe, you'll need a 3" faceplate. You'll also need a bandsaw for several steps.

Although you can turn this project from any wood species, it's important to choose a wood that is dry and free of checks for both ease of shaping and a stable lid.

I prefer short trunk and limb lengths of dead but standing trees. Where I live in central Arizona, elm (shown above *right*), small pinion, and juniper are my favorite species because they dry relatively evenly, have interesting grain, and are plentiful. (Dead standing trees can be a great source of check-free woodturning blanks since the timber tends to dry slowly when left standing.)

Although rarely used today for salt, the antique maple box, *left*, still serves as a handsome holder for items like keys, change and other small items. Both salt boxes are based on an original salt box brought to the U.S. by the author's German grandmother.

The finished box size, including top, is determined by taking into consideration the available swing of the lathe to make the decorative back plate. For my 16" lathe, I chose a $5\frac{1}{2}$ " box size. This takes into account the turned element on the back plate, measuring about $3\frac{1}{2}$ ". (Box height of $5\frac{1}{2}$ " plus hinge area of $\frac{1}{2}$ ", added to one-half the diameter of the turned element, $1\frac{3}{4}$ " equals $7\frac{3}{4}$ " for a lathe with a 16" swing.)

Begin with a 7"-diameter log about 9" long. With a bandsaw, cut the ends parallel to each other. Then cut a few $\frac{1}{4}$ "-thick end slices and test the soundness of the stock. Try breaking the slices with a snap between your hands; if the slice snaps easily, so may the lid.

Rough out the blank

Remove loose bark that might fly off during the rough-out, then cut off protruding knots and limbs.

With a compass or centerfinder, mark the center of the blank ends. With a mallet, set the spur drive into one end of the blank. By setting the spur with a mallet, you assure a good bite into the hard, dry end grain. This readies the piece to be placed between centers.

Mounting the blank between centers instead of directly onto a faceplate gives you the ability to shift the piece side to side. This can be useful if you need to cut more material off a side (for example, a side with an imperfection) or keep a desirable area from being cut (grain with visual interest).



Above: To close the end grain on the lid, invert the $\frac{3}{8}$ " bowl gouge (flute down) and cut up close to the tail center. If you rub the bevel, this cut will produce a fine thread of shavings while it closes the end grain. This will reduce the your sanding effort for a smooth finish.

Right: Choose highly figured grain to accent the lid. This elm shows off the growth rings well.

With the piece centered and mounted, use a $\frac{3}{4}$ " spindle roughing gouge to turn a $4\frac{1}{2}$ "-diameter cylinder. Work the tool off the ends in each direction and check the diameter frequently with calipers.

Close up the end grain

Using a $\frac{3}{8}$ " bowl gouge and a peeling cut, true the tail center end of the blank so that it's flat. Mark the end with a pencil as the piece spins, estimating a 3"-diameter circle. This circle becomes a reference to help center the 3" faceplate.

Using $1\frac{1}{4}$ " coarse-thread screws, secure the faceplate onto the blank, thread the mounted blank onto the spindle, and secure the tail center for support. If the blank spins off center, true it again.

To reduce sanding in later steps, close up the end grain on the box lid. To accomplish this, use a $\frac{3}{8}$ " bowl gouge and an inverted finish cut to cut across the end grain, as shown in **Photo 1**. Cut right up close to the tail center. The fine shavings peeling off the gouge exhibit this cutting technique.



"Plenty of subjects going about, for them that know how to put salt upon their tails. That's what's wanted. A man needn't go far to find a subject, if he's ready with his salt-box."

—Uncle Pumblechook,
Great Expectations
by Charles Dickens

Shape the lid

To turn the salt-box lid, mark a line $\frac{3}{8}$ " down from the tail-center end.

Using a $\frac{3}{8}$ " bowl gouge, shape a small roundover just ahead of the line and toward the tail center.

Then using a parting tool, make a cut at the line, stopping when you have about $\frac{1}{2}$ " of wood left for support. This groove will allow you to sand and round the entire edge of the lid, progressing through 120-, 180-, 220-, and 320-grit sandpaper.

With the edge sanded, back off the tailstock, invert the bowl gouge, and face off the last part of the lid. Sand the top, then saw through the tenon to separate the lid. Sawing helps reduce tear-out near the pith in soft woods, as shown in **Photo 2**. Remove saw or parting marks on the underside of the lid with a random-orbit or finish sander.

Form the salt box

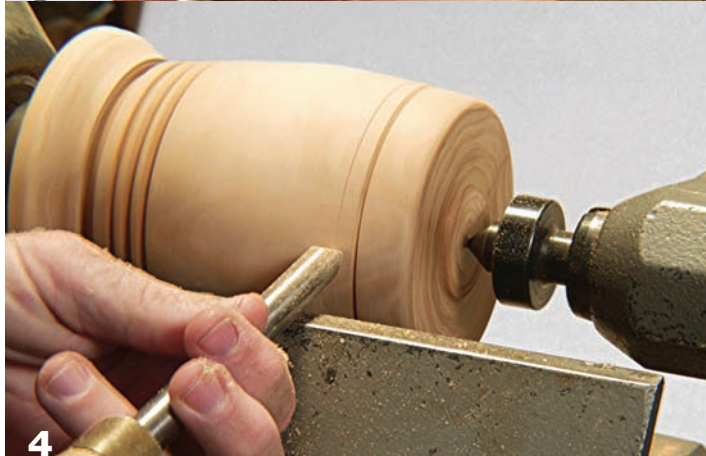
After resecur ing the tail center, true up the parted end and close up the grain with a $\frac{3}{8}$ " bowl gouge. Mark the bottom of the box with two pencil lines: $4\frac{3}{4}$ " from the tail-



With a $\frac{3}{8}$ " bowl gouge, cut from the midline to the gauging cuts.

With a pyramid tool or skew, make two decorative beads close to the bottom and another set near the top of the box.

Hollow out the salt-box body using a $\frac{3}{8}$ " bowl gouge and pull cuts. See page 39 for more details about this technique.



center end and a midline ($2\frac{3}{8}$ ") that divides the box blank at the center. Make two $\frac{3}{8}$ "-deep gauging cuts with a parting tool, one cut at the top end and one at the bottom of the box body.

Use a bowl gouge to turn the barrel shape of the box from the midline toward each gauging cut, as shown in **Photo 3**.

After turning the box body, sand the piece smooth, progressing through the sandpaper grits noted previously. Using a skew or pyramid (point) tool, make two decorative beads close to the bottom and another set near the top of the box, as shown in **Photo 4**.

Hollow the end grain

Back off the tailstock, then use a bowl gouge to cut a small dimple

at the end center point. This enables straight drilling of a hole into the blank. Mount a $\frac{1}{2}$ " bit in a Jacobs chuck, then bore a hole within $\frac{1}{2}$ " of the bottom of the box. Measure and mark the bit to prevent drilling the hole too deep.

Hollow out the box. I prefer a pull cut with a $\frac{3}{8}$ " gouge, as shown in **Photo 5**, which works extremely fast and clears shavings down the flute. To learn more about this technique, see the techniques sidebar on page 39.

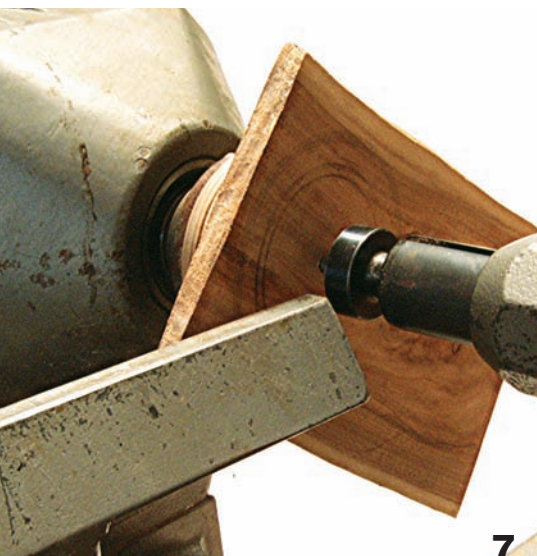
Reduce the wall thickness to about $\frac{3}{8}$ ". (You need enough wall thickness to later cut a flat into a side of the box.) When you're satisfied with the hollowing, sand the interior to 120 grit and turn down the tenon to about $\frac{1}{2}$ ". Then saw through the remainder of the tenon.

Turn the decorative plate

From matching stock, cut a $5 \times 8 \times \frac{3}{8}$ " slab, then sand the board smooth. On one of the board, scribe a $4\frac{1}{2}$ "-diameter circle. Use this circle as a guide to center a 3" faceplate and attached hardwood wasteblock.

From brown paper (a paper grocery sack is a good choice), cut a 3"-diameter circle. Apply a liberal amount of yellow woodworker's glue to the wasteblock and the decorative plate. Slip the brown-paper circle between the two glued surfaces, and clamp. (Later, the brown paper will allow easy removal of the decorative plate from the wasteblock).

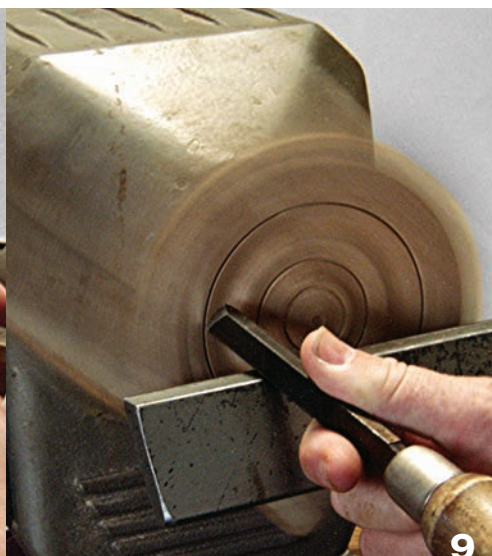
After the glue is dry, mount the board to the lathe and bring up the tail center. Use the tail center to mark center, draw a $3\frac{1}{2}$ "-diameter



7



8



9

Left: Mount the decorative plate off center; your lathe swing will determine the maximum size. Center: Cut the coves with the roundnose scraper handle slightly elevated. Right: Detail the coves with a skew (long point down). Take extra care with the detail work, as this area will be a focal piece of the salt box.

circle on the board. Check the layout, as shown in **Photo 6**.

Mount the plate off center as shown in **Photo 7**. With a ½" roundnose scraper, cut three shallow coves in the circle as shown in **Photo 8**, then detail the cuts with a skew, as shown in **Photo 9**. Separate the board from the wasteblock with a few quick raps to a chisel or hardwood



6

Lay out the body and lid on the decorative plate, then pencil a line for a bandsaw cut.

wedge at the glue line.

Bandsaw the arc lines, then sand the edge with 120-grit sandpaper. Drill a ½" hole in the center of the plate, which you'll later use to hang the salt box on the wall.

Cut a flat on both pieces

With a bandsaw, cut a flat portion on the turned body and lid; this allows you to mount these two pieces to the decorative plate. As a guide, tape a square of cardboard to the body, as shown in **Photo 10**. When you finish cutting the box, there will be an oval opening in the cut side, and a small bridge of wood at both top and bottom.

Position the lid on the body with a ⅜" overhang. Tape the cardboard guide to the lid, then remove the lid from the body. Bandsaw the lid.

Assemble and finish

Position the body on the plate, allowing space for the lid. Using a pencil, outline the shape of the body and lid on the plate and a transition to the turned detail. Bandsaw the shape and sand.

Secure the box to the plate with



10

With a bandsaw, cut off a portion of the box where it will attach to the decorative plate. Use a cardboard guide taped to the body.

yellow woodworker's glue and and two ⅛" dowels through the thickest part of the flattened wall.

Create two hinges with a pair of ½" brass screw eyes in the lid and screw hooks in the decorative plate. Use needlenose pliers to close the screw hooks.

Apply a finish of your choice. I prefer a penetrating oil to bring out the color and grain in the wood.

Phil Brennion (philb@northlink.com) is an *American Woodturner* contributing editor. He lives in Chino Valley, Arizona.

Hollowing End Grain with a Pull Cut

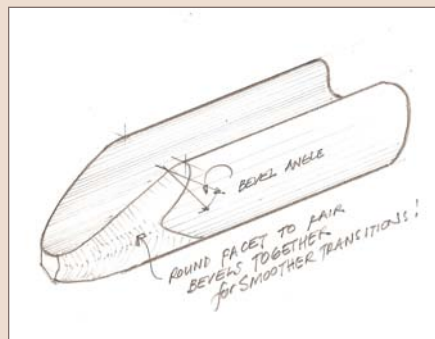
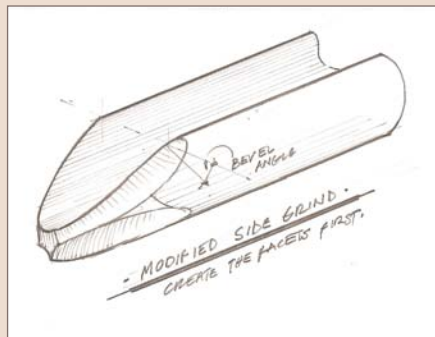
Ask a woodturner what's his or her favorite end-grain hollow turning tool, and you're most likely going to get answers like, my Ellsworth or Jordan tool. Or maybe they may be fond of a Stewart, McNaughton, Lea, or Jamieson device. But seldom will you hear "my bowl gouge." It seems few turners use the $\frac{3}{8}$ " bowl gouge to actually hollow turn.

Although this technique won't replace deep boring bars or crook-neck scrapers, with a bit of practice pull cuts will certainly streamline the process of cleaning out the shavings.

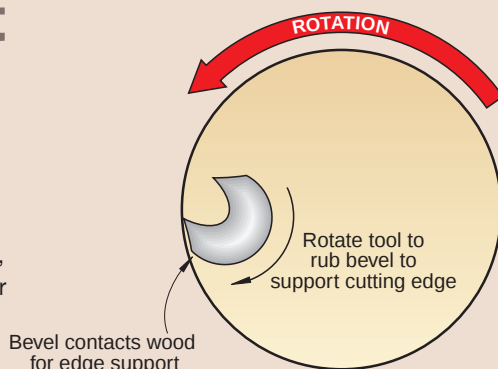
Here's what works for me.

1. Modify your gouge. You need to grind over a secondary bevel on the side of a traditional gouge.

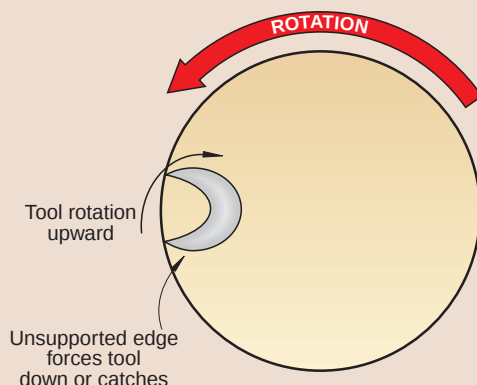
Starting at the tip, grind 30- to 40-degree bevel the entire length of your cutting edge as shown *below*. This allows the tool's bevels to instantly contact the wood when you roll the tool into position to cut.



Illustrations: Angelo Iafraite



PULL CUT WITH MODIFIED GOUGE



TRADITIONAL GOUGE

Illustrations: Roxanne LeMoine

2. Start in a scraping position. If you present the tool to the wood at 90 degrees, the two edges are just scraping; this is the safe presentation mode. Start with the flute directly at 9 o'clock inside the vessel. Scrape for just an instant or you will quickly dull the edge.

3. Roll the tool by turning it away from you. This immediately puts the cutting edge and bevel in contact with the wood, as shown in "Pull Cut with Modified Gouge." The cut is instant, but rubbing the bevel helps prevent a catch.

4. Back off the tool if the cut becomes too aggressive. By simply rotating the tool back toward a scraping position, you can control the aggressiveness of the cut—or completely stop cutting.



Even with hard and dry wood, this pull cut on a hollow vessel works well to remove shavings.

5. Give the flute room to direct the shavings. As the tool cuts, shavings will pass down the flute, as shown in the photo above. If the opening is small, pull the gouge part way out to allow the shavings to clear. Either method shouldn't require you to stop the lathe, which is a drawback of other hollowing methods.

TIPS

It's always best to practice this technique on an open bowl to learn the mechanics of this cut.

To get a reference where the flute is and when the tool is in scraping mode, use a felt-tip marker to make a black line up the shank of your gouge and in line with the flute.

—Phil Brennon

Wearable Turnings

By Tim Heil

Ready to wear your turning skill on your sleeve? Tim Heil shows you how to turn his buttons that were so popular at the AAW symposium in Louisville.



"Sherren's Sampler Button Pillow" includes 40 different buttons. Tim's wife, Sherren, provided the stitchery expertise.

Buttons are a practical turning project you can enjoy in your everyday life. They also offer an ideal use for those lovely small scraps of wood many of us find hard to throw out.

You'll grow as a turner if you accept the challenge of making buttons because they will force you to work accurately, skillfully, and on a tiny scale. Turn some buttons and you'll see what I mean.

Most of the buttons I turn are between $\frac{1}{4}$ " and $\frac{7}{8}$ " (coat buttons) in diameter. Shirt buttons have a $\frac{7}{16}$ " diameter and are $\frac{1}{16}$ – $\frac{1}{8}$ " thick. You'll need 10 or 11 buttons (counting at least one spare) for a typical long-sleeved shirt.

Get started

This is one of the simplest projects you'll encounter: You can turn a basic button with only a parting tool and a drill bit. If you add a detail gouge and skew to your tool list, the design door to countless options is opened.

For turning stock, choose a hardwood like cherry, walnut, ash, or hard maple. I find 1×1×3"

turning blocks easy to work. With good planning, you should be able to turn at least four buttons from each turning block.

Turn all your buttons from face grain; if you fail to do this, they will split down the grain. Turning end grain won't work!

For idea starters, use buttons on these pages or examples from clothing. Or, dig around in grandmother's button box—you'll find a treasure trove of examples.

Turn on a button

Mount your stock in a 4-jaw scroll chuck. Turn a cylinder to the diameter of your finished button; the buttons shown in these how-to photos are $\frac{5}{8}$ ". Then turn the face of the button to a balanced, pleasing, and functional shape, as shown in **Photo 1**.

Locate button holes (two or four holes are most common) and mark them with an awl, as shown in **Photo 2**. Use a handheld drill and either a $\frac{1}{32}$ " or $\frac{1}{16}$ " bit to create the button holes. Don't drill too deep if you plan to use your chucked stock for more buttons.

Finish turning by parting the button from the cylinder, as shown in **Photo 3**.





With a parting tool, turn the button profile. The cherry stock above is $\frac{5}{8}$ "-diameter face grain.



Use a scratch awl to lay out button holes, then use a $\frac{1}{32}$ " or $\frac{1}{16}$ " bit to drill the holes.



Use a parting tool to separate the button from the turning block. There should be plenty of stock remaining in the chuck to turn matching buttons.



Sand the back of the button on a 180-grit belt. A piece of double-faced tape will help you keep the button in contact with your thumb.

Hand-sand the back of the button to 180-grit smoothness so it won't catch on fabric. To streamline this step, slip a scrap piece of $\frac{3}{4} \times 3 \times 11\frac{1}{2}$ " pine inside a 3x24" sanding belt, as shown in **Photo 4**.

I don't sand the face of the button because I want to retain the crisp, detailed design.

Finish the button

If you customize the button with pyrography, do the woodburning before you apply finish.

The finish you choose must wash, dry, and wear well. I've had excellent results with polyurethane, polymerized oil, and Watco Gel coat.

Wipe the finish on all surfaces at the same time. Dry the buttons by resting a hole on the tip of a nail, as shown in **Photo 5**.

Tim Heil (tim@heiltruckbrokerage.com) is a member of the Minnesota Woodturners Association. He lives in Gem Lake, Minnesota.



Rest the buttons on the tips of small finish nails or tacks while the finish dries.





Historic spindle work endures

Turnings of Old St. Paul

By Alan Lacer

Take a tour of old St. Paul and walk among the one of the nation's most exemplary collection of Victorian-era homes. Here, you can feast your eyes on remarkable spindle turning that has been lovingly preserved for more than 100 years.

The exaggerated entasis on this column brings it to life. The largest diameter is just below the center with a gentle curving upwards and downwards. This restored home is on Holly Street.

More than 25 years ago, I was sitting in a Shaker meeting hall when something amazing happened. There was a turned column in the middle of the room—unusual in itself—and the more I looked at it, the more impressed I became with the turning.

Rather than just a straight line, the column's shape was a slow, asymmetrical convex curve. This was not a run of inches as you might do on the outside of a bowl or vessel, but a pleasing curve over an 8- to 10-foot span.

Since then, I have marveled at really outstanding between-center work—heresy in the turning world. Production machines, poor designs, overuse of details, and mediocre execution led many turners away from doing, esteeming, or even noticing such work. Little wonder bowls and vessels became the dominating forms of turning in the last 30 years.

Miles of Victorian homes

There is a place where you can find outstanding examples of great turning in old St. Paul—just minutes from the AAW's headquarters in the historic Landmark Center.

The Summit Avenue area near Minnesota's capitol is a showcase of architecture from the 1850s to about 1900 that includes a wide range of styles.



How could a turner not fall in love with this grouping of porch columns? Four columns like this anchor each corner of the porch on Holly Street. The upward taper contributes to the light, lifting feel a single column can't duplicate.

Preservationists bill the five miles of Summit Avenue as the longest stretch of inhabited Victorian homes in the country. This last point is significant, as the Victorian style heavily used—and at times overused—turned elements.

And if you look around in a 25-mile radius of St. Paul, you will find an amazing array of turnings—both on the outside and inside of homes and other buildings.

This region was an enclave of wood and production wood-working in the later half of the 19th century. Minneapolis had its origins in sawmilling and dominated the country for many years in the quantity of wood sawn.

In the mid-1870s, there were six woodturning shops in Minneapolis and four across the Mississippi River in St. Paul. There was even



Intricate spindles add interest to this square column from the 1870s. Notice how the corners are cut away to allow the insertion of small spindles.

one shop specializing in bone and ivory turning and one lathe manufacturer (Tannahill) during this period.

Learning by example

How can a modern turner benefit from really good architectural turnings of 150 years ago? Here's a starter list:

- entasis in columns (more on this later)
- convex and concave lines
- the power and importance of the convex curve
- creating a pleasing look from multiple elements on the same turning



This column incorporates carving at the top, giving a hint of a floral pattern or perhaps a rim of a bowl or vessel.

- carving and texturing after turning (a great deal occurred in turning, fluting, reeding, and spiraling of turned work)
- symmetry and asymmetry
- multiple turnings placed together
- the use of negative space (especially in a grouping)
- the vocabulary of turned elements (much borrowed from classical architecture)
- the play of square to round
- uncovering pleasing design ideas contained within the turnings (can you see pepper mills, vase or vessel forms, lidded boxes, and surface treatments to translate into your work?)

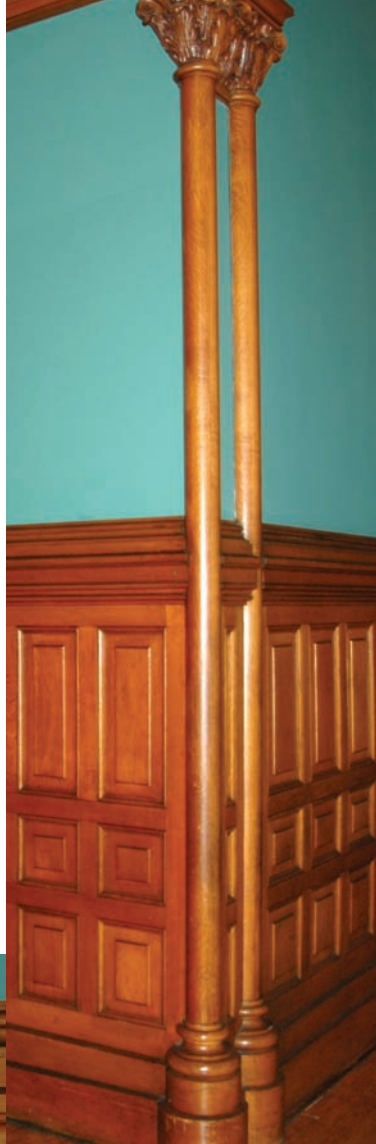
Columns

Let's start with a look at columns. In this region, you can find a large number of columns—both indoor and outdoor examples—some great, some average, some poor.

The first thing you notice is that straight columns are boring. The ancient Greeks realized this, as well as an optical illusion that occurs with a long, straight line:



In nearby Hudson, Wisconsin, these 4-foot columns harmonize with the arches on this porch. Small ball forms just below the top of each column add subtle detail.



In downtown St. Paul, the Landmark Center (home of the AAW offices and gallery) has many examples of *entasis*. These 9-foot oak columns have a slender taper and curve and fascinating scribing detail with wall panels.



Inside this 1870s house on Exchange Street, tapered oak columns trim a doorway. Carved lineal lines that flow up the column are more complex than most preserved examples.

Architectural Tours

The Minnesota Historical Society conducts walking tours of the Summit Avenue area from June through September. For more information, visit mnhs.org.

Numerous cities large and small have historic districts with Victorian homes, many with extensive spindle work. Other areas recognized for preserved Victorian homes include Colorado (of note, Georgetown and Colorado Springs), California (particularly San Francisco), Chicago, Toronto, Milwaukee, and Stillwater, Minnesota. Check with your state historical society for more details.

A Field Guide to American Architecture by Carole Rifkind (Penguin Books, 1980) provides more examples.

it appears to pull inward towards the middle. The Greeks solved the illusion by a slight asymmetrical convex curve that tapers up and down from a point below the center of a column. This process is called *entasis*.

The Romans exaggerated the concept—the Greeks strove for this concept to be almost invisible—to become a clear design strategy. The architects and/or woodturners of the St. Paul area also strove for the notion in most of the columns so lovingly preserved.

Whether they knew the his-

tory is unknown, and sometimes the notion of a continuous curve was lost—there are tapers but they seem to just be straight lines. When the turner understood the slow curve that breaks below center and tapers both upwards and downwards—well, you have something! This effect—pronounced, not invisible—adds fullness, tension, or a pushing outwards that appears to be pleasing to turners and non-turners alike. It is alive, has a motion that the eye follows, and is difficult to execute over a long length.

Balusters and newels

What of the many balusters that we find in this area? A railing, whether along a stairway or simply on a porch, could be supported in a number of ways. The balusters preserved here are like nothing you can find at today's home centers.

Some of St. Paul's balusters are plain, others are overly ornamented, and some would look boring standing alone but come alive in a grouping. On a few stunning examples, the negative space created by the shapes and spacing looks deliberate and planned.

Most balusters have squares at both ends (usually referred to as pommels) for mounting on the rails. A turner can address the transition from square to round in at least three ways: square-shouldered, rounded, or a lamb's tongue (ogee). On the last two, the pattern that is created on the square becomes a design element that can be of genuine interest when well-executed.

These balusters are worthy of study on a number of points:

- balance and unity of the piece
- perspective (is there a preferred top and bottom?)
- symmetry vs. asymmetry
- fullness and pleasing forms
- static vs. alive with motion
- the discovery of pleasing forms within this type of turning

Playing with square elements found its way into columns and newel posts (usually a large vertical turning at the end of a stair or porch railing). Sometimes the turners made shallow cuts into the squares to provide a texture or pattern.

Newel posts—sometimes oversized to call attention—dominate several homes.



What style of turnings would one of the richest men of his time request for his home? The James J. Hill Home has spiraled balusters with alternating direction on the grand staircase. The house built by the Great Northern Railroad magnate has a number of interior columns and balusters, but those in this photo were meant to be showpieces. The Minnesota State Historical Society maintains this historic home.



The small urn or vase shape on this porch rail provides a dominant element for the house. The square-shouldered pommels with beads just below the square illustrate the skill of the turner.



This curved porch on Holly Street has several strong points: the fullness of the dominant bulb form and the negative space created by the grouping.

An interior newel post at the base of a stairway can be a place for the hand to rest when ascending or descending the stairway—so touch becomes a concern. You'll see examples of a ball or dome shape placed at just the right height.

One last thing of note to be learned from St. Paul's turnings: the warmth of subtle variations within matched turnings will always fall down on one point—exact uniformity is boring. Slight variations in shape, diameter, and placement of elements add life to these hand-turned multiples.

If you have an opportunity to visit this region—or any region with classic spindle work—take the time to closely observe what yesterday's turners had to say.



Newel posts are the strong turned element on a number of the houses. In both of these examples, detailing of the pommels (square areas) add interest.



Alan Lacer (AlanLacer.com) is an *American Woodturner* contributing editor. He lives in River Falls, Wisconsin.

20 ways to master Spindle Turning

By Nick Cook

In the hands of an expert, turning a spindle looks effortless. But there are plenty of pitfalls to avoid on the journey to expertise. Here are 20 tips to help you become a spindle master.

Spindle turning may seem easy for production turners and others who have stood in front of a lathe for a few decades. Many of us simply turn on the machine, mount the blank between centers, and start cutting. Those who watch—either in demos or as students and even clients—are amazed at the speed and accuracy with which we perform what we consider the mundane task of turning spindles.

But for the beginner, there are so many things to think about!

Editor's note: Earlier this year, we published Nick Cook's article "Twenty Ways Not to Turn a Bowl." Nick received so many compliments about this article that he volunteered to write a follow-up article with spindle-turning tips.

Let's start with mounting the blank. Should we use a safety center or a spur-drive center? A two- or four-prong spur center? Should I use a mini-spur? Should it be spring-loaded or not?

See what I mean? This may be too much for the average student.

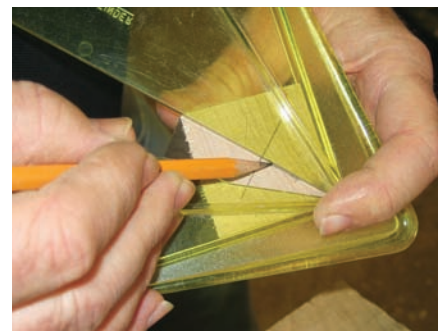
Most beginners don't really have to think about all that much. The lathe they just purchased came with a drive center and a four-prong spur center without a spring loaded center, and is large enough to drive most anything that will fit on it.

Here are some do's and don'ts to improve your spindle work.

Mount your stock

1 Choose your turning stock carefully. Avoid knots, checks, and other defects. Straight-grain blanks produce the best results. Poplar is inexpensive, easy to turn, and readily

available. For projects requiring detail, maple is my favorite light-colored hardwood; walnut and cherry are ideal when dark woods are preferred.



2 Always use a centerfinder or a straightedge across the corners of the blank to find the center. This is especially true if you are going to leave squares on the final turning. It is also necessary to make sure the blank is truly square when preparing the material. On fully rounded work, this is not as critical.

3 Never mount the blank with the lathe running.

It is dangerous and can cause you harm. Don't do that!



4 Never drive the blank onto the spur center while it is mounted in the spindle.

This can damage the Morse taper and stress the lathe bearings.



5 Never drive the spur center into the blank with a steel-faced hammer.

This will damage the Morse taper, preventing it from fitting properly. Always drive the spur with a wooden mallet, dead blow, or other soft-faced hammer.

6 Never apply excessive pressure on the blank with the tailstock.

Slide the tailstock forward, lock it in place, and run the live center into the end of the blank. Be sure to lock the quill in place once you've snugged up the tail center. At the tailstock, use a good-quality live or ball bearing center; one with interchangeable tips to accommodate different applications is worth the extra expense. A cup-shaped tip on the live center will be less likely to split smaller blanks.

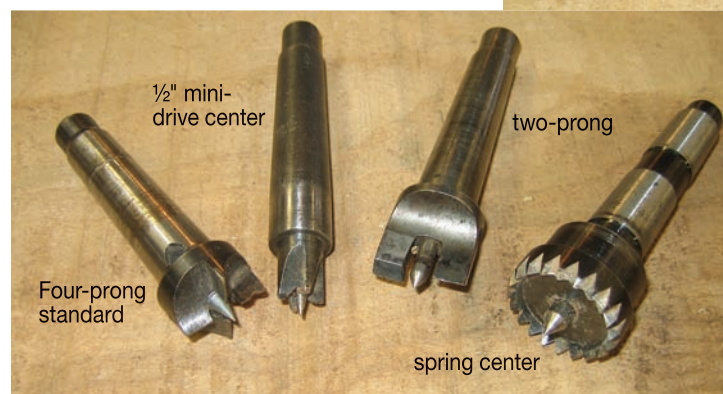
Tool-rest tips



7 Maintain your tool rest.

All turning tools are harder steel than the tool rest. Nicks and dings in the tool rest will be reflected in the workpiece. Use a mill file to keep the tool rest smooth. Some turners even wax the tool rest with paraffin (sometimes called canning wax).

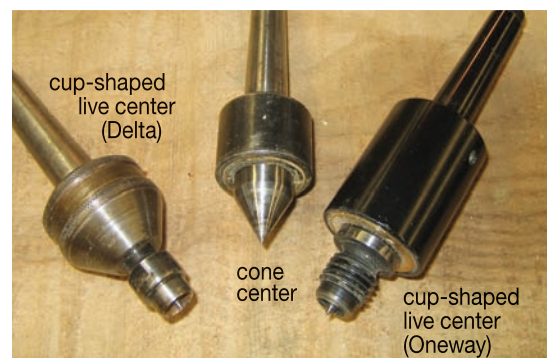
Popular drive centers



8 Position the tool rest parallel to the blank and as close as possible—1/4" is

adequate clearance. Be sure to lock the tool rest to the support and the support to the lathe bed. Always rotate the workpiece by hand before turning on the machine. No matter how many times you have seen it done in demos, never move the tool rest with the machine running. Always move the tool rest closer after removing the corners from the blank—excessive overhang of the tool will cause chatter.

Popular tailstock centers





9 Adjust the height of the tool rest to match the tool you are using. You should cut above center for most lathe tools. If you switch from a thick tool (like a spindle roughing gouge) to a thinner tool (like a skew) you will need to raise the tool rest.

Turning tips



10 Always cut downhill, from large diameter to small diameter on spindles. Attempting to cut uphill on some woods will produce disastrous results—expect a lot of catches.



11 Never work with dull turning tools. If in doubt, sharpen the tool. The skew in particular needs to be razor sharp. Honing is required to maintain the edge of the skew; other tools may be used straight off the grinding wheel. Sharpening jigs or fixtures will ensure that you get a consistent bevel angle on your tools. (See page 32 for details.)

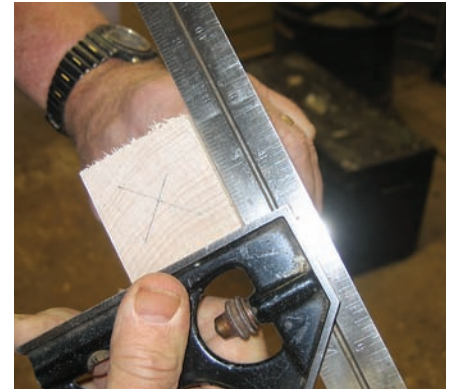


12 Never turn on the lathe without first checking the speed. Step pulleys are easy to check visually. Variable-speed lathes that utilize an adjustable pulley system do not allow you to change the speed without the machine running. Turn on the lathe before mounting the blank, adjust the speed, then turn it off and mount the workpiece. Some of the electronic

lathes are equipped with digital readouts so you can see the RPM as you make adjustments.

Here are speed guidelines (wood species and experience are key variables): For 1"- to 3"-diameter stock, I recommend roughing out at 1,200 rpm and moving up to 2,000 rpm for finishing cuts. For stock 5" in diameter or larger, rough out at 800; finish at 1,500.

13 Use your body—not just your hands—as you move the tool along the tool rest. This will provide more support and better control.



14 When turning furniture parts or architectural elements with square ends or pommels, make sure your blanks start out perfectly square. It is also critical that you accurately locate the centers on this type of work.

Master skills

15 **Take your time;** rushing through a project will probably create less than satisfactory results.



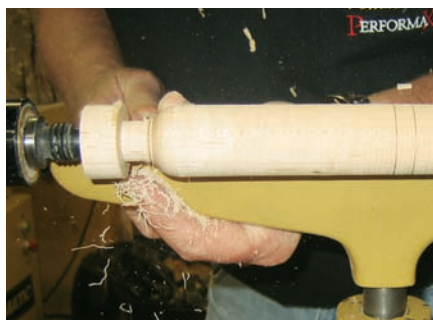
16 **If duplicating two or more spindles, make a pencil gauge or story stick.**

Use your template to mark each blank once it is roughed out. The marks will identify where details are located along the spindles. Use a parting tool or bedan and a vernier scale to cut down to the appropriate diameters. Always measure from the same end to provide consistent results.



17 **Vernier scales and spring calipers can get caught in the workpiece and snatched from your hands.**

Always round over the tips of your measuring tool before using them on spinning stock. Or even safer: Stop the machine to take measurements.



18 **For additional support and better control of** your spindle turning, wrap your index finger around the tool rest.



19 **Remove the tool rest prior to sanding.** It's too easy for fingers to get caught between the tool rest and the turning stock.



20 **Never use cloth rags for applying finish,** only paper towels. In an instant, the spinning lathe can grab a thread and your finger. It's false economy to use cast-off T-shirts if doing so leads to a trip to the emergency room.



Always think SAFETY!

Whatever you turn, keep two safety tips in mind:

- Always wear a proper dust mask while sanding.
- Never turn without proper eye protection.

Enough said.

Nick Cook (nickcook@earthlink.net) is an *American Woodturner* contributing editor. He lives in Marietta, Georgia.

Photos: Marisa Pruss

Lessons Learned

Coaching high school turning students

By Jim Rodgers

For the last three school years, five members of the Bay Area Woodturners Association (BAWA) have been coaching woodturning at two high schools in our area. Although many of us have taught introductory lathe and turning classes to adults and young students, helping teach in a high school shop is another story.

The high school environment requires different thinking. We learned that chopping lathe time into small bites—about 35 minutes for each class period—requires a lot of organization!

From our experiences, we have developed guidelines for what our chapter members may expect with most students.

Here's what has worked for us in setting up six-week turning sessions in the two schools.

Create enthusiasm, celebrate achievements

Even though we teach knowledge and skills, our target is a completed project. Regardless of how the first project looks, we celebrate the successes and evaluate the positive aspects. We invite student input on what they might do differently the next time.

The positive experiences

throughout the year conclude with successful open houses at each school. During the day, school is dismissed early so shop students can show their projects to classmates. Then in the evening, parents come to the school to view the student work.

Proud? You bet!

One step at a time

When teaching new students, we always start with spindle work to give them a basic understanding of the lathe, tools, and body motions. Additionally, this method engages the new turners safely while assessing their abilities to assimilate new techniques.

We get right to a project—no practice pieces. First up: a bud vase. Each student selects a pleasing profile from several models and begins turning down a square with a spindle roughing gouge. For the first week, the coaches sharpen the tools.

We provide basic, simple, and brief instructions with a little background suitable for the students' attention spans and desires to "get on with it." We resist the temptation to provide more turning information than they can absorb.



We give instructions for one step, allow the student to practice, deliver new instructions, and start again. For example, all instructors agreed in advance to teach just one method of turning a bowl interior (a simple three-part process to avoid catches). We don't reveal advanced methods of using a tool until the second or third project.

Defined work process

Being clear seems easy, but there are several aspects that must be managed, starting with the coach's role in the classroom. This is clarified with the school's shop teacher before the semester begins. For example:

- What should I do if I see a student in another area creating a safety issue?
- What is my role in the cleanup at the end of the class session?

Before we started a new program last fall at Las Lomas High School,

Jacques Blumer, Brad Adams, and I had four planning meetings (about 10 hours total) with Pat Blank, the shop teacher. During an additional work session, Pat turned a bowl with us.

Since all school students must receive a letter grade, we discussed how the turning unit would fit into the semester grades.

We also got the students' buy-in to complete the six-week turning rotation. (The shop teacher selects the students based on interest.)

Because two turning coaches work with the same students, we assured the school district and shop teachers that we would be in concert on how we described activities, which techniques will be demonstrated, and the specific steps in a project.

And to make sure we were on the same page, Brad and I spent four hours at the lathe on the bowl project to make sure we didn't confuse students with conflicting instructions and techniques.

Address attention span

We schedule two coaches at each school: one at the beginning of the week (Tuesday and Wednesday) and one later in the week (Thursday and Friday classes). The first member sets up the activity and expectations for the week, and the second corrects, adjusts, and supports. Although we don't see each other at the schools, Brad and I talk at least twice a week about our students.

Our experience has taught us to roll out new information, behaviors, and techniques in small, repeatable segments and only at the specific time that the information is needed. Because students can forget information over a weekend, we introduce new

skills on Monday or Tuesday.

Be exible

Projects rarely go as planned. Holidays, teachers' meetings, and special assemblies interrupt the schedule. Equipment breaks or is not available, and students may choose to focus on another, more urgent activity. Flexibility within the process is a must and requires constant communication between the shop teacher and coaches so everyone stays on schedule.

Planned activity must fit into the available time frames. In a 50-minute class, the time needed for attendance, announcements, and cleanup leaves about 35 minutes in the average class period. This is worth repeating: Plan on 35 minutes of actual turning in each class period.

We've been reminded that all students will not progress at the same rate. The more advanced students may need to be redirected to another activity while others catch up. We've worked around this by providing advanced students with the opportunity to help with sharpening and equipment maintenance.

Brad and I feel fortunate. Some students spend their lunch hours in the shop, and the parents have embraced the lathe program with fund-raisers and contributions.

Pat Blank, the shop teacher, couldn't be happier. Although he knew little about woodturning when he met us, he's eager to expand the program. This summer, he completed a one-week class for woodturning instructors at Crafts Supplies in Provo, Utah.

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

Dan's story

I live in Ashland, a small southern Oregon town. When my own kids entered high school, I volunteered to help in the shop classes. I was received with open arms and started coming into the shop two to three times a week.

Most of the kids will just turn one or two bowls and then return to their other wood projects. But a few of them get hooked. Dan was one of them.

A couple of years back, when I first met him, Dan seemed a bit hard and angry—troubled, I assumed. He was not easy for me to work with. Dan demanded a lot of time, and I couldn't keep him off the lathe.

He began spending more and more time in the shop. Then Dan actually started showing up on time for class!

The technical skills he acquired within that first year were amazing—salad bowls, balls, and hollow forms.

In an article for a local newspaper, Dan admitted that he had been close to dropping out. Today, he seems so much happier, and to watch him working on the lathe is a delight—all intent and so much willingness to learn. Oh, you should have seen that glow of pride after selling his first piece!

Dan's requests to be challenged and his acceptance of failure are mature. I can now ask him to help others when they need help. And I can see how much respect he gets from the rest of the class. He even stands taller now.

Last year, Dan's parents bought him a small lathe, and he adds tools as he goes along. His senior project for graduation was entirely turned work.

Will he become a woodturner? Who knows? It doesn't really matter. Dan is learning some things that will not be reflected in grades or SATs. The ability to envision an object, then create it. The pride of knowing how to use a tool well. The satisfaction of making something with his own hands.

There are a few more students like Dan in these classes, and we have become friends. We have something in common.

—Christian Burchard

Back to School

Tips for introducing turning to your local school

By Jacques Blumer

As many woodturners and woodworkers are keenly aware, high-school shop programs are disappearing for many reasons, including lack of equipment, lack of funds, space demands, or lack of turning knowledge by shop teachers. Indeed, some schools have closed their woodworking programs altogether.

In 2002, the AAW awarded a \$1,000 Educational Opportunity Grant (EOG) to the Bay Area Woodturners Association (BAWA) to develop a turning program at Campolindo High School in Moraga, California. The program was a great success. As the word spread, the BAWA was invited to set up a similar program at Las Lomas High School in nearby Walnut Creek.

Here are some of the lessons we have learned from our youth training programs.

You don't have to be an expert turner or teacher

You don't need to be your chapter's best woodturner or the best instructor to teach young students. You do need to be a competent turner and teacher, but other qualities are far more important. Working with and relating to young people requires an easy-going personality, flexibility, a sense of humor, and lots and lots of patience. Being structured and consistent is important.

When more than one instructor is participating in the program, constant communication between teaching sessions is essential for continuity. "Winging it" isn't an option for these classes.

Find a leader

Every program needs someone who has the vision, drive, and enthusiasm to make it succeed. Your chapter may have many willing participants, but you need at least one leader to assume responsibility.

Coordination, planning, scheduling, and other support activities will demand as much time as teaching the students. There will be critical decisions to be made or occasions where a leader needs to take charge and provide direction or develop a consensus among members.

Teach the classroom teacher

Many certified industrial arts (shop) teachers are skilled woodworkers, but few we've met have lathe experience. If so, take time to train the teacher in private sessions. Encourage him or her to attend chapter programs (many chapters waive dues for high school students and instructors). Also remember that the AAW waives the registration fee for the annual symposium for all youth instructors. And if your mini or regional symposium isn't already making a similar offer, it should.



Shop teacher Pat Blank, right, helps Lee turn a bottle stopper.

Money matters

Many schools around the country have turning programs with lathes and tools that are 30 years behind the current technology. These programs need financial support so that instructors have the right equipment to teach with and students have the right equipment to complete projects.

At our two high schools, more than \$20,000 in lathes, tools and supplies have been invested in the last three years. Think about the combination of resources available: EOG grants, general and special school funds, parent clubs and individual parent donations, holiday fund-raisers, support from your local turning club, and grants from outside organizations. Be creative and think big.



Green bowls turned by last year's students will be completed in turning classes this year.

Get involved

I recently spoke to Christian Burchard, who volunteers at a local school in Ashland, Oregon. He said that he gets back so much more than he puts in that he can't understand why everyone is not doing something to prepare the next generation of turners. (On page 51, read Christian's story about one of his students.)

When we started our program in the Bay Area, Jim Rodgers said, "If we make a difference in one teenager's life, I will be satisfied with our effort."

After three years, we have achieved that goal and so much more. We encourage other chapters and turners to get involved in the local high school shop programs so that every youth training program in the country will be assured of success.

Jacques Blumer
(jacquesblumer@hotmail.com),
is a studio turner, instructor,
and demonstrator in the San
Francisco area.

Observations from the shop class

1. Mind your own behaviors first.

- a. Make sure you and your students always follow AAW safety guidelines (printed in the front of your *Resource Directory* and available online at the AAW website).
- b. Don't demonstrate or do anything that you do not expect students to accomplish safely.
 - Don't take shortcuts or work fast.
 - Always explain the "why" behind a technique.
- c. Dramatize body movements.
 - Students' movements and body positions are often too rigid and contained.
- d. Require the students to keep the work area clean and neat with all tools and accessories put away at the end of each period.

2. Teach the ABC's of tool usage.

- a. **ANCHOR** the tool, rub the **BEVEL** behind the cutting edge, raise the handle to **CUT**.

3. Start with a spindle project.

- a. A bud vase from 3x3x8" maple or walnut stock is an ideal starting point.
 - Always use the tailstock for support
- b. Get lathe speed up and tool manipulation speed down.
- c. Don't fear the skew chisel.
 - Put the skew to use after the spindle roughing gouge (SRG) for planing cuts.
- d. Teach decorative cuts with both the skew and the SRG.
 - Watch for this and correct—the SRG gets used in a scraping cut and uphill to the grain.
- e. Incorporate proper sanding techniques into each project.
 - Establish a sanding standard—no scratches.
 - Use all grits and new sandpapers—don't skip grits or scrimp with used abrasives.
 - For each grit in spindle turning, turn off the lathe and sand with the grain.

4. Everyone wants to get to turning a bowl.

- a. First bowls should be shallow; an ideal finished size is 8–10" in diameter and 3–5" in depth.
- b. As skills improve, move onto deeper or bigger bowls.
- c. Due to the constant need to remove and replace the projects with each change of class, use faceplates and glue blocks rather than chucks.
- d. To help students grasp the goal, provide sample bowls with simple profiles.
- e. Focus on catenary curves—no reverse or undercut curves initially.
- f. Rough-out a green wood bowl first before attempting to complete a dry wood bowl.
 - Green bowls are easier on the student and more forgiving.
 - Allow rough-turned green bowls to dry to build a library of dry bowls for the next semester.
 - You will need to start the turning program with a donated inventory of dry wood bowls; give specific dimensions.
- g. Be clear to the students about your requirements for bowls.
 - No tiny feet.
 - Not larger than the lathe capacity.
 - Positive tenon desirable for use on a glue block and faceplate.

5. Teaching sharpening is easy; getting students to stop and sharpen is hard.

- a. Use jigs and fixtures to assure repetitive and fast sharpening.
- b. Use setup guides to assure quick, proper grinder setup.
- c. Keep the sharpening station near the turning area so it won't be avoided.
- d. Teach students to assume that all tools are dull when entering the classroom (our coaches do sharpen all of the tools for the first week).
- e. Assign tool-sharpening duties to the student who has more turning skills and has free time.

6. Be sure all projects are completed, sanded, finished, and photographed.

- a. Give 8x10" prints to the students and/or retain the photos in a gallery organized by the school's teacher.

Friction-fit Tool

Is there room at your lathe for one more tool? This specialty cutter will help you finesse your next fit on a wasteblock.

By Bob Rosand

As woodturners, there is probably a little gadget freak in all of us. Let's face it: We love tools! Tools to hollow, tools to shear-scrape, tools to cut beads, gadgets to keep our skewers from catching, even vacuum gouges that suck up chips as we cut. Sometimes I think we are all looking for the magical tool that will make us better turners.

I must confess, I occasionally succumb to the call of the tool gods. It seems that at least once a year, I purchase a tool that I really do not need and with a little thought, I probably could have come up with a homemade alternative.

The best advice I could give is to get to know and use the basic tools you have in your tool kit and then modify them as needed for special jobs. One tool I have come up with for my own personal use is what I call a "friction-fit tool."

(I'm sure that I did not invent this tool—someone out there is saying, "Been there, done that.")



A friction-fit tool is ideal to create a tight-fitting wasteblock before turning the bottom of a bowl.

At any rate, this tool is simply a modified square-nose scraper. It allows me to remove small amounts of wood when friction-fitting the lids of boxes. This tool also allows me to reverse small bowls (and larger ones), friction-fit them in a wasteblock, and finish the bottoms, all the while providing precision and control with the amount of material I am trying to remove.

Grind the profile

To make this tool, you need nothing more than a discarded scrap of $\frac{1}{8}$ "-thick HSS planer blade about 6" long and $\frac{1}{4}$ " wide that you'll mount in a handle. Grind the nose of the tool just as you would a regular square-nose scraper. Then, turn the tool 90 degrees and sharpen about a $\frac{1}{4}$ " notch on the left-hand side. Resist

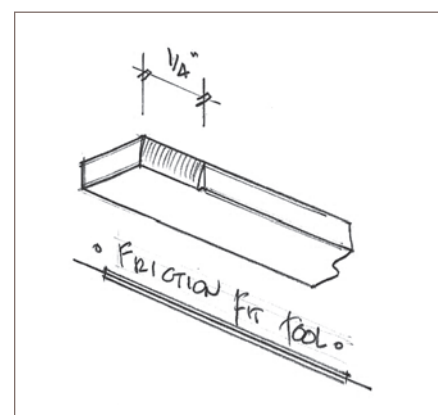


Illustration: Angelo Iafate

the temptation to sharpen all the way down the side of the tool. If you over-sharpen, you will waste a lot of steel and shorten the life of the tool.

Next, turn a handle of your choice. You'll find complete information on turning a homemade handle for lathe tools in Alan Lacer's how-to article in the Winter 2004 issue.



1 To turn the bottom of a bowl, first prepare a flat surface on a wasteblock.



2 With calipers, transfer the bowl's rim diameter to the wasteblock.



3 Slide the friction-fit tool along the tool rest until you reach the marked diameter.

Put the tool to use

Here's how to use the tool to friction-fit a 4"-diameter bowl in a wasteblock to finish the bowl bottom. Yes, a vacuum chuck would work well here, but if you don't own this accessory, this tool will help you accomplish this task—and perhaps with less setup effort.

When you put the friction-fit tool into action, you will only use the 1/4" notch.

True up the wasteblock (**Photo 1**), then set your vernier calipers to the bowl diameter. While the lathe is running, scratch the diameter onto the soft pine wasteblock



4 Tilt the friction-fit tool to the left to finesse the final diameter.



5 Mount the bowl in the wasteblock, then turn the bowl bottom with a spindle gouge.

as shown in **Photo 2**. Use the vernier calipers as you would use a scraper, with the points angled toward the floor. If you don't do this or if you touch the outboard point, you risk damage to the calipers and to yourself.

With a spindle gouge, remove some of the material between the scratch lines. Now, switch to the friction-fit tool to scrape a flat area to accept the rim of the bowl. Gently slide the tool along the tool rest, removing small amounts of wood, as shown in **Photo 3**.

As you get close to the scratch (reference) lines, check the fit of the bowl. When you get close to a snug friction fit, tilt the tool to the left just a bit, as shown in **Photo 4**. If you sharpened the tool properly and at 90 degrees, this cut will remove a scant amount of wood—hopefully just enough to allow for that perfect fit.

If you're not happy with the fit, remove the bowl, true up the wasteblock, and start again.



6 On a soft pine wasteblock, use calipers to mark the diameter of the lid interior.



7 Before fitting the lid, use a spindle gouge to remove the waste material.

If you've done it just right, you will feel that the bowl is snug and running true. Now, you can use a small spindle gouge to clean up the bottom, as shown in **Photo 5**.

Fit a lid

To finish the outside of a lid, you'll need to friction-fit the lid into a wasteblock. With calipers, measure the diameter of the inside of the lid, then transfer the measurement to the wasteblock, as shown in **Photo 6**.

After you remove the waste material between the reference lines (**Photo 7**), fine-tune the fit with the side of the friction-fit tool.

Bob Rosand (RRosand.com) is an *American Woodturner* contributing editor. He lives in Bloomsburg, Pennsylvania.

Tips to improve the fit

If your fit is good but not great, a layer of paper towel between the bowl and wasteblock often does the trick. Or, spray the wasteblock with water, which will swell the fibers of the wood and improve the fit.

What you can't see can harm you

Battling Dust

Peter Fedrigon knows dust. For more than 20 years, he's hopscotched across the country as a consulting engineer on dust collection, air filtration, and system design.

For the 650 employees at the L. & J. G. Stickley factory, he designed a monster system with three 150-hp fans that suck wood dust from the plant and blow it into a towering filter dubbed the "baghouse."

"I turned for four or five years and only occasionally wore a mask. Now, I have asthma from breathing wood dust. Bad situation—I pay for three day if I get even a puff of sawdust in the nose."

"I recommend moving as much air as you can when you sand. Take good care of your lungs!"

—David Ramsey, Phoenix-area segmented turner and retired hospital executive

He watches over 40-plus systems. At a Wrigley Brothers plant in Gainesville, Georgia, the system protects the lungs of 850 employees from sugar dust.

Variety? Peter has designed systems for rock crushers, tobacco, clay, and peanut shells. And of course, plenty of wood dust.

In the mid-1990s, he started Oneida Air, which his daughter and son-in-law now run.

In sprawling factories, there are rigid OSHA standards for dust levels, which could get out of compliance from poor dust collection and improperly maintained return air from bag-room filters.

Of course there are EPA standards for the air vented outdoors. And the explosive dust must meet National Fire Protection Act requirements.

"All the factors that apply to industry also apply to our home shops," Peter says. "Think about this: The EPA doesn't allow dust masks in factories—the dust collectors have to do all the work. That's the way it should be in your shop, too."

Peter can quote dust statistics until your eyeballs roll into the next ZIP code. But his bottom line message is simple: "If you like to turn, you'd better get yourself a dust collector."

Peter is just as strident about the

importance of dust collection for the AAW turners as he is about his consulting jobs. When he's home, Peter relaxes at his lathe.

Members of the Central New York Woodturners are fortunate to have him as an active member. Peter estimates that he's set up or upgraded dust systems for more than 50 members. And of course, he's always eager to talk about his favorite topic—dust.

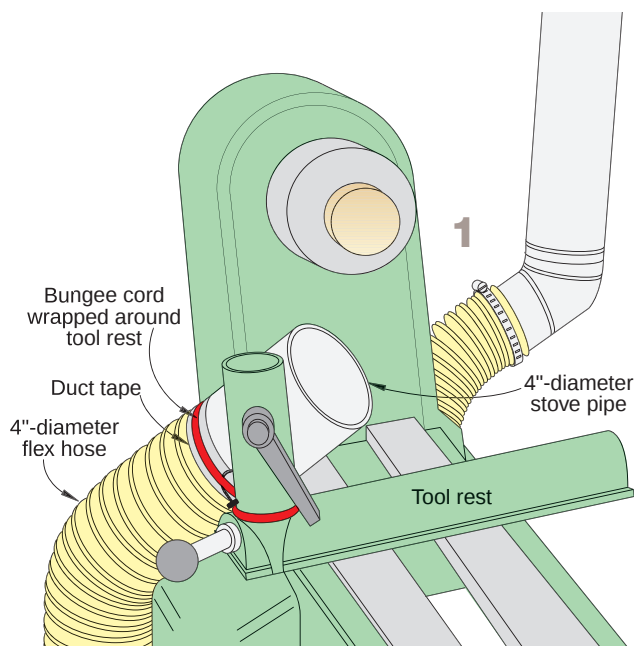
Microns and your lungs

If you're considering adding a dust collector to your shop (and you should), you could easily get lost in a sea of technical jargon. You'll find more explanations in the sidebar "Dust Terminology."

Most of the advertising material speaks about the ability to gather dust whose particle size is measured as micrometers, or microns.

Here's what you need to know about microns:

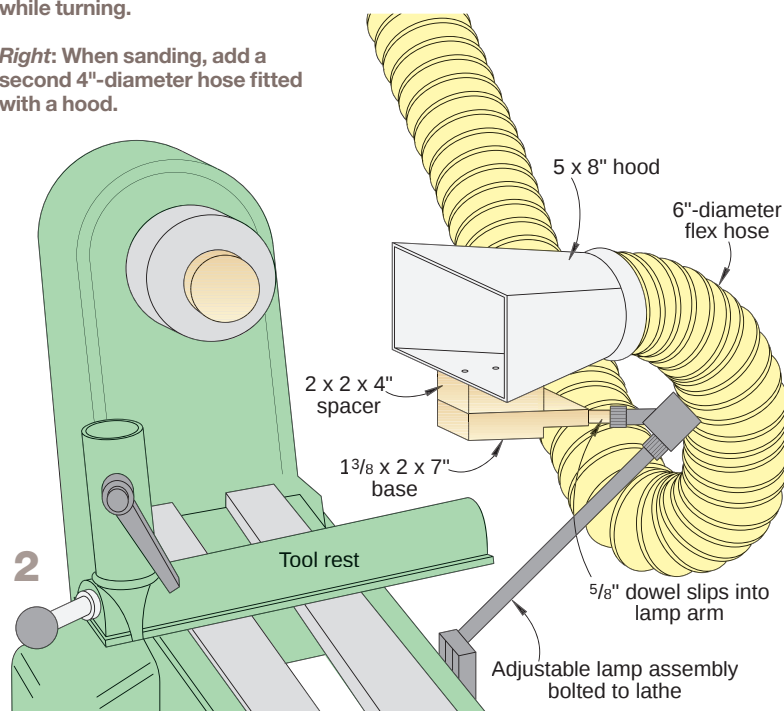
- There are 25,400 microns in an inch. The period at the end of this sentence is about 320 microns in diameter.
- It is the tiny particles which you breathe in that damage your lungs. The dust from 1 to 10 microns in diameter is the nasty stuff that is harmful to lung cells and causes respiratory problems—coughing, nosebleeds, sinus problems, emphysema, and bronchitis. That may explain why you develop a



Get after dust!

Left: A method to gather dust while turning.

Right: When sanding, add a second 4-inch diameter hose fitted with a hood.



cold after you spend a lot of time sanding. The finer you sand, the finer the dust particles.

By comparison, wisps of tobacco smoke fit in the range of 0.01 to 1.0 microns. Of course, you know what damage tobacco smoke does to healthy lungs.

In your shop, you can sweep up the nuisance chips too big to enter your lungs. It's the tiny particles and sanding dust that should be your biggest concern.

Collect dust at the source

Peter has a simple solution for gathering chips, shavings, and dust when he turns: He attaches a 4-inch diameter flexible duct to his tool rest with a bungee cord, as shown in **Drawing 1**. "I don't even start up my lathe without turning on the dust collector," Peter says. "This duct is never in the way while I turn. The thin flex hose lets me move the tool rest around with ease."

When it's time to sand, Peter opens a blast gate to a second 4-inch diameter duct fitted with a hood, as shown in **Drawing 2**. With two ducts running, he gets 600 to 800 cfm through his

2-hp cyclone system.

"I keep the hood opening small so the air can reach out to capture the dust. I'm getting about 99.9 percent of the dust collected right at the source.

"Remember that dust is a fire and explosion hazard, too."

The dust-gathering solutions *above* are typical of what he has set up for the home shops of Central New York chapter members and nearby AAW chapters (word of Peter's knowledge spreads faster than dust).

The filter factor

"Dust filtration is critical," Peter says. "If you can see dust migrate through the bags when you turn on your collector, your system needs immediate attention.

"It is important to understand

the filter media and the efficiency of the media. Spun-bond polyester filter media in pleated filters is the best for your shop.

"The woven or felted polyester doesn't do as good a job because it can't hold back the high dust-loading that occurs in home shops. In addition, woven filters must be cleaned often."

When you choose filters, Peter suggests you select wide-pleated cartridges. Today's top-performing cartridges can filter 99.9 percent of the dust down to .02 micron.

A better two-bag collector

Peter has helped several chapter members upgrade a two-bag collector. Among his solutions:

- Replace the 30-micron bag (standard with many collectors)

with a more efficient 1- or 5-micron bag. (The replacement bag will be larger.) American Fabric Filter (americanfabricfilter.com, 800-367-3591) provides technical support for aftermarket bags.

- Replace the top bag with a pleated canister filter, which provides at least four times the media surface over a cloth bag. For details, check with your original manufacturer. Donaldson Company (airfilterusa.com, 800-667-8563) is one online source.

A system for your shop

There's not one perfect system for every shop, but Peter's design looks something like **Drawing 4**.

Whatever choice you make for a dust collector, Peter urges you to keep it running in top form. To check his shop system's efficiency, he spent less than \$5 in a U-tube manometer assembled from plastic and copper tubing and colored water. This device, shown in **Drawing 3**, measures the static pressure required to push air through the filter.

On his system, Peter knows that if the pressure jumps by +1.5", it's time to clean his filter. For best results, Peter recommends that you install the manometer between the fan and the filter, as shown in **Drawing 4**. "You can even install this on your two-bag system. Poke a hole in the flex hose right before the bags. You'll see an amazing improvement if you monitor this."

You also can buy an 8" flex U-tube manometer for about \$20 (dwyer-inst.com).

Understand fan curves

Okay, this is getting a little technical. But your lungs will love you if you just stick with this.

If you've gone to the trouble

of checking your systems and efficiency, you'd better at least have a pedestrian knowledge of a fan curve. When adding a manometer to check on your system, the fan curve, as shown in **Drawing 5**, takes on new meaning.

In Peter's shop, he knows that with 8" SP (static pressure), he's getting about 880 cfm in his shop. See how an additional 1" of static pressure (resistance from clogged filters) drops his system from 880 cfm (blue line) to down to 600 cfm (red line). Result: much less suction to grab up all that sanding dust.

You may have noticed that your shop-vacuum barrel doesn't have to be full to lose its efficiency. The same story is being repeated in shops all across the country.

Be sure you know the true capacity of the system you're

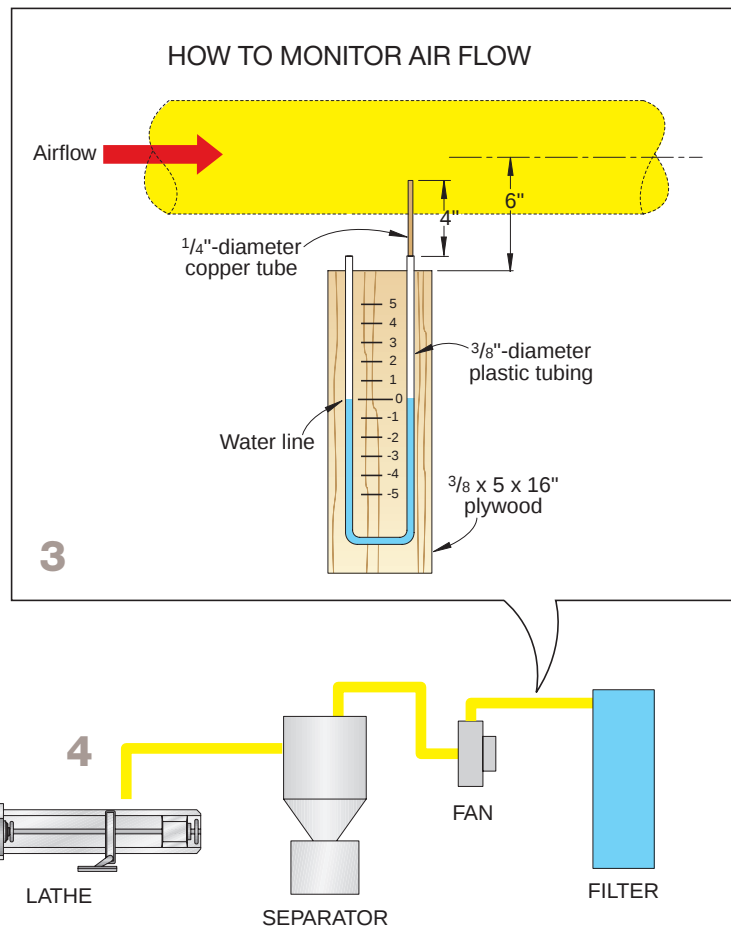
considering installing. Some companies advertise a fan of 1,200 cfm or greater. Sounds impressive, right? But add your duct work, as **Drawing 5** shows, and the cfm drops dramatically.

Separate grinder system

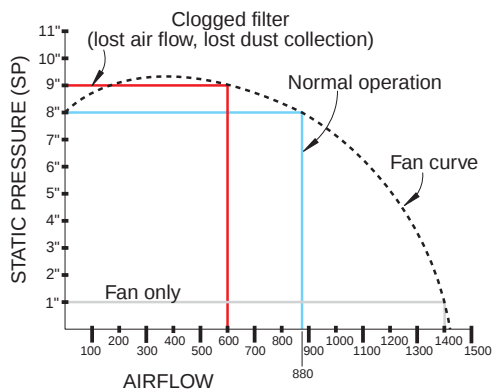
Don't forget to connect your grinder to a separate dust collection system. Because grinding involves sparks, you don't want this machine to share the same lines as your wood dust system.

Peter recommends a shop vacuum (at least 70 cfm) connected to your grinder dust port, as shown in **Drawing 6**.

"You can easily set up your collector so it automatically turns on every time you switch on the grinder," Peter advises. "It's real easy to switch the hose from one



5



Dust terminology

Okay. You've decided to make the investment in your respiratory system by reducing your sawdust. Now what?

Your dust collector fan creates the criteria that follow. If your fan can meet these requirements and collect dust, you have a good system.

If you're not a dust engineer, you could easily get sucked up in a dust storm of numbers and acronyms. Here are some key definitions:

Air Volume. The amount of air that is moved through the duct in a prescribed amount of time. Air volume is measured in cubic feet per minute, expressed as cfm. A roll-around shop vacuum may have a rating of 70 cfm; a complete system for a home shop (with blast gates, hoods, and ductwork) should be in the range of 600 to 800 cfm.

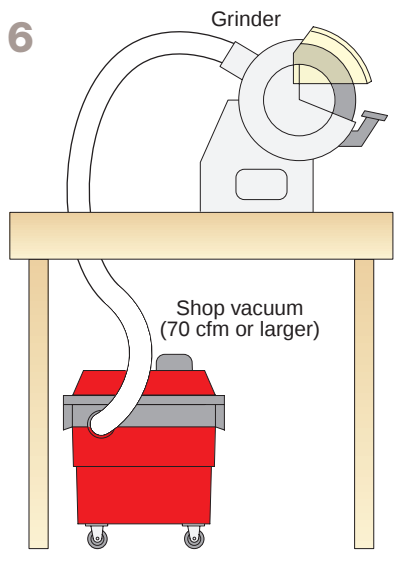
Static Pressure (SP). Moving air through a pipe, cyclone, or filter involves resistance. Stick your hand out of the car window and drive down the road at 5 mph—that's static pressure you feel. When the resistance from each of your machines is added together, the total is the amount of static pressure the fan needs to produce.

The above are all the things created by the fan and these are the necessary requirements your fan should overcome to perform as a reliable dust collection system.

Want to learn more?

Here's a website you can learn more about dust collection: allwoodwork.com/article/woodwork/gettingtoughondust.htm

6



A simple dust collection system at your grinder will trap aluminum oxide and other harmful dust from your wheels.

side of the grinder to the other.

"Aluminum oxide and ceramic dust from grinder wheels are really nasty stuff. You're especially throwing off a lot of dust when you dress your grinding wheel."

Control noise

Woodturners who do battle with dust wrestle another nemesis: irritating noise from the collector. The noise comes from the exhaust side of the fan; the higher the velocity, the greater the noise.

Many dust collectors now include a silencer or have silencer accessories (something like a muffler on an auto).

The turners who use "too much noise" as a weak reason to avoid installing or running a dust collector, you need a better plan.

One strategy is to locate the collector beyond the shop (either outside or in an adjoining room). Morton Kasdan, a member of the Louisville Woodworkers Association, chose to locate his 3-hp cyclone collector in the center of his shop, which reduced the length of his duct runs.

Mortie dampened the noise in his shop, a converted three-car garage, by constructing a 3x2' closet framed by 2x4s and covered with ¾"-thick plywood. (The top sections surrounding the external



filters are larger.) Each side is lined with insulation panels, as shown at left. A hinged door makes it easy to empty the

dust barrel; he can easily remove four clamps on one side for filter maintenance.

Mortie also added an insulated top over the closet that has 4" - to 6"-wide slots for air exchange. Perforated hardboard over the plywood panels expands his tool hanging storage.

Although the center location in his shop reduced the length of duct lines, Mortie lamented that "If I had it to do over, I would put the collector in the corner. I could control the noise better there. Regardless, the insulation has reduced the noise level significantly."

How to avoid a catch

Woodturner's Fear Factor

By Lyle Jamieson

If you've been around the AAW for a decade or more, you may recall "Five Ways to Avoid a Catch," a well-read journal article Lyle Jamieson wrote in 1996. Lyle has revisited this topic with fresh drawings and thoughts to take you beyond the suffocating fear of catches.



To hollow "Class Act" and similar sculptures, Lyle Jamieson uses a supported boring bar. "If you set up a supported system parallel to the floor, you can't get a catch," he said. On his lathe, Lyle hollowed this 20x6x5" elm piece on three axes.

It seems simple, but there are complicated forces taking place while you shape a revolving piece of wood with your turning tools. I want to simplify the process and put a language to catches. If you understand what causes a catch, you can eliminate the cause.

There are just four cuts in all of woodturning: push cut, pull cut, scrape, and shear scrape. Let's further break down these cuts into two groups:

- The push and pull cuts require bevel support to prevent catches.
- The scrape and shear scrape require that you don't violate the 90-degree rule. More about that later.

Start with sharp tools

A primary way to prevent catches is to turn with sharp tools. A sharp tool can shear off those end-grain fibers cleanly and smoothly. However, a dull tool will push, grab,

and tear out end-grain fibers. You can have all the right techniques and still have trouble with catches if your tools are not sharpened properly and often. Sharp tools mean less sanding, and I don't like to sand. Who does?

When using gouges and doing the push and pull cuts, most catches come from allowing the gouge to cut while not being supported by the bevel. Without bevel support, the tool will dig in violently in a split second. Big chunks of wood are ripped away.

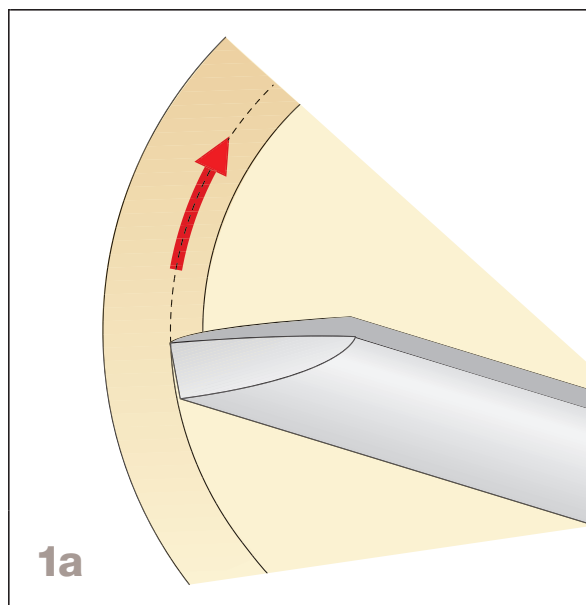
The bevel prevents the gouge from cutting too aggressively—it is a controlling factor.

Inside the bowl

Let's first focus on the inside of a bowl. This is where catches are most apt to occur because the inside of a bowl is where we are prone to lose bevel support.

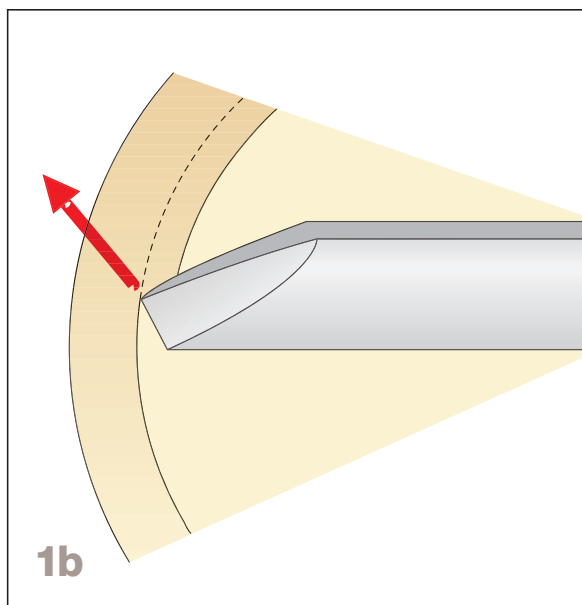
The direction the gouge wants

How to hollow the inside of a bowl



SAFE

Note the arrow indicating the direction the tool wants to go. Swing the handle slowly toward your body to direct the bevel to travel the path indicated by the dashed line.



RISKY

Note the arrow indicating the direction the tool wants to go. Swing the handle slowly toward your body to direct the bevel to travel the path indicated by the dashed line.

to cut is along a line from the heel of the bevel to the sharp point of the edge, as shown in **Drawing 1a**. The first approach is to relax and let the tool go where it wants. Relax the tool-rest hand and direct the cut by moving the handle hand. You can get pretty good at white knuckling your way through a cut, as shown in **Drawing 1b**, but the surface left behind will need a lot of sanding.

It is not much fun when a catch ruins the shape you intended. Relax, take a deep breath, and let your handle hand do the work.

Find the sweet spot

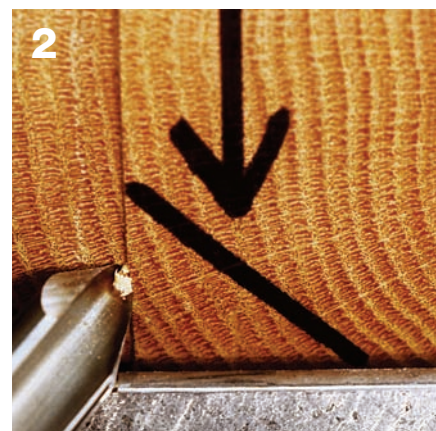
You will hit the sweet spot for a clean cut with the flute pointing in the direction you want to travel with your cut. A twist of the tool will have the flute pointing at a 45-degree angle. Whenever possible, maintain this shearing cut to cleanly slice through each grain

fiber as it spins past your tool. Your gouge cuts the shaving at the tip of the cutting edge, as shown in **Photo 2**.

This may help: Think of the motion of an ice cream scoop scooping out the inside of the bowl. You have one hand on the handle of the ice cream scoop and then follow the shape of the rounded scoop for your ice cream.

With the bowl gouge, you follow the little tip of the tool, or the bevel. Swing the tool handle to follow the contour of the vessel with the bevel.

“Ride the bevel” is the usual term to describe this, but it is a terrible term. You don’t want to ride the bevel, you need to follow it gently. Riding the bevel too hard will cause a number of problems: It will burnish the surface, create vibrations, and bounce the bevel into any voids in the vessel. For me, a “bevel-supported cut” is better.

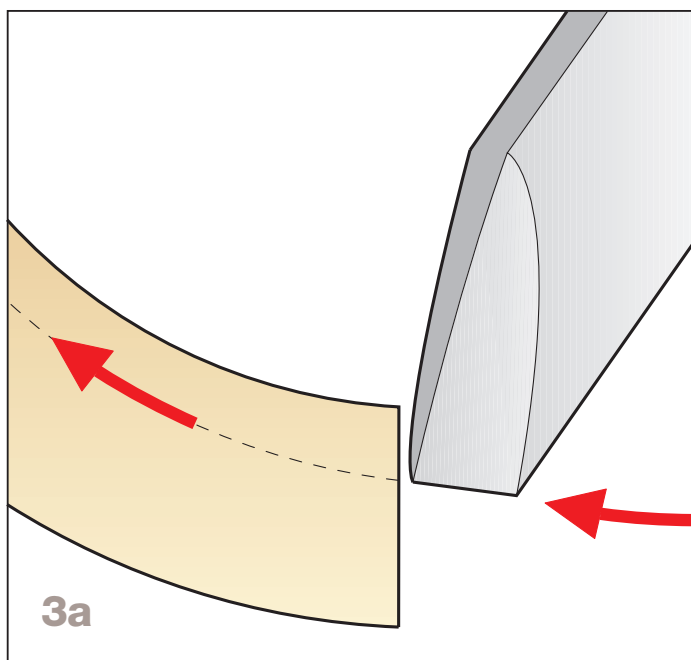


Note the arrow indicates the direction the wood is traveling past the tool. The 45-degree angled line shows the angle that will produce a clean slicing cut. To get this angle, twist the tool on its axis with your handle hand. The shaving comes off the right-hand side at the tip of the tool.

Bevel-supported cut

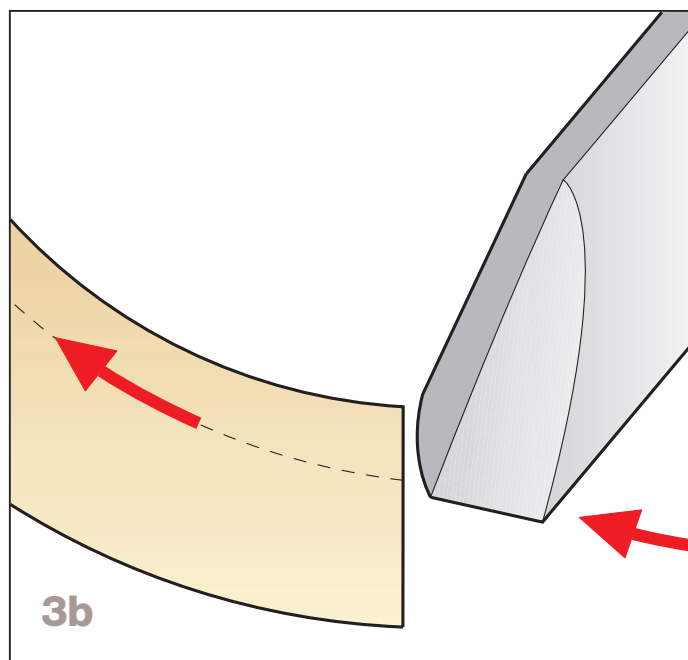
One of the hardest things to accomplish is to start a bevel-supported cut. The tool wants to skate in a spiraling manner across the face of the wood when you start at a 45-degree angle.

Starting a cut: Here's a safer way



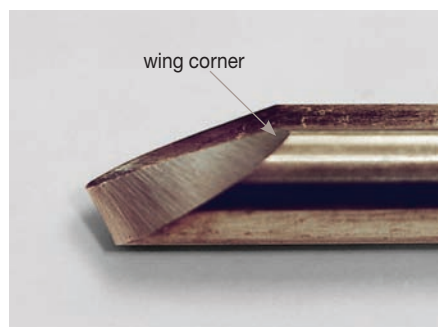
SAFE

If your gouge is ground to the profile shown *below*, you get quick bevel support and reduce the chance for a catch. The red arrow indicates the cutting direction.



RISKY

A gouge with a hump at the tip cuts into the wood long before the bevel has a chance to give support. This can cause a catch or even blow up a thin-walled bowl or vessel.



The wing (side) profile of Lyle Jamieson's favorite grind has a nearly straight line from the tip to the wing corner.

The bowl-gouge grind can make it easier to enter a cut. I reshape the Ellsworth grind slightly to make the entry into a cut easier for me, as shown in **Drawing 3a**. When I use a gouge with a slight hump near the tip, the tool attempts to grab the wood first before the bevel support has been established, as shown in **Drawing 3b**.

I prefer the sharpened edge that is almost straight from the top to the back corner of the wing—there is no hump when viewed from the side, as shown at *left*.

Hollowing systems

When setting up your supported hollowing system for boring out the interior of a hollow vessel, make sure the scraper cutting tip is parallel to the floor and on the centerline of the vessel, and you will never get a catch. This setup will be cutting right at 90 degrees.

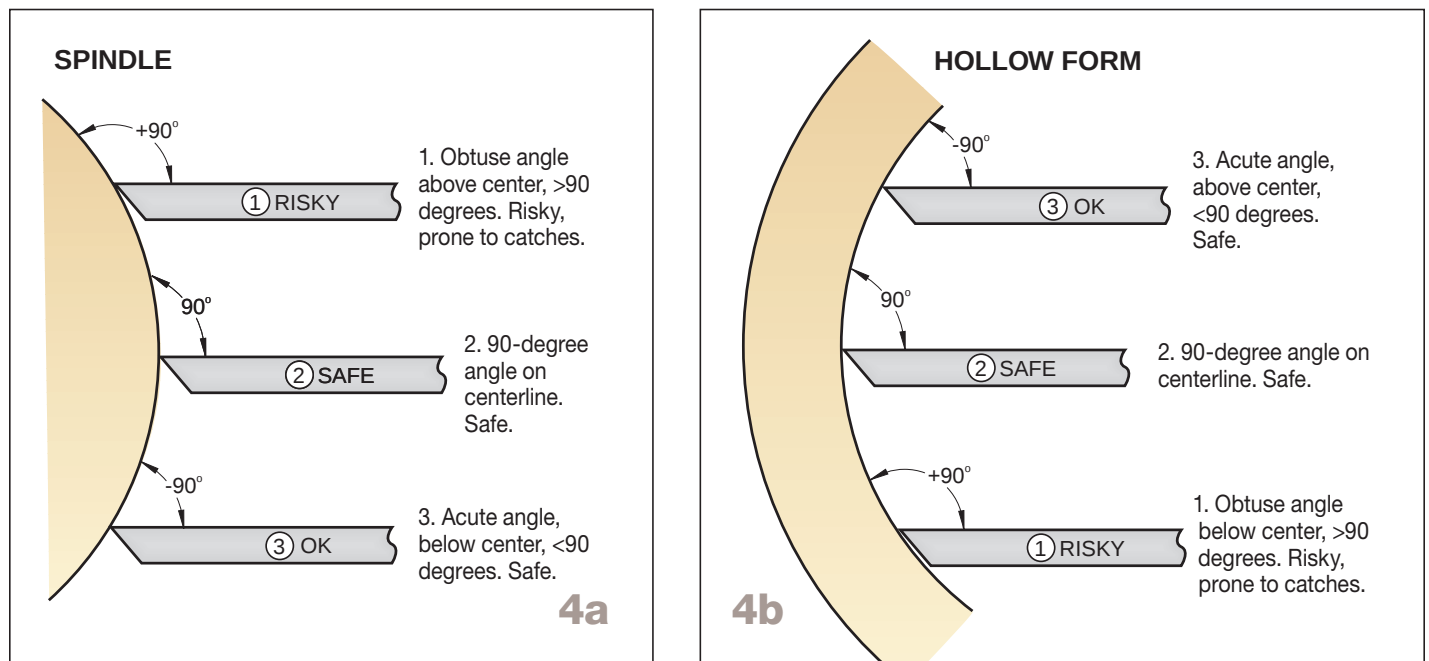
(You can err slightly with the tool-rest position on the high side, but never have the cutter below center in a hollow form.)

If you choose to twist the cutter for a shear cut, keep this in mind: When you angle one side of the cutter down to shear scrape, the opposite side of the cutter is pointing up into the wood and will get grabby and produce a catch.

Scraper strategy

A scraper requires an entirely different process from a gouge. Whenever a cutting edge touches the wood without the bevel support, a catch can occur. (The exception is the edge touching the wood at less than a 90-degree angle, as shown in **Drawing 4a** and **4b**.) With a scraper positioned flat on the tool rest and parallel to the floor, the tool-rest height is critical. If the tool rest is high on

Scraper positions for spindles and hollow forms



the outside shape (like a spindle), it gets risky. If the tool rest is too low on the inside shape, like a hollow form, it gets risky, as shown in **Drawing 4b**.

This is why negative-rake scrapers came into vogue. The negative rake gives you extra insurance to not violate the 90-degree rule. With handheld scrapers, you can change the angle at which the tool touches the wood by raising or lowering the handle.

Move beyond fear

As I teach at chapters around the country, I meet many self-taught students. They settle for techniques that are difficult and demand considerable sanding, and some of the techniques are downright dangerous.

The fear generated from catches is suffocating. If you walk up to the lathe with catch butterflies, you

are missing out on the true fun of woodturning. Do you worry about taking one more cut?

Woodturning enjoyment starts by being in control at the lathe. Taking "catch" out of your vocabulary will make turning a lot easier and more pleasurable.

You can watch others turn or read all the articles available and still have catch fear. I suggest getting some hands-on help. Take your turning job to the next level. It is not necessary to pay loads of money to get some woodturning instruction. All AAW chapters have good turners to mentor you—usually just for the asking.

Recently, I had a chance to speak with Michael Hosaluk, and he made a statement that summed up woodturning experience. He asked, "What is the difference between a beginner and an advanced turner?" And then he

answered his own question with, "It is what you do with the basics."

I truly believe in this approach. Get the foundations right, and it opens up possibilities of excellence rather than creating obstacles and settling for mediocrity.

Now, let's get over your fear of catches. The fun and creativity locked up inside you will take you places you never imagined.

Lyle Jamieson (lylejamieson.com) is a full-time woodturning sculptor and instructor who lives in Traverse City, Michigan. He is president of the Northwestern Michigan AAW chapter.

Make a Stand for Safety



This project has taken a long route to *American Woodturner*. First stop: Richard Stapley's British website (laymar-crafts.co.uk). There, Richard posted plans for a safer way to chainsaw turning blanks.

Jerry Markowitz, a member of the Bayou Woodturners from Kenner, Louisiana, found Richard's design on the Internet and added a few tweaks of his own. Because many bowl blanks dwarf his benchtop bandsaw, Jerry added a 4"-wide platform at one end so he can trim off the corners of bowl stock with his 16" electric chainsaw.

Put this chainsaw platform at the top of your "to-do" list so it's built before you prepare turning stock again. (Note to chapter program committees: Consider building these at an upcoming meeting.)

And the next time you have "just a couple of cuts to make," you'll be set up for a safer procedure.

Build your platform

1 From $\frac{3}{4}$ " MDF or exterior plywood, cut seven pieces to

12×15". Cut V-shaped notches in one support section where dimensioned *opposite*. Drill $\frac{1}{2}$ " holes through the stock where shown in the drawing. To ensure accurate alignment of the holes, use a stopblock on your drill press.

2 From $1\frac{1}{2}$ " PVC pipe, cut 10 sections 3" long and two sections 6" long.

3 Before you begin cutting the $\frac{1}{2}$ ×36" all-thread rod to length, place a $\frac{1}{2}$ " nut on one end. (When you remove the nut, you will clean up threads damaged in the sawing process.) With a hacksaw, cut two pieces of $\frac{1}{2}$ " all-thread rod to 28".

4 To assemble, follow the 4-step drawing *opposite*. First, thread a $\frac{1}{2}$ " washer and a $\frac{1}{2}$ " nut on one end of each of the all-thread rods, positioning where shown in **Step 1**. Slide 6"-long sections of PVC over the all-thread, then screw on another nut and washer 6" from the previous pair where shown in **Step 2**.

5 Pass the rods through two of the notched supports (**Step 3**). Then thread another washer and nut pair on each end where shown

in **Step 4**. Tighten the washer and nut pair against the supports.

6 Continue assembling the jig as shown *opposite*, placing the pair of 3"-long PVC pipes between other platform supports as shown.

Put the platform to use

Each time you use this platform, strap your timber to the supports with a band or web clamp.

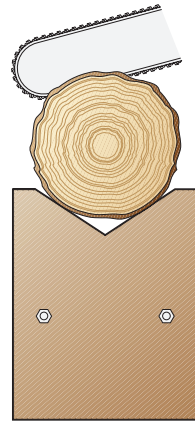
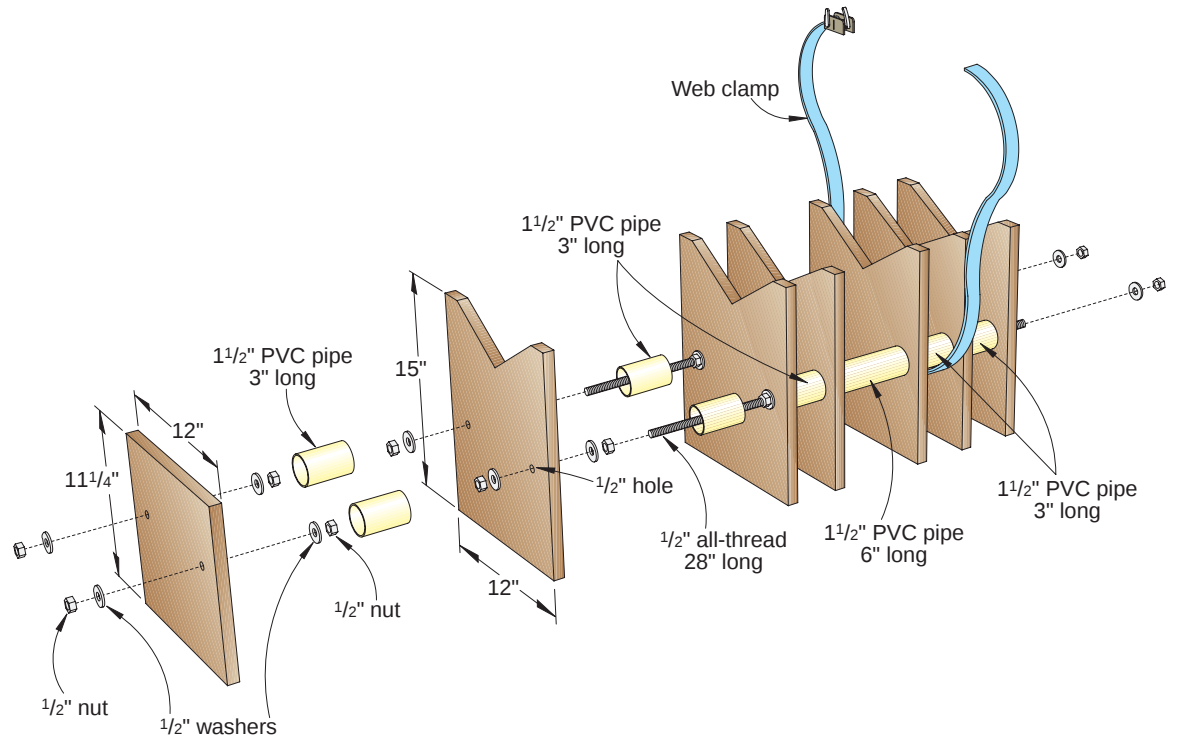
Here are three tasks to use this platform to increase safety:

Split logs. As shown in the photo *above*, place split logs on the flat side of the platform.

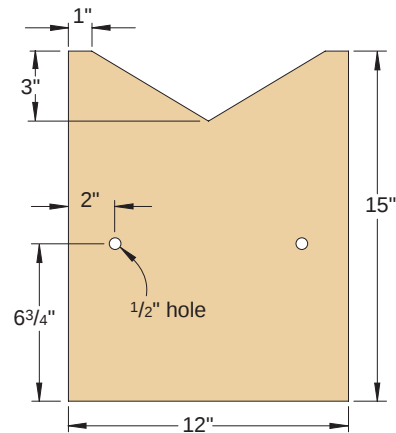
Unsplit logs. Place unsplit logs on the V or notched side of the jig as show at right and the End View Drawing *opposite*.

Bowl blanks. Jerry's modification, shown *below right*, allows you to prepare bowl stock by trimming off the corners.

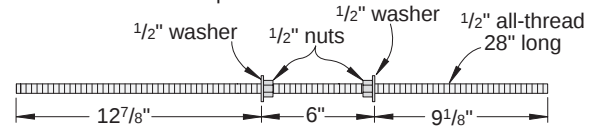
Supplies: $\frac{3}{4}$ ×48×36" MDF or exterior plywood; $\frac{1}{2}$ ×36" all-thread rod (2); $1\frac{1}{2}$ ×48" PVC pipe; $\frac{1}{2}$ " nuts (28); $\frac{1}{2}$ " washers (28); band or web clamp.



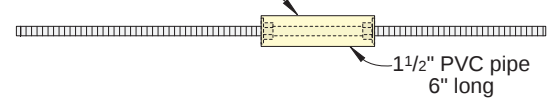
END VIEW



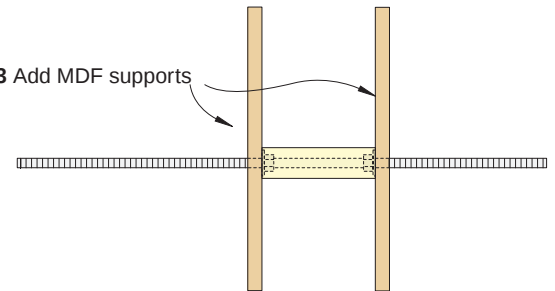
Step 1 Thread nut and washer pairs



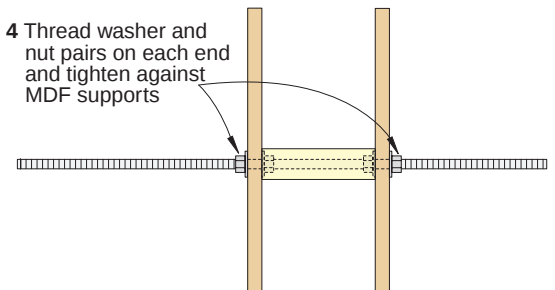
Step 2 Slide 6" PVC into place



Step 3 Add MDF supports



Step 4 Thread washer and nut pairs on each end and tighten against MDF supports



Tips

Got a Great Idea?

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

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

Prevent cramped hands

When I had to turn 275 large rosettes, I quickly found that my left hand cramped from holding my ½" bowl gouge and gripping the chuck key. As an experiment, I made a wooden sleeve through-bored for the tool's shank. I bored and tapped three ⅜"-16 holes, as shown at *right*. Applying light pressure on three setscrews held the sleeve in place. The cramps in my left hand disappeared.



To solve the problem with the chuck key for my 4-jaw scroll chuck, I found a 1¼" dowel through-bored for a ⅝" carriage bolt, then cross-bored it ⅝" for the chuck-key shank. This trick prevents me from getting annoying blisters on my hands.

*Robert Vaughan
Roanoke, Virginia*

Give your chucks a bath

Every so often, my 4-jaw scroll chuck gets filled with gunk and becomes difficult to turn with the key. When this happens, I have to stop everything and clean it. I have found this to be a chore I dislike because doing it correctly takes me quite a while.

As a solution, I submerge my chuck in acetone overnight in a 2-pound coffee can with a snap-on lid. As a fire safety measure, it's best to put the can outside.

By morning, the chuck works like new. It also looks a little better.

*Glenn Hodges
Nashville, Georgia*

Lemon-aid for black hands

After a recent turning session, I returned home with black hands—no amount of scrubbing would remove the stains. Then while preparing dinner, I squeezed a lemon; to my surprise, the stain vanished where the juice touched my hands.

When I rubbed the lemon half over my hands, the stains instantly disappeared.

*Danielle Klorig
Alexandria, Virginia*

Easy double-bevel sharpening

I just attended a class by Eli Avisera sponsored by the Baltimore Area Turners. I was quite taken by his double-bevel sharpening and I decided to make this really simple jig to make sharpening easier. This jig eliminates resetting the sliding V-block between grinding steps.

The jig is made from a piece of ⅜" or ½" particleboard cut to fit in the sliding V-block of a grinding jig (Wolverine is one popular brand). An inset magnet holds the particleboard in place.

It's easier to set the V-block accurately on the larger secondary bevel. Put the jig in the pocket of the V-block with the magnet to the back. Adjust the V-block slide so the larger bevel matches the grinding wheel. Then, grind the secondary bevel.

Next, remove the jig. Without moving the V-block slide, grind the primary (shorter) bevel.

*David R. Smith
Hampstead, Maryland*



Center turning stock with a homemade centering pin

When you need to mark the exact center of turning stock for the future location of a lathe spur or center, use the 4-jaw scroll chuck and a homemade centering pin turned from hardwood. Here's what worked for me.

Turn the centering pin to fit snugly inside the chuck spindle threads. (You may have to custom-fit the tip that protrudes through the chuck jaws to mark the center of smaller stock.) Center-drill the business end to insert a short length of a box nail. The hole needs to be about 1" deep, and the nail needs to be pressed into the hole or epoxied in place with about 1/8" of the tip exposed.

With the chuck mounted on the lathe, mount the stock, remove the chuck from the lathe, insert the centering pin through the chuck until it contacts the stock, and tap it lightly with a mallet to mark the center.

If you turn the diameter of the centering pin too small and it has excessive wobble, wrap the shaft with electrical tape to improve the fit, as shown in the photo *above*.

James L. Pruitt

Mountain Home, Arkansas

Spiff up your lathe with turned grips

Some of the nicest lathes have fancy brass or anodized aluminum grips on the tailstock and banjo handles. If your lathe has more humble roots, you can add custom grips. Here's how I dressed up my Jet 1642.

The trick is boring out the grip in a way that attains a reasonably precise fit. The tailstock handle on my lathe measured 0.748", so a 3/4" bit was ideal. But the banjo lever was 0.700" and the tool rest locking handle (which is an aftermarket model and metric) was 0.393" (metric 10mm).

I drilled the tailstock handle 5" deep with a 3/4" Forstner bit. To minimize drifting off-center, first drill to the limit of the bit without the extension, then add the extension to finish the depth.

For the banjo shown at *right*, turn a maple plug gauge as close to 0.700" as possible. The gauge end needs to be a little longer than the depth of the hole (for my lathe, about 3 1/2"). To bore the hole, I started with a 5/8" Forstner bit and then enlarged the hole using a squarenose scraper. (Be careful not to end up with an ever-increasing taper toward the bottom of the hole, which is why the plug gauge is necessary.) Carefully bore the ID out to size in small increments. Test the fit and continue until the final depth is reached. Use the same process for other handles you want to customize. Just so things matched, I also added a grip to the headstock locking lever, as shown at *right*.

As far as the tolerance to the fit goes, I found that a "hand" fit is best—that is, the grip should just slip over the handle with only the slightest friction. If the fit is too tight and you have to pound the grip onto the handle, it will probably split the wood. If the grip rattles, it's too loose, and it either won't look right when you glue it or the grip will split where the void can't support the repetitive pressure from articulating the handle. If the fit is just right, you will need to drill a small hole in the closed end to allow the trapped air to escape. Otherwise, when you glue the grip to the handle, the glue will act as a seal and the compressed air will prevent the grip from completely seating.

After you've bored the handle hole, mount the stock between centers and turn the outside to the desired shape. Then sand and buff to a high shine before applying a finish. (I used Crystal Coat to finish my grips.) To bond wooden grips and the metal handles, use an epoxy or a polyurethane product (Gorilla Glue is one popular brand).

Bob Hadley

Yorba Linda, California



Calendar of Events



"Creation" by William Hunter, part of a Hunter retrospective show at the Long Beach Museum of Art. Australian jarrah burl; 29×27×20".

Spring Calendar deadline: Jan. 10. Send information to carlvoss@mac.com.

Alabama

Mobile Museum of Art, Mobile, *Connections: International Turning Exchange 1995–2005*, April 20–June 17.

Alaska

Third Annual Alaska Woodturners Association Woodturning Symposium, March 10–11 in Anchorage. Featured turners include Petter Herud and Stuart Mortimer. Master classes for beginning, intermediate, and advanced turners will be held the weeks prior and after. Information: Bill Bowers at 907-346-2468 or akwoodturners.org.

Arizona

Desert Woodturning Roundup Symposium, Feb. 10–11 in Mesa. Demonstrators include Malcolm Tibbetts, Bob Rosand, Donald Derry, Art Liestman, Trent Bosch, Curt Theobald, Tony Cortese, Binh Pho, and Allan and Stuart Batty. Information: desertwoodturningroundup.com.

Arkansas

Arkansas Arts Center, Little Rock, *Connections: International Turning Exchange 1995–2005*, Feb. 9–March 25.

California

del Mano Gallery, Los Angeles, *Solo Exhibition: Hans Weissflog*, Dec. 2–30; *Solo Exhibition: Bert Marsh*, through Dec. 30; *Small Treasures*, March 17–April 14. Information: delmano.com or 800-del-Mano.

The Long Beach Museum of Art, Long Beach, *Transforming Vision: The Wood Sculpture of William Hunter 1970–2005*, until Dec. 10; *River of Destiny: The Life and Work of Binh Pho*, Dec. 8–March 4. Information: lbma.org.

Oakland Museum of California, *Transforming Vision: The Wood Sculpture of William Hunter 1970–2005*, Jan. 20–March 18. Information: museumca.org.

Connecticut

Yankee Woodturning Symposium, June 1–3. Sponsored by the Yankee Woodturners Association. Featured demonstrators include Mark St. Leger, Jean-Francois Escoulen, Jimmy Clewes, Bob Rosand, Mark Sfirri, Michael Hosaluk, JoHannes Michelsen, and Angelo Iafrate. Information: Gary Bashian at garybashian@hotmail.com or yankeewoodturningsymposium.org.

Delaware

Citizens Bank Center, Wilmington, *International Turning Exchange: 1995–2005*, through April 2007. Information: woodturningcenter.org.

Florida

Florida Woodturning Symposium, Jan. 12–14 at the Lake Yale Baptist Convention Center near Eustis. Demonstrators include Stuart Batty, Binh Pho, Al Stirt, and Andi Wolfe. Information: floridawoodturningsymposium.com.

Georgia

Southern States VII Symposium, April 27–29 at the Georgia Mountains Conference Center in Gainesville. Featured demonstrators include Soren Berger, Mike Mahoney, and Dale Nish. Information: Marsha L. Barnes at 828-837-6532 or southernstates.org.

Hawaii

Eighth Annual Big Island Woodturners Woodturning Show, March 5–30 at the Wailoa Center in Hilo. Special events include a March 9 artist reception and Saturday demonstrations throughout March. Information: Don Albrecht at 808-968-7049 (hawaiiwoodturner@yahoo.com) or the Wailoa Center at 808-933-0416.

Kansas

Dane G. Hansen Memorial Museum, Logan, *Connections: International Turning Exchange 1995–2005*, through Jan. 28.

Maine

Roundtop Center for the Arts, Damariscotta, "Holiday Gifts & Projects," Dec. 16–17; "Master Bowls Intensive," Jan. 20–21; "Hollow Turning: Deep Vessels," Feb. 24–25; "Lidded Boxes & Embellishments," March 24–25. Information: Ken Keoughan at kkeoughan@yahoo.com or 207-832-6538.

Minnesota

AAW Gallery, St. Paul, *Step Up to the Plate and 20 Years—Still Evolving*, until Dec. 15. *Open & Closed*, an invitation-only exhibit of works by contemporary turners and potters, Jan. 12–April 15. In cooperation with the Northern Clay Center. Information: AAW Administrative Offices at 651-484-9094 or woodturner.org.

Douglas-Baker Gallery, Minneapolis, featuring David Sengel, *Dancing the Void*, through January. 612-332-2978 or douglasbakergallery.com.

Pennsylvania

Wood Turning Center, Philadelphia, *Fabulous Function*, through Jan. 14; *Beginnings and Coming of Age*, Feb. 15–May 20.

Tennessee

Arrowmont School of Arts and Crafts, Gatlinburg, *Rude and Daphne Osolnik: A Family Portrait*, through Jan. 6.

Appalachian Center for Craft at Smithsville, "Boxes for the Beginner" with Michael Albanese, Feb. 24–25; "Applied Studio Woodturning" with Paul Ferrell, Mar 17–18. Information: tntech.edu/craftcenter or 615-597-6801.

REDEFINING MINIMALISM



Bill Luce

billluce.com

"This piece is from a recent series that has taken my passion for the minimalist approach in a slightly different direction. The shape contains a certain intrigue for me in the flatness of the partial rim, the straightness of the sides, the near rectangular outline of the bowl when viewed from above, the simple curve when viewed from the side, and the power of the grain running the long way in the bowl. Note that the near edge of the bowl is the natural edge of the tree and the holes are wormholes."



Untitled Series: #3
Douglas fir
4 1/4 x 13 x 8 1/4"
Colored rim